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Exploring the Role of Community Pharmacy in Providing Healthcare to Young People in New Zealand

Using a Youth Participation Approach

Emma Jane Horsfield

“A youth is to be regarded with respect. How do we know that his future will not be equal to our present?”

Confucius
Abstract

Background
Youth are often perceived as a population with low health needs, because the majority are strong, resilient and healthy. However, many young people in NZ and internationally have unmet sexual, mental, substance-use and preventative health needs. Community pharmacies are accessible and convenient, and their developing scope of practice could provide new opportunities in youth health fields. This thesis aimed to explore the role of community pharmacy in youth health, and, importantly, to involve young people in the research process.

Methods
An explanatory mixed-methods design was used, in which the results of two quantitative studies were investigated using qualitative interviews to explore and explain the findings. A Youth Advisory Group guided the research throughout, following a strengths-based youth participation approach.

Results
Secondary analysis of Youth’07 survey data provided evidence of opportunities for pharmacies to increase youth healthcare access in NZ. A survey of NZ community pharmacies confirmed that nearly all provide services in areas of health relevant to youth. However, the youth-friendliness of pharmacy environments could be improved, and pharmacy personnel did not always consider these services appropriate for young people. Qualitative interviews with pharmacy personnel highlighted challenges including difficulties communicating, ethical dilemmas, and concerns about follow-up care. Interviews with young people indicated that they valued the convenience, choice and professional advice available from pharmacies. Key barriers related to lack of information, perceptions of pharmacies as intimidating, limited privacy, and cost. Training for pharmacy personnel and promotion of services to youth were suggested by both parties as necessary for improving service delivery to this age group.

Conclusions
This thesis has identified potential for community pharmacies to improve youth health, described the barriers from the perspectives of youth and pharmacy, and proposed possible strategies to address these. The profession has a responsibility to respond to the needs of this population, and the role of community pharmacy in youth health should be developed. Youth participation approaches are recommended for future pharmacy practice research to ensure that youth voices are heard.
Acknowledgements

I have received a lot of help during the last four years, and am extremely grateful to all those who have been involved with this research. Firstly, thank you to my fantastic supervisors Associate Professor Janie Sheridan and Dr Fiona Kelly for their support, friendship and expert advice throughout my doctorate. I could not have wished for better. Thanks also to my amazing husband, Jason Lydon, for his love, patience, understanding (and willingness to stuff envelopes), without which I would have been lost. Thank you to Youthline and the Counties Manukau Youth Advisory Group for their voluntary and invaluable contribution to this research. Thank you to Dr Terryann Clark for her enthusiasm and guidance as a youth health expert. Thank you to all the study participants for their interest in the research. Thank you to Elizabeth Robinson, Joanna Stewart and Marion Blumenstein for their statistical support, and to Dr Nicola Gray whose article inspired my interest in this area.

This research was supported with funding from the University of Auckland and the New Zealand Pharmacy Education and Research Foundation (grant number 220). As a doctoral student I have been supported by a NZ International Doctoral Research Scholarship provided by Education New Zealand. Thank you to these organisations.

Lastly, thank you to the publishers of Youth Studies Australia, the International Journal of Pharmacy Practice, Research in Social and Administrative Pharmacy, and the International Journal of Public Health for allowing published work to be featured as part of this thesis.
Dedication

I would like to dedicate this thesis to my Granddad, John Marris, and my Opa, Dr Frank Horsfield, both of whom sadly passed away during the course of this project. From as early as I can remember, they have always encouraged me to learn, study and achieve to the best of my ability. They enthusiastically supported my undertaking of this PhD, and I really wish that they could have been here to see me finish it. I feel extremely lucky to have been their granddaughter and am wholeheartedly grateful for everything they taught me.
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**Nature of contribution by PhD candidate:** Lead author

**Extent of contribution by PhD candidate (%):** 70

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Could community pharmacies help to improve youth health? Service availability & views of pharmacy personnel in NZ

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<td>C-Card</td>
<td>Condom Card</td>
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<tr>
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<td>District Health Board</td>
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<tr>
<td>ECP</td>
<td>Emergency Contraceptive Pill</td>
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<td>General Practitioner</td>
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<td>Human Immunodeficiency Virus</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<tr>
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<td>Nicotine Replacement Therapy</td>
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<td>NZ</td>
<td>New Zealand</td>
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<td>OTC</td>
<td>Over the counter</td>
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<td>PhD</td>
<td>Doctor of Philosophy</td>
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<tr>
<td>PP</td>
<td>Pharmacy Personnel</td>
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<td>PSS</td>
<td>Pharmacy Support Staff</td>
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<td>STI</td>
<td>Sexually Transmitted Infection</td>
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<td>YP</td>
<td>Young People</td>
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Chapter 1. Introduction

This thesis explores the role of community pharmacy in providing healthcare to young people in New Zealand. The purpose of this chapter is to provide a brief overview of the rationale for focusing on this area, the research objectives, and the thesis structure.

1.1. Why focus on youth health?

Youth is generally regarded as a period of good health, and young people (aged 12 to 25 years) are often considered to be at their peak of physical health and fitness [1, 2]. Mortality rates amongst this age group tend to be relatively low compared to other populations [3], because the risks of childhood illness have passed, and the manifestations of non-communicable diseases affecting adult life expectancy are yet to emerge [4].

Although the burden of disease may be expected to be low in youth, it has been suggested that paucities in data and literature relating specifically to the youth population make the monitoring of epidemiological trends more difficult [5, 6], potentially masking deteriorations in the health status of this age group [6, 7]. When youth data are examined separately from child or adult data, it is evident that many young people are living with long term health conditions or disabilities [8]. Importantly, it also becomes apparent that the contemporary improvements in health and mortality achieved in child and adult populations are not mirrored amongst youth; indeed, in some areas such as sexual and mental health, the health of this age group appears to be worsening internationally [6, 9, 10] as well as in New Zealand (NZ) [5, 11, 12].

This raises concerns for both the present and the future health of this generation. Of immediate concern is that this is inequitable, and is impacting upon young people’s quality of life and productivity right now [8, 13]. Twenty percent of the NZ population are young people [14], and the health issues they experience limit their capacity to contribute towards the social and economic growth of the country [8].

Of concern for the future, and the focus of much of the international youth health literature, are the long term outcomes of youth health status. There is increasing evidence to show that youth health status sets a foundation for adult health [15]. This is because health behaviours established at this time track into adulthood [16], and health issues emerging in youth strongly correlate with the development of chronic diseases and causes of mortality in later life [15, 17]. For example, being overweight and physically inactive during youth is linked to increased
risk of diabetes, cardiovascular disease and cancer in adulthood [18]. Such issues clearly have important implications for future population health interventions and national productivity, and with an increasing focus on preventative interventions to address non-communicable diseases, youth should be a key target group for public health in developed countries [19].

Better understanding of the social determinants of health is providing further rationale for nations to invest in youth health [3, 20]. Because it is such an important period for social development, health inequalities resulting from associations between health status and income are reinforced or established during youth [17, 21]. This has implications not only for the future health of these individuals themselves, but also for the children they parent [4, 20], and aging populations which are becoming increasingly dependent upon young people to support their economic growth and stability [20]. Correspondingly, youth health has received increasing international attention over the past two decades [3], with youth health policies on the agenda of many governments including NZ [22].

1.2. Why community pharmacy?

Young people have specific health needs and as a population may be affected by different barriers to healthcare access compared to child or adult age groups [23]. Key barriers to youth healthcare access identified include low health literacy, lack of transport, cost and difficulties attending appointments, as well as embarrassment and confidentiality concerns [24-26]. Community pharmacies are retail pharmacy outlets which supply prescription and over-the-counter (OTC) medications and associated services and advice. It has been suggested that the accessibility of community pharmacies could present opportunities for the profession to contribute towards addressing youth health needs, as they are located amongst other shops and services in most towns and cities, there is no need to make an appointment, and there is no consultation fee [27-32].

In NZ as in many other countries, the range of health products and services available from community pharmacies is increasing [33], and new and developing services look set to expand the scope of pharmacy practice into youth health fields [29, 30]. For example, chlamydia screening [34], smoking cessation [35] and weight management [36] services are now offered by community pharmacies in some countries, and potential roles for the profession in mental health [37] and alcohol health promotion [38] are also being explored. However, to date there appears to have been very little research in this area, with only a handful of published articles available.
Chapter 1 – Introduction

1.3. Research objectives

Given the significance of youth health as a global population health priority and the potential opportunities for pharmacy, further research in this area was warranted. This thesis explores the hypothesis that pharmacies may be able to increase youth healthcare access. Four studies were conducted in order to address the following research objectives:

- To explore the potential for community pharmacy to increase youth healthcare access in NZ
- To characterise the barriers to young people’s use of community pharmacies and the delivery of services to this age group in NZ
- To identify how community pharmacy services for young people in NZ could be improved
- To involve young people in the research process through the use of a youth participation methodology

1.4. Thesis structure

The thesis comprises a literature review, two quantitative studies, two qualitative studies, and a discussion, plus an action plan for the future. In introducing how this thesis is structured it is necessary to highlight that it is presented as a thesis with publication, whereby several chapters include original research articles published as part of the doctorate. As it was necessary to discuss the literature and introduce the rationale for the research in each article, there may be some repetition between the introductory sections of these chapters when read consecutively as part of the thesis. However, the articles are featured here with the publishers’ permission unchanged¹ in order to maintain clarity regarding published and unpublished work.

The following chapter begins by presenting a review of the literature on youth health and development in NZ, discussing the barriers and facilitators of youth healthcare access in the primary care setting, and exploring potential roles for community pharmacy in youth health areas. Chapter 3 sets out the theoretical framework and methodology of the thesis and introduces the role of the Youth Advisory Group (YAG), who were consulted throughout the

¹ Abstracts have not been included, in order to avoid unnecessary repetition.
research in meeting objective 4. Their involvement at each stage of the research is described in the individual chapters which present results.

Chapter 4 describes the first quantitative study, which was a secondary analysis of the NZ Youth’07 youth health and wellbeing survey data [2] investigating potential for community pharmacy to help meet unmet health needs and increase healthcare access for young people in NZ.

Chapters 5 and 6 present results from the second quantitative study, which collected baseline data on the youth-friendliness of community pharmacies in NZ. Chapter 5 focuses on accessibility and the youth-friendliness of the physical pharmacy environment, whilst chapter 6 explores the potential capacity for community pharmacies to increase youth healthcare access in NZ in terms of the availability and distribution of youth-relevant pharmacy services and the views of pharmacy personnel with regards to their appropriateness for young people.

Chapters 7 and 8 describe the two qualitative studies which were conducted to explore, expand and explain the quantitative findings. Chapter 7 presents a study of pharmacy personnel and describes their perspectives on providing services to youth, the role of the profession in improving youth health, and the barriers and facilitators of developing services for this age group. Qualitative interviews were also conducted with young people to explore their experiences of using pharmacies, their perceptions of the profession and its role in youth health, and the barriers and advantages of accessing healthcare through pharmacies. This study is presented in Chapter 8.

In Chapter 9, key themes from the pharmacy and youth interviews are compared and contrasted. Areas of convergence and divergence were identified and analysed through a theoretical youth development (YD) lens to provide possible explanations for differences between youth and pharmacy personnel perspectives. Implications for practice and potential directions for future service development are discussed.

Chapter 10 reports the outcomes of the final consultation with the YAG, in which the results of all the studies were used to put forward a set of recommendations (or ‘Action Plan’) to improve the youth-friendliness of community pharmacies in NZ. Finally, Chapter 11 discusses the key findings and implications of the thesis as a whole, evaluates the strengths and limitations of the research (including the youth participation approach), and presents possible directions for future research. The conclusions of the thesis are summarised in Chapter 12.
Chapter 2. Literature Review

2.1. Introduction and chapter overview

This chapter provides a review of the relevant literature and is presented in four sections. The first section provides an overview of the major developmental changes occurring during youth and the second describes key health issues which may be experienced during this time. The third section reviews the literature relating to youth healthcare access, including barriers which may impede young people’s use of primary health services and possible ways to improve this. These three sections set a foundation for the fourth and final section, which explores potential roles for community pharmacy in meeting unmet youth health needs and increasing youth healthcare access. First, a definition of youth as referred to in this thesis will be provided.

2.1.1. Defining youth

Historically, health services have tended to treat individuals as either children or adults [7, 13] and report health data in the same way [5, 39]. In terms of eligibility for publicly funded health services, the NZ health system makes a distinction between children aged 16 and under, and adults aged 17 and above [40]. Division in this way does not recognise youth as a distinct group in their own right, with unique health needs which may not be adequately met by either child or adult services as they transition between providers [41, 42].

Defining ‘youth’ is not straightforward, however. Sociological literature focuses on youth as a state of change and development, avoiding definitions based on specific biological age ranges [43], since the rate at which developmental stages are reached varies between societies, cultures, genders and so on. For example, there are indicators to show that the period of time experienced as ‘youth’ by those maturing in the developed world is more prolonged than that experienced by previous generations, or by young people in developing countries [44]. As the age of puberty appears to be lowering in developed countries [45], individuals as young as nine or ten years old may be considered as youth. Similarly, youth is becoming increasingly elongated to accommodate more years in education, and sociological definitions may include any individuals still financially dependent upon their parents as they may not be considered to have reached full socio-economic maturity and independence [46]. According to these definitions, the youth population of NZ may be expanding.
Whilst recognising these issues, the majority of youth health literature defines youth in terms of biological age [6]. West suggests that definitions of youth based on biological age are appropriate since the dominant social influences upon health and development during this time (such as school or the ability to purchase alcohol) are linked to age through cultural norms and national laws [7]. Because these milestones differ between countries, it is pertinent to utilise a definition of youth which is specific to NZ with regards to research which is exploring youth health in this country. For the purposes of this thesis therefore, young people will be defined as 12-25 year olds, as this is consistent with the age range considered as the youth population by the NZ Ministry of Health [5, 11] and Ministry of Youth Development [47]. This definition encompasses several other terms which are often used interchangeably with ‘youth’, but between which there are subtle differences.

- Adolescence - The term ‘adolescent’ tends to be used for young people who have reached puberty, but who are considered to be still under the care of parents or guardians [48]. The World Health Organisation (WHO) suggests an age range of 10-19 years old [3], whilst the Journal of Adolescent Health defines adolescents as those aged 13-18 [49]. Adolescence can also be divided into early (10–13 years), mid (14–16 years) and late (17–19 years) adolescence [15].

- Teenagers - young people aged 13-19 years (ages ending in ‘teen’).

- Young adults - young people who are considered to be no longer under the care of their parents or guardians, but for whom it is recognised that various milestones with respect to emotional, social or financial maturity remain to be reached [48]. The suggested age range for young adulthood is 19-24 years [7, 49].

2.2. Changes occurring during youth

Consideration of the developmental processes occurring during youth is essential to understanding the contextual influences of youth health [50]. Although it is beyond the scope of this literature review to provide a detailed discussion of the myriad of changes which occur during this period, the major physiological, psychological and social transitions will be briefly outlined with a focus on issues affecting youth health outcomes. A key point to highlight is that in developed countries where youth is elongated to allow more years in education, physical maturity tends to precede emotional and social maturity and this has important implications for health behaviour and the delivery of services to this age group [3].
2.2.1. Physical and reproductive maturation

Adolescence is associated with the onset of puberty, marked by growth spurts, sexual maturation and the emergence of physical dimorphism between males and females. Growth increases nutrient and sleep requirements, and hormonal changes affect mood and how adolescents interact with others [51]. Young people may become sexually active at this time, and, correspondingly, sexual health care needs such as contraception requirements or testing for sexually transmitted infections (STIs) may emerge [51]. The normal hormonal changes underlying physical and reproductive developmental processes in youth can also cause undesirable physiological effects and conditions such as acne or body odour [16]. These occur secondary to the effects of testosterone levels which cause an increase in sebum and sweat secretion, and are likely to affect nearly all individuals to some degree during their youth [51]. Girls may also be affected by dysmenorrhoea or anaemia due to recent onset of menstruation [51]. Both acne and menstrual cramps may be common presenting issues for young people in the community pharmacy context [52].

Variation between individual physical and reproductive development is often a source of anxiety and embarrassment for young people, as their physical changes are highly visible to others [53]. This may be particularly problematic for young people who experience precocious or delayed puberty which is not aligned with their psychological or social development. Early puberty tends to result in shorter stature in the long term and may cause low self-esteem in girls, whilst delayed puberty can cause low self-esteem in boys [50].

2.2.2. Psychological development

Youth is also an important time for psychological development, as intellectual capacity increases and young people begin to establish their own opinions and worldview [1]. During this time, young people may be considered to develop their identity as an individual [54]. Psychological perspectives on sexual identity and orientation, body image, moral concepts, religious and political ideology are progressed which have the potential to alter their life-course [44]. Youth is also a time when long term health behaviors are established [15, 16].

Biologically, cognitive function appears to accelerate in adolescence due to a number of factors, in particular an increase in interconnectivity between neurones [55, 56]. Studies investigating the development of the brain during adolescence have found that puberty is associated with a period of synaptic proliferation in the pre-frontal cortex [56, 57], followed by a period of synaptic pruning which continues into young adulthood [58, 59]. As the prefrontal
Chapter 2 – Literature Review

cortex is a region of the brain involved in higher executive functions such as personality expression, decision making, and the moderation of social behavior, this research indicates that youth is an important and formative period of brain plasticity and psychological development [56-58].

Youth is traditionally a time of experimentation and risk taking behaviour [44], which has contributed towards negative social and media images associated with ‘youth’; for example with regards to binge drinking [1]. Research into neurodevelopmental processes during youth is providing an improved understanding of these behaviours which can inform targeted health interventions for young people [3]. A particularly important discovery has been that the limbic system (responsible for pleasure seeking and reward processing) develops at a faster rate than does the capacity for impulse control [56, 58]. Impulse control requires abstract thinking involving the ability to imagine future hypothetical consequences, a skill which develops in late adolescence and early adulthood [50]. Although more research is needed to establish causal linkages between these neurodevelopmental processes and the actual behaviour of young people observed in the real world [57], such research is already being applied in explaining risky health behaviours such as substance use and unprotected sex [60], and subsequently in the advancement of developmentally appropriate policies and programmes to improve youth health [19, 61].

2.2.3. Social development

In terms of social development youth is a busy time and it is important for healthcare providers to recognise that health issues experienced by young people are contextualised amidst a succession of major life events [7, 44]. Some social activities and milestones which the average New Zealander might experience during their youth could include academic assessments, their first romantic or intimate relationship, sports, music or church commitments, learning to drive, travelling or moving away from home, making career choices and starting their first job, or starting a family of their own [47].

Central to young people’s social development is the disengagement from parental control and increasing independence and responsibility [3]. In developed countries this process has become elongated in comparison to previous generations, due to the increasing social expectation to complete secondary and tertiary education [46]. This results in prolonged reliance upon parents until young people are able to support themselves financially, move away from home or provide for children of their own [44]. Therefore, although the biological
transitions of youth are completed by mid to late adolescence, the social and emotional transitions may continue well into young adulthood.

As parental influence upon the health decisions of young people decreases, the social climate in which a young person is developing plays an increasingly important role [7]. Relationships with other young people become very important and identification with peers can be a strong influence upon health behaviour, particularly in early adolescence [50]. Schools are also influential [7], and since secondary education is compulsory in NZ as in most developed countries, education environments are frequently the chosen setting for the delivery of government lead health improvement strategies for school-age young people [62, 63]. Progression from primary to secondary education at age 11 is regarded as a developmental milestone in many societies, signifying the start of the social transition from child to adult [44].

Laws around legal ages of majority and consent are socially constructed milestones which both reflect and influence cultural norms and expectations regarding important determinants of youth health such as alcohol consumption and sexual activity [7]. Several social transitions occur at the age of sixteen in NZ [64], including the legal right to leave home, to consent to sexual intercourse or to refuse medical treatment; all of which may be profound effects in terms of health. In NZ young people attain full adult rights at age eighteen [64]. This is the age at which young people can vote, consent to marriage, get a credit card or bank loan, and purchase tobacco and alcohol. Legal ages of majority in NZ are outlined in Table 1, adapted from NZ Citizens Advice Bureau information [64]. Emotional and social development may continue into young adulthood, as individuals adapt to their new freedoms and responsibilities.
### Table 1 - Legal ages of majority in NZ

<table>
<thead>
<tr>
<th>At age...</th>
<th>You can...</th>
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<tbody>
<tr>
<td>5</td>
<td>Start primary school</td>
</tr>
<tr>
<td>10</td>
<td>Be charged for murder or manslaughter</td>
</tr>
<tr>
<td>13</td>
<td>Start secondary school</td>
</tr>
<tr>
<td>14</td>
<td>Be legally classified as a ‘young person’ rather than a ‘child’&lt;br&gt;Be left home alone and can babysit children&lt;br&gt;Be prosecuted for criminal offences</td>
</tr>
<tr>
<td>16</td>
<td>Obtain a learner drivers licence&lt;br&gt;Leave home without parental consent&lt;br&gt;Get married with parental consent&lt;br&gt;Agree to or refuse medical treatment&lt;br&gt;Leave school and work full time&lt;br&gt;Apply for benefits&lt;br&gt;Consent to sexual intercourse</td>
</tr>
<tr>
<td>17</td>
<td>Join the Army, Navy or Air Force</td>
</tr>
<tr>
<td>18</td>
<td>Obtain a full drivers licence&lt;br&gt;Get married without parental consent&lt;br&gt;Purchase alcohol&lt;br&gt;Purchase tobacco&lt;br&gt;Get a credit card or bank loan&lt;br&gt;Vote&lt;br&gt;Place a bet&lt;br&gt;Get a tattoo</td>
</tr>
<tr>
<td>20</td>
<td>Adopt a child</td>
</tr>
<tr>
<td>Any age</td>
<td>Have an abortion without parental consent&lt;br&gt;Negotiate an employment agreement</td>
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</table>

Following the long standing ‘nature vs. nurture’ debate, it is now generally accepted that social and environmental factors interact dynamically with the physical and psychological changes happening to young people [65], and that both internal and external influences contribute towards youth health outcomes. For example, whilst external environmental factors such as poverty have been indicated as strong determinants of youth health [21], research on
resiliency [66] and youth development (YD) [67] theory have helped to explain how individuals may respond to such negative life events differently based on internal processes. This has informed new approaches to dealing with youth health issues which will be described in Chapter 3.

2.3. Health issues affecting NZ youth

There is an international shortage of youth health data, making trends in prevalence difficult to estimate and comparisons between countries problematic [6]. NZ is relatively fortunate in that it has a developing youth health speciality [68], and that important data on youth mortality, morbidity and health behaviours are available. National population health surveys are conducted every five years and collect basic but reliable data on health status and conditions, health behaviours and risk factors, and healthcare access [39]. Since the year 2000, health data relating specifically to young people has also been collected through the Youth2000 Health and Wellbeing survey series [69]. These national surveys of NZ secondary school students (age 11-19) have collected detailed data on youth health indicators, as well as information which can be used to identify the correlates and determinants of youth health in NZ. However, they do not capture data about young people who are not in school and who may face significant health inequities [70].

Although now rather outdated, the NZ Ministry of Health Youth Health status report [11] released in 2002 is the most recent government publication on the health of young New Zealanders. The findings of this report concluded that “New Zealand’s young people are over-represented in mortality and morbidity statistics, and have high rates of preventable diseases.” Compared to countries of similar socio-economic standing, young people in NZ were identified to be at higher risk of suicide, unintended pregnancy or abortion and sexually transmitted infections. Prevalence of substance use and mental health issues were higher amongst young people than in other age groups. Areas of youth health identified as priority issues in NZ were:

- Mental health; including an increasing prevalence of depression and anxiety, and relatively high rates of suicide, suicide attempts and self-harm
- Sexual and reproductive health; including relatively high teenage pregnancy rates and increased incidence of sexually transmitted infections
- Overweight, obesity and physical inactivity
2.3.1. Mental health

Life course epidemiological data indicate that mental health issues such as depression often emerge during adolescence [54]. The rapid physical and social developmental changes associated with youth can be confusing and stressful for young people, and a certain degree of emotional distress can be considered expected or normal during this time [1, 50]. There are differences between genders in how young people experience mental health disorders. Males and females tend to suffer from different types of mental disorders; males have higher rates of conduct disorder and substance misuse, whilst females have higher rates of anxiety and depression [54]. More deaths amongst young men are due to suicide than young women, but suicide attempts and self-harming are more common in young women [11].

2.3.1.1. Suicide, suicide attempts and self-harming

As in other developed countries, suicide is a main cause of mortality for young people in NZ, causing just under forty percent of deaths in 12-25 year olds in 2002 [11]. Although not fatal, suicide attempts and self-harming are a significant cause of hospitalisation and morbidity amongst young people in NZ [11]. Twenty-one percent of girls and 10% of boys participating in the Youth 2012 Health and Wellbeing survey reported suicidal ideation in the preceding 12 months, and 6% of girls and 2% of boys had made a suicide attempt during that time [12]. In a review of effective strategies for suicide prevention amongst young people in NZ [71], Beautrais et al. identified training for medical practitioners and restriction of access to suicide methods as two areas in which strong evidence of effectiveness exists. These findings concurred with international recommendations [72]. Providing medical practitioners in primary care settings with training could reduce the incidence of suicide by improving identification and treatment of depression in young people [73]. Although the most common method of suicide in NZ was found to be carbon monoxide emissions from vehicles, reducing the availability and pack sizes of analgesics and increased restrictions on prescription drugs which are toxic in
overdose were suggested as effective strategies to reduce suicide rates [74]. These recommendations are clearly of high relevance to community pharmacy.

2.3.1.2. Mood disorders and self-harm

Data on suicide and suicide attempts represent only a fraction of the young people experiencing mental distress [75]. Mood disorders such as depression and anxiety are amongst the most significant causes of disability-adjusted life years for this population internationally [3], and their apparent increasing prevalence has been identified as a global public-health challenge [75]. The Youth 2013 Health and Wellbeing survey identified clinically significant depressive symptoms in 16% of female and 9% of male students at the time of the survey [12]. Around two in five female students and one in five male students reported that they had felt down or depressed for two or more consecutive weeks during the preceding 12 months, and deliberate self-harm within the same time frame was reported by 29% percent of female students and 18% of male students [12].

Although evidence suggests that conditions such as anxiety experienced during youth are associated with increased incidence of mental health issues in adulthood [76], more recent research indicates that the likelihood of this tracking decreases if the duration and severity of mental distress experienced can be decreased through intervention [77]. In a systematic review and meta-analysis of evidenced-based treatments for depression in young people [78], Carr et al identified cognitive behavioural therapies as the most effective option. Although there is evidence that selective serotonin reuptake inhibitors may be effective for treating severe depression, their use is associated with increased suicidality in children and young people and these risks are felt to outweigh the benefits for all but fluoxetine [79].

Low mental health literacy levels [80] and reluctance to access help for mental health issues due to perceived stigma and concerns about confidentiality [81, 82] have been identified as causes for untreated mental distress in young people. Consequently, although it is recommended that all young people presenting in primary care be screened for emotional distress, research suggests that this may not occur in practice [73]. Mental health promotion in schools [83] and online screening tools which link young people to computerised cognitive behavioural therapy interventions (such as ‘The Lowdown’ [84] and ‘SPARX’ [85]) are also being increasingly utilised as strategies to increase young people’s access to mental health support in NZ.
2.3.2. Nutrition and physical activity

2.3.2.1. Obesity, diet and exercise

The majority of young people in NZ are of a healthy weight [12]. Internationally however, NZ has the third highest rate of obesity compared to other developed counties such as those in Europe, Australia, Canada and the United States (US) [86]. In 2012, 37% of secondary school students had a Body Mass Index (BMI) in the overweight or obese categories [12]. The proportion of overweight young people in the 15-25 age group is not reported, but around 20% are currently obese [86]. With the links between obesity and major causes of morbidity and mortality such as diabetes, cardiovascular disease and cancer [87], these statistics are of public health concern. Increasing physical activity appears to be one of the most effective prevention strategies for overweight and obesity in youth [88, 89]. Recent NZ data indicate that around two thirds of school age young people report exercising vigorously for 20 minutes or more at least three times per week [12], whilst just over half of young adults are physically active for 30 minutes five times per week [39]. Therefore, although many still do not meet current exercise recommendations, young people are amongst the most physically active of age groups [39].

There is some evidence to suggest that weight management interventions which appear to be effective in adult populations may not be effective in young people [90]. Indeed, although various weight management approaches for youth have been trialled, few successful strategies have been identified [18]. A study investigating the attitudes of adolescents in the United States found increased exercise and eating a healthier diet to be the preferred obesity prevention measures, which the majority of participants reported being willing to do in order to manage their weight [91]. A meta-analysis of international literature conducted by Kitzmann et al indicated that lifestyle interventions to promote healthy weight management in youth can be effective in a variety of settings [89]. Crucially, parental involvement was identified as a key component of successful interventions. This may provide a possible explanation as to why a youth-led weight management programme piloted through NZ secondary schools was not able to demonstrate improvements in weight management, since parents were not actively involved in this approach [92]. Further support for this theory was provided by the results of a later study conducted by the same authors which found that successful and sustained weight loss attempts appeared to be more likely amongst young people with greater family support and connectedness [93].
2.3.3. Substance use

Youth is often a time when individuals may begin to explore the effects of tobacco, alcohol and other drugs [94]. Although substance use in youth is predictive of chronic use patterns and associated mortality and morbidity in later life [15], some experimentation may be considered normal or even healthy [50]. Intoxication with alcohol and/or other drugs can cause young people to expose themselves to other risky behaviours such as unprotected sex or driving under the influence which may result in harm to themselves or others [11, 60]. Abstinence-based education programmes do not appear to be effective in reducing consumption or harm relating to substance use in youth [63]. Alternative approaches such as youth development [95], peer education [96], motivational interviewing [97] and harm reduction [97, 98] appear to be more appropriate for this age group and are associated with behavioural change. In a meta-analysis of systematic reviews [99] Toumbourou et al. found evidence for developmental interventions which supported vulnerable young people and challenged the attractiveness of substance use in schools and communities in preventing the establishment of harmful patterns of substance use. This review also concluded that regulatory interventions such as increasing prices and raising the legal purchase age are effective in reducing youth alcohol and tobacco consumption. Screening, brief interventions (including motivational interviewing) and harm-reduction approaches were indicated as appropriate strategies in improving health outcomes in youth related to illicit drug use.

Comparison of the Youth2000 series Health and Wellbeing survey data reported between 2000, 2007 and 2012 indicates that generally, substance use amongst school age young people in NZ appears to be improving [12]. Although efforts need to be sustained to in order to support continuation of these positive trends, the apparent reductions in the prevalence of smoking, binge drinking and cannabis use by young people should be celebrated.

2.3.3.1. Tobacco

It has been suggested that smoking behaviour in young people may be influenced by social factors (such as the ease of obtaining cigarettes or their marketing and advertising [22]), as well as individual health beliefs about smoking such as a strategy to control weight gain [22] or coping with elevated stress levels [100]. The prevalence of cigarette or tobacco smoking increases during adolescence [94], and most adult smokers report that they started smoking in their teens [15]. Prevalence can be difficult to estimate since the legal purchase age may make this age group more reluctant to self-report [101]. Around 11% of secondary students
participating in the Youth 2012 survey reported that they smoked cigarettes at least occasionally, and a further 5% indicated that they smoked weekly or more often [12]. Of these, 61% had tried to cut down or quit. The proportion of weekly smokers had decreased from 8% in 2007 and 16% in 2000. The percentage of students who had ever tried cigarettes in 2012 (23%) had also decreased from 37% in 2007 and 53% in 2001. Youth smoking rates reported for youths and young adults in the 2013 NZ national health survey were slightly higher [39]. Seven percent of 15–17 year olds reported smoking daily, which had declined from 2012. The prevalence of daily smoking amongst young people age 18–24 had also decreased to 20%. These figures compare to 15.5% of the adult population identified as daily smokers in the same survey. There is evidence that amongst young people with long term illnesses such as Type I diabetes, rheumatoid arthritis, asthma and cystic fibrosis, smoking rates may be comparable to youth who do not live with these conditions [102], although the detrimental effects to their health outcomes may be more severe through the exacerbation of disease processes and secondary complications [102, 103]. As these young people are likely to access primary healthcare services regularly, healthcare professionals in these settings (including perhaps pharmacy personnel) may be considered well placed to provide health promotion information and brief interventions to reduce tobacco smoking in these groups.

There is a shortage of evidence regarding smoking cessation interventions for youth [104]. Recruitment and retention of young people in conventional smoking cessation programmes is low [105], and this age group does not appear inclined to use them even when delivered in a school-based context [106]. Findings of qualitative interviews with young smokers in Canada [107], United States [108], and Scotland [109] offer some explanations. Although participants identified themselves as smokers, few regarded themselves as being ‘addicted’, and, therefore, did not perceive that smoking cessation interventions such as nicotine replacement therapy (NRT) were necessary [108, 109]. Manufacturers of NRT do not recommend use as a cessation aid for sporadic smokers [110], which may limit use in youth populations. In NZ, the leading brand of NRT (Habiltrol) available in community pharmacies is not licensed for use in those under the age of 18 without prescription [110]. Young people felt that the most important factor in quitting smoking was willpower [107, 109], and reported a preference for support and advice from friends rather than healthcare professionals in such endeavours [107, 108]. However, some success has been demonstrated with motivational counselling support provided through telephone [104, 111] and text [111] interventions. More research is needed to evaluate the feasibility and cost effectiveness of these strategies in primary care [111].
2.3.3.2. Alcohol

Alcohol appears to be the most frequently used substance amongst young people in NZ [12, 112], and is associated with negative social constructs of youth culture [113] due to detrimental outcomes such as violence and youth offending [11]. In a recent qualitative study exploring their attitudes towards alcohol consumption and drinking behaviour at school social events, young people suggested use of this substance to be “almost necessary for socialisation in a New Zealand context” [113], whilst highlighting that the majority of secondary school students appear to drink in moderation and reporting some degree of intolerance towards intoxicated peers. Findings of the Youth 2012 survey of secondary school students (aged 12-18 years) indicated that 57% reported ever having tried alcohol, and 45% were currently using alcohol [12]. Of these participants, 23% reported hazardous binge drinking behaviour within the previous four weeks. This was a decrease from 34% in 2007 and 40% in 2001. Most recent national MoH data concurred with this trend, suggesting that whilst hazardous drinking levels had remained static in adult populations, they had fallen among youth [39]. However, young people aged 15-24 years continued to report the highest hazardous drinking rates, with one in four consuming amounts considered harmful to health (compared to 15% of adults). Rates of hazardous drinking reported in this age group were also much higher amongst young men (22%) than young women (9%).

Although previous research has indicated increasing prices of alcoholic beverages as an effective strategy in reducing alcohol-related harm in young people [99], a more recent systematic review concluded that this approach appears to have little or no effect upon binge drinking patterns in youth populations [114]. A Cochrane systematic review of interventions to reduce alcohol misuse in children and young people indicated that harm reduction strategies appear to be most effective, particularly in the context of school or family settings [115]. For example, the School Health and Alcohol Harm Reduction Project (SHARP) conducted by researchers in Australia reported sustained reductions in alcohol consumption (around 30% less) and alcohol-related harm amongst secondary students following delivery of a harm-minimisation focused intervention in two phases over two years through the curriculum [98]. Similarly, alcohol harm reduction material in video format was developed in a recent study which used a youth engagement approach in schools in Whanganui, NZ [116]. This resource was developed to support delivery of curriculum-based alcohol education which identified and promoted strategies to minimise alcohol related harm in youth and appeared to result in significant improvements in participant awareness of alcohol effects and safer drinking practices. It is recommended that primary healthcare providers actively screen for and provide
brief interventions to reduce hazardous drinking behaviour in young patient populations [50, 117].

2.3.3.3. Illicit drugs

Results of the NZ 2008 alcohol and drug use survey found that around 50% of New Zealanders self-reported having ever used illicit drugs for recreational purposes [112]. Of these, 34.6% reported that their first use of drugs had been at age 15-17, and 27.8% at age 18-20 years [112]. Furthermore, this study found recreational drug use within the past year to be significantly higher amongst youth (33.9%) compared to the sample population as a whole (16.6%), and that young people were more likely to have experienced harm as a result of their use [112].

Cannabis appears to be the most commonly used illicit drug amongst NZ youth [112]. Findings of the Youth 2012 Health and Wellbeing survey indicated that 23% of students reported having tried cannabis [12], which had decreased from 27% in 2007 and 39% in 2001. The NZ drug and alcohol survey estimated that cannabis had been used recreationally in the past year by one in four 16-17 year olds and nearly one in three 18-24 year olds [112]. Cannabis use in young people under 16 years may be associated with problems in later life such as youth offending, mental health disorders (e.g. schizophrenia [118]), and suspension or expulsion from school [11]. Cannabis is also sometimes considered to be a ‘gateway’ drug, with use in adolescence associated with progression onto the use of other substances in young adulthood [119]. Use of other illicit drugs such as benzylpiperazine, ecstasy, amphetamines or opiates by young people in NZ appears to be less common. Results of the Youth 2012 Health and Wellbeing survey indicate use of ecstasy and amphetamines amongst secondary school students to be relatively uncommon (less than 3% and 1% respectively), and that the majority of these students reported only having used them on a single occasion [12]. Although injecting drug use appears to be rare amongst NZ youth, improving access to harm reduction services (such as needle exchange services offered by community pharmacies in NZ [120]) has been identified as an important component of improving health outcomes for this age group internationally [121].

2.3.4. Long term conditions in youth

Although over 90% of young people in NZ report their health to be good or excellent, approximately 20% have a long term condition, and 9% have a disability [12]. A secondary
analysis of the Youth’07 Health and Wellbeing survey data found that depressive symptoms were significantly more common amongst participants with a long term condition, with 28% reporting that it impacted upon their activities and 8% reporting that it affected their ability to socialise [122]. Conditions affecting young people include cystic fibrosis, epilepsy, juvenile arthritis, asthma and type I diabetes [123]. Young people living with these conditions must learn how to manage their lifestyles, medications and other treatments whilst simultaneously navigating the developmental processes of adolescence and young adulthood described in the previous section. Responsibility gradually shifts from the parent or carer to self-management, which both may find challenging [124, 125]. At the same time, they are transitioned from child to adult health services, and must get to know new systems and healthcare professionals [126]. As such, the management of long term conditions in youth can be problematic. Studies indicate communication problems with primary healthcare providers [123], who may not pitch health information appropriately [127], or be perceived as lacking in empathy with regards to the impact of long term conditions upon young people’s daily lives and activities [128]. The majority of literature regarding long term conditions in youth focuses on asthma and diabetes. This literature is briefly reviewed below.

2.3.4.1. Asthma

The prevalence of asthma in NZ is relatively high and it is the most common long term health condition amongst NZ youth, affecting around one in eight [122]. Young people’s lifestyles may increase their exposure to spasmogens and triggers such as cigarette smoke, dry ice or exercise-induced asthma, and physiological changes may necessitate dosage adjustments in medications [50]. However, adherence to asthma medications amongst young people can be inconsistent [129]. It has been suggested that this may be because young people may not understand the importance or benefit of preventative medication if they are not presently experiencing asthma attacks [50, 130], or they may underestimate or ignore the severity of symptoms [50, 131]. As responsibility moves from the parents to the adolescent themselves, they may simply forget to take their inhalers [125, 132], or may have a poor inhalation technique which results in suboptimal therapy [129, 132]. Reliever bronchodilator inhalers can often be (unintentionally) overused, leading to increased sensitivity of the airways and poorer asthma control [129].
2.3.4.2. Diabetes

Learning to self-administer insulin is just a small component of what young people growing up with Type I diabetes need to accomplish. Individuals must also learn to manage their diet and activities, monitor themselves for signs of hyper and hypoglycaemia and assimilate this in the context of their busy lives [126]. Diabetes treatment requires routine, yet many of the changes and activities of youth such a growth, exercise, late or skipped meals and alcohol can drastically alter insulin demand [133]. There is some evidence to indicate that young people may attach stigma to health-compromising conditions such as diabetes, because this is perceived as a physical weakness [134]. This may cause some to forego medications in social situations because they do not want peers to know that they are diabetic. In addition, some young people may deliberately miss doses to lose weight or experiment with risk within their condition [103]. As a result of these issues, diabetes management in youth tends to be less than optimal. For example, a Canadian study of adolescents and young adults with type II diabetes found that less than half had visited their General Practitioner (GP) for a diabetes related appointment in the last year, and the majority had haemoglobin A1c (HbA1c) test results indicating poor glycaemic control [135]. Young people with diabetes may not appreciate the importance of good glycaemic control if they are predominantly asymptomatic, however the consequences of long term secondary complications are of concern for this patient group.

Primary care providers have an important role in helping to address these issues. Youth utilisation of primary care services and barriers to healthcare access will now be discussed.

2.4. Youth healthcare access

2.4.1. Where do young people access healthcare?

Young people’s use of primary health services can be fragmented, making it difficult to provide a comprehensive model of service usage [136]. Data from the Youth 2012 Health and Wellbeing survey indicate that 79% of secondary school students in NZ had accessed health care in the previous 12 months [12]. Of these, the majority had visited a GP (93%). Twenty three per cent had utilised school health clinics, 5% family planning or sexual health clinics, and 2% had received care through specialist youth health centres [137]. Approximately 30% of the sample had accessed healthcare from a pharmacy or chemist in the same timeframe [12].
Research indicates that young people’s preferred sources and utilisation of health services may differ depending on the nature of the problem they are experiencing [138]. For example, adolescents report a preference for informal resources such as friends, partners or supportive adults for help and advice with issues they perceive as non-physical (e.g. depressive symptoms), but may seek help from healthcare practitioners for health conditions with obvious physical symptoms [134, 139].

The youth population has the lowest presentation and utilisation rate of primary care services in NZ [25]. Young people are also less likely to see the same primary care provider consistently, and tend to have shorter consultation times compared to other age groups [140]. One study conducted in the United Kingdom (UK) found that GPs spend 20% less time with adolescent patients than with child or adult patients [141]. Youth presentation in hospital accident and emergency centres is disproportionate compared to other age groups [11], with 16% accessing emergency healthcare through after-hours accident and medical centres and 18% through hospital emergency departments in 2012 [25].

2.4.2. Foregone healthcare amongst young people in NZ

It has been suggested by healthcare providers that young people may forego care because they are a healthy population with fewer health needs [142], however, as discussed in the previous sections these perceptions are unlikely to be an accurate reflection of actual youth health status [9]. In 2012 one in five (19%) NZ secondary school students indicated that they had been unable to access healthcare when needed in the last 12 months [12]. This was an increase from one in six (17%) in 2007 [143]. These findings are comparable to earlier data from the United States (US), which indicated that on average 18.7% adolescents reported foregone health care within the last year [144].

In addition, just under 30% of the Youth’07 sample indicated that they had had difficulty getting help for a health issue in the preceding 12 months [2]. Table 2 shows the breakdown of these unmet health needs, as reported in the Youth’07 The Health and Wellbeing of Secondary School Students in New Zealand Technical Report [2]. Nearly one in twenty (4.9%) students had unmet contraceptive or sexual health needs. Acute health needs such as minor conditions, accidents and injuries, and emotional worries were cited most frequently.

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2 Youth’07 results are presented as these data are not yet available for the 2012 sample.
Table 2 - Health issues for which students participating in the Youht’07 Health and Wellbeing survey had difficulty getting help in the last 12 months.

<table>
<thead>
<tr>
<th>Health issue</th>
<th>% of students selecting this variable*</th>
</tr>
</thead>
<tbody>
<tr>
<td>An injury/accident</td>
<td>9.9</td>
</tr>
<tr>
<td>An emotional worry</td>
<td>9.0</td>
</tr>
<tr>
<td>A condition that does not last very long e.g. a cold</td>
<td>7.2</td>
</tr>
<tr>
<td>Contraception or sexual health</td>
<td>4.9</td>
</tr>
<tr>
<td>A long term health condition e.g. asthma</td>
<td>3.7</td>
</tr>
<tr>
<td>Help with stopping smoking</td>
<td>3.2</td>
</tr>
<tr>
<td>Pregnancy or pregnancy test</td>
<td>2.9</td>
</tr>
<tr>
<td>Help with stopping drug or alcohol use</td>
<td>2.7</td>
</tr>
<tr>
<td>Something else</td>
<td>6.8</td>
</tr>
<tr>
<td>I haven’t had difficulty getting help</td>
<td>70.4</td>
</tr>
</tbody>
</table>

*students could select more than one

Young people who forego health care are at risk of increased physical and mental health problems, and experience poorer health outcomes [144]. For example, a recent US study exploring the relationship between healthcare access and blood glucose control amongst youth with type 1 diabetes found poorer glycated haemoglobin levels amongst those who reported difficulties accessing healthcare [145]. Furthermore, several studies have found the prevalence of foregone healthcare to be higher amongst youth with long term conditions and those who smoke, drink or are sexually active [25, 146] (i.e. those with greater health needs). After controlling for sex, age, ethnicity, and socioeconomic deprivation, Denny et al found that the relative risk of foregone healthcare amongst the Youth’07 sample was 1.5 for participants reporting binge drinking behaviour, 1.8 amongst those with a long term health condition, who were currently using cigarettes or were sexually active, and 2.5 amongst students with depressive symptoms. Indeed, nearly 40% of young people identified with depressive symptoms in this study reported being unable to access needed healthcare in the previous 12 months [25]. These findings concur with those of a similar study investigating foregone healthcare of young people in the US [144], which also indicated that around a third of adolescents with symptoms suggestive of health problems reported foregone care.

It is difficult to ascertain whether such results are because young people with poorer health are more likely to require help and therefore more likely to experience difficulties accessing
services, or because decreased healthcare access negatively impacts youth health status; perhaps both these factors may be at play [25]. However, what the literature does indicate is that youth who forego health care are not the worried well [147], and that young people are less likely to present to primary services due to barriers they experience to healthcare access, not because of reduced need compared to other age groups.

2.4.3. Barriers to youth healthcare access

There has been much research into the reasons why young people may not access healthcare when needed, with large scale studies conducted in the US [144], UK [26], Australia [148], NZ [25], and internationally [149]. It is evident that the barriers to accessing needed healthcare experienced by young people are often complex and may vary depending upon their gender, ethnicity, location and family circumstances. Young males are less likely to seek healthcare than young females [150], with young adult males in the 19-24 year age group the least likely to present in primary care of any demographic group [49]. In NZ, Maori [151] and Pacific [152] youth are significantly more likely to be unable to access healthcare when needed compared to young people of other ethnicities. The prevalence of unmet health needs also increases with increasing level of socioeconomic deprivation, with foregone healthcare reported by 22.7% of young people living in the most deprived areas compared to 14.7% in the least deprived [25]. Youth healthcare access barriers may also be different for different health issues [146]. For example, concerns about privacy and confidentiality may be greater barriers to young people’s use of mental health services than for long term conditions [153].

Barriers experienced by NZ secondary school students unable to access healthcare when needed in the previous 12 months were reported by the Youth’07 The Health and Wellbeing survey¹ [2], shown in Table 3 below.
Table 3 - Reasons for not accessing healthcare when needed reported by students participating in Youth’07 Health and Wellbeing survey

<table>
<thead>
<tr>
<th>Barrier</th>
<th>% of students selecting this barrier*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn’t want to make a fuss</td>
<td>55.0</td>
</tr>
<tr>
<td>Couldn’t be bothered</td>
<td>39.1</td>
</tr>
<tr>
<td>Cost too much</td>
<td>32.2</td>
</tr>
<tr>
<td>Too scared</td>
<td>29.9</td>
</tr>
<tr>
<td>Worried it wouldn’t be kept private</td>
<td>28.2</td>
</tr>
<tr>
<td>Had no transport to get there</td>
<td>26.9</td>
</tr>
<tr>
<td>Couldn’t get an appointment</td>
<td>23.1</td>
</tr>
<tr>
<td>Didn’t know how to</td>
<td>21.8</td>
</tr>
<tr>
<td>Didn’t feel comfortable with the person</td>
<td>21.4</td>
</tr>
<tr>
<td>Couldn’t contact the health professional</td>
<td>9.8</td>
</tr>
<tr>
<td>Other</td>
<td>20.6</td>
</tr>
</tbody>
</table>

*students could select more than one barrier

‘Didn’t want to make a fuss’ was the most frequently selected barrier, although it is difficult to determine how individual participants may have interpreted this option. It may be that they had concerns about needing to attend an appointment which would cause disruption during school or work hours, that they believed seeking help might cause peers, parents or the healthcare professional to view them negatively, or that they did not perceive the condition to be serious enough to seek help for. The additional option ‘hoped that the problem would go away or get better over time’ was added to the Youth 2012 survey and was selected by 51% of students who had been unable to access healthcare [12]. Not wanting to make a fuss still ranked highly as a common barrier however, selected by 46%.

Reasons for not accessing healthcare amongst youth are frequently divided in to those which are predominantly practical or personal [26, 148, 154]. Practical barriers relate to difficulties in accessing and negotiating the healthcare system, such as lack of awareness of health services available, cost, or difficulty attending appointments. Personal barriers tend to be internalised emotions or perceptions which result in reluctance to seek help, including fear of judgement, social stigma, shame, or embarrassment [154]. In their review of young people’s views and access to primary healthcare in the UK, Gleeson et al concluded that personal barriers may be augmented by limited understanding of youth confidentiality rights by both young people and healthcare professionals, and appear to be more detrimental to youth
healthcare access than practical barriers [26]. Whilst to some extent concurring with this view, Booth et al do, however, highlight that it may depend which young people are included in the research sample, suggesting that those who do not access health services regularly may be more likely to report personal barriers because they have not had experience of practical difficulties [148]. For example, when young people with long term conditions are interviewed, it is evident that practical barriers such as accessibility, appointments and cost are also important to this age group [128, 155]. The following section briefly reviews the literature on key barriers identified, before discussing young people’s views on how to improve health service delivery to this age group.

2.4.3.1. Youth health literacy

The term ‘health literacy’ is used to describe the capacity of an individual to obtain, process, and understand basic health information, make appropriate health decisions, and know when and how to access services when needed [156]. While there is much literature concerning the health literacy of adults, few studies have focused on youth. That which is available indicates that young people are likely to have lower health literacy than adults [80, 156-159], and obtain health information from different resources such as parents, peers, mass media or the internet [156, 157, 160, 161]. School-based health education programmes tend to focus on increasing young people’s knowledge of health conditions and when to seek help, but may be less likely to provide information on the training and expertise of primary healthcare professionals, how the health system works, or the availability of local services and how to access them [62]. The findings of a UK survey indicated that young people’s knowledge of local health services was very poor [138], and nearly half those participating in a US study did not know where they could obtain confidential healthcare if needed [162]. Youth awareness of primary health services for sexual health, mental health and drug or alcohol use appears to be particularly low [156], which is of concern given the threat these issues represent to youth health and wellbeing.

Increasingly, young people report the internet as their primary health information source [156]. Therefore, health services which do not promote their services using the internet or have low online visibility are unlikely to be utilised by this age group [161]. A focus group study with 11 to 19 year olds indicated that most participants had extensive personal experience with using search engines to research health information online, and that the internet was valued as an information source because it combines both lay and professional opinion and can be accessed in privacy [160]. However, healthcare providers may hold concerns that young
people sometimes lack the critical appraisal skills necessary to discern which sites are credible and may retrieve inaccurate information [161, 163, 164]. In the context of pharmacy, it has been suggested that this issue may make the youth population more susceptible to purchasing medication from illegitimate internet pharmacy sites [165].

There is very little information available regarding young people’s knowledge of community pharmacy services, although since research in general consumer populations has indicated low awareness [166], youth awareness might be expected to be limited. One study investigating young people’s knowledge of emergency contraception found that less than a third of Australian university students were aware of its availability over the counter [158]. This was despite a relatively high-profile media campaign in the months prior to the data collection for this survey, suggesting that young people’s awareness of other pharmacy services is likely to be much lower. Advertising and promotion of youth-relevant services have been highlighted as potential strategies to improve youth-friendliness and increase utilisation of sexual health services provided by community pharmacies in developing countries [27, 28].

2.4.3.2. Accessibility and appointments

Increased accessibility and flexibility from healthcare professionals in the form of extended opening hours and drop-in clinics are consistently requested in studies asking young people what they want from their health services [136, 154, 155, 167, 168]. This is particularly evident in feedback from young people with long term conditions who may access health services frequently, and value healthcare which does not disrupt their lives [128, 155]. Barriers such as ‘had no transport to get there’ and ‘couldn't get an appointment’ were reported as reasons for unmet health needs by nearly 1 in 3 Youth’07 participants [2]. Young people in rural areas may experience greater difficulty accessing healthcare where facilities tend to be more limited or spread out [24, 146]. This may include practical difficulty attending clinics due to transport issues, less flexible appointment times and increased waiting lists, and reduced choice of providers [169]. The later may also result in increased confidentiality concerns for young people from small rural communities [146, 169], particularly with regards to accessing sexual health services [170]. Such issues are of relevance to NZ, with approximately 15% of the youth population in this country living in rural areas [2].

2.4.3.3. Cost

Inability to access healthcare when needed is more common amongst NZ youth from areas of high deprivation (22%) compared with those from areas of medium (18%) or low (16%)
Chapter 2 – Literature Review

deprivation [12]. Although the full explanation for this association is likely to be complex [171], a probable contributing factor is likely to be lack of financial resources to pay for health services and medications. Young people in NZ may experience significant cost barriers to accessing primary healthcare through GPs or after-hours medical centres, since providers charge on a fee-for-service basis in this country [172]. Fees are self-set and vary between providers. Patients enrolled at a regular surgery are entitled to government subsidised consultations, but as we have discussed, young people may not be aware of this and are less likely to be enrolled with a regular primary service. Although specialist youth health centres, family planning clinics and school-based health providers are usually free, service availability is often limited [25].

Cost as a barrier may particularly impact upon healthcare access for issues which young people do not wish their parents or carers to be aware, as they may be reluctant to involve their parent but may be unable to pay for health consultations or treatments themselves [49, 173]. This may partially explain the increased risk of foregone care in the mid to late adolescent age group [25, 144], representing young people with increasing sexual health needs who are not yet in paid employment. Healthcare vouchers have been piloted in several countries as a strategy to reduce cost barriers to sexual health services for young people, however, the results of a systematic review were inconclusive in determining their effectiveness to improve youth access [174]. Recent initiatives to provide free emergency contraception [175] and condoms [176] through community pharmacies to New Zealanders under the age of 25 aim to reduce financial barriers and increase access to preventative sexual healthcare for youth. These pilots are yet to be evaluated.

2.4.3.4. Embarrassment and fear of judgement

Embarrassment and fear of negative reactions from others are consistently cited by young people as reasons for not accessing healthcare [81, 177-179]. This may in part be due to concern over physical examination, for example this is evident for gynaecological problems and contraception in young females [180]. However, it has also been suggested that many youth health issues such as mental health, sexual health or substance use are socially stigmatised and therefore associated with negative emotions such as shame which may deter young people from seeking help regardless of whether a physical examination might be required or not [181]. In focus groups exploring the multidimensional nature of privacy and confidentiality from the perspectives of youth accessing healthcare, Britto et al. described concerns about being seen or identified by members of the public when using health services [182]. This issue may have particular relevance in the community pharmacy setting, where the
public nature of the retail environment has been identified as a potential barrier to the access of services such as chlamydia screening by adult populations [183].

Evidence suggests that young people may also anticipate negative responses from healthcare personnel regarding their health issues [26, 184-186], and whether projected or actual [185], that these perceptions are a key barrier to young people’s utilisation of primary health services. Gleeson et al [26] identified the main barriers to accessing primary healthcare for youth in the UK as confidentiality concerns, embarrassment and healthcare personnel who were perceived as unsympathetic, and suggested training for healthcare providers in addressing these issues. Qualitative studies have also indicated that adolescents may be reluctant to engage in discussion regarding personal or sensitive health issues with GPs and nurses, or to ask questions that reveal poor adherence to health advice or treatment [123, 184]. Health service support staff encountered by young people such as GP receptionists may also have a role in determining healthcare access [187], and there is some evidence to suggest that experiences of poor treatment or lack of respect may result in negative perceptions of health services by youth [26, 154].

Embarrassment and awkwardness may cause young people to prefer minimal interaction with health professionals if possible when accessing services for sensitive issues such as contraception [181]. However, studies have highlighted that this may not be in their best interests in the long term, and that it is important that barriers in service delivery are addressed to ensure that young people receive contraceptive advice at this point of contact [188].

**2.4.3.5. Privacy and confidentiality**

Research collated over more than two decades has provided compelling evidence that the protection of young people’s privacy and confidentiality increases the likelihood that they will access and receive needed healthcare [147, 178, 189-191], which the findings of NZ studies have echoed. In their analysis of Youth’07 data, Denny et al [137] found that of the students who had accessed healthcare in the previous 12 months, only 27% reported receiving private and confidential services from their primary care provider. Furthermore, the prevalence of unmet health needs was higher among students who had not been offered confidential care, particularly with regards to sexual, emotional, or substance use issues [25].

Although young people have a right to confidential care under the UNICEF Convention on the Rights of the Child [192], evidence suggests that confidentiality as a barrier to youth healthcare access relates primarily to concerns that healthcare professionals will inform parents or carers
of risk taking behaviours or sexual activity [147, 193]. For example, one survey of US secondary school students found that less than half were aware that their GP could provide private health services [190]. There have been many calls for healthcare professionals to explicitly explain and reassure young people of their confidentiality rights during consultations [147, 178, 189, 190, 194-196], however, other research suggests that this may have limited success in allaying their fears. A study investigating young people’s understanding of confidentiality in a healthcare context before and after explanations were provided demonstrated that although understanding improved, many young people still believed that healthcare providers would inform parents of pregnancy, homosexuality, if they were sexually active or receiving contraception, or if they had been tested or treated for an STI [197]. Such findings have led to suggestions that for youth, privacy and confidentiality concerns appear to be as much related to lack of trust as to lack of understanding [198].

A consistent theme throughout research exploring the perspectives of healthcare professionals on the provision of services to youth is that confidential care may sometimes be challenging to deliver in practice [199]. As well as the difficulties of parental presence during consultations or their involvement in payment for health services, many clinicians report experiencing internal conflict with regards reconciling the provision of confidential care with family values, and may view facilitation of communication with parents to be in the best interests of young patients [191, 200]. Some may also feel that the legislation pertaining to minors puts them in difficult position; for example, although young people have the right to access confidential sexual healthcare at any age, provision of services to those below the legal age of consent may be regarded as an ethical dilemma by some healthcare providers [201, 202]. There is some evidence to indicate that the personal views healthcare personnel hold regarding youth health issues influence the care they provide to this age group, and may affect youth healthcare access [203, 204]. In the context of community pharmacy, several studies investigating the supply of emergency contraception to adolescents (both prescribed over the counter) have reported that requests from young people may be handled differently compared to adults [205-208], confidentiality may be breached [206], and in some cases that young people have been treated poorly or refused access to this service [205-208]. However, as the majority of this literature originates from the US where religious and social attitudes towards contraception are likely to be an important factor, it is uncertain how applicable such findings are to current pharmacy practice in NZ.
Many community pharmacies in New Zealand, now have private consultation areas [209]. NZ-registered pharmacists are professionally obligated to provide services in a confidential manner under the Pharmacy Council code of ethics [210], and are legally obligated to maintain confidentiality under the Health Information Privacy Code [211]. However, the legislation is complex and includes several exceptions where information may be disclosed without specific authorisation from the individual concerned, such as when might be necessary to prevent harm. Rule 11 of the Privacy Code indicates that information may be disclosed to the individual’s representative (specified as their parent or guardian if they are under the age of 16) where the individual is ‘unable to exercise his or her rights’ [211], but does not elaborate upon what this might mean in relation to young people. Legislation pertaining to the provision of informed consent to medical treatment (including pharmacy products and services) outlined in the Code of Health and Disability Services Consumer’s Rights [212] specifically avoids age-related thresholds to define competence, stating that;

‘The question of competence hinges not on the age at which a child may validly consent to services, but rather whether the level of understanding of a particular child enables him or her to consent to particular services.’

Whilst this position supports the autonomy of young people to make their own healthcare decisions where they are competent to do so and recognises that this may vary depending on their level of psycho-social development, little guidance is provided regarding how to assess competency, which remains at the discretion of the healthcare provider. The above statement is also contradicted by the licensing requirements of many OTC products available through pharmacies such as ECP and NRT, which, as we have discussed, are not licenced for sale to those under 16 years of age in NZ [110]. There is little published research which has investigated the perspectives of pharmacists regarding legal or ethical issues in the provision of products and services to young people. The views of pharmacy support staff on this topic appear largely unexplored, even though they may be the first or only staff member encountered by customers (including young people) visiting a pharmacy [213].

2.4.4. What do young people want from their health services?

When young people are consulted about how health services could be improved to be more youth-friendly, some consistent themes emerge. As we have discussed, many young people would like more information about the health system, how to access services, and what is available in their local area [156]. Flexibility regarding appointment times and drop in services
are frequently requested [167, 168, 214, 215], and confidentiality is extremely important to young people [137, 178, 182].

In addition to these suggestions, young people also emphasise that the ability of healthcare professionals to empathise, engage and communicate with this age group is essential, as it may influence their intention to seek help as well as their perceptions of the quality of care they receive. In a qualitative study exploring the recommendations of young adults with long term conditions regarding the transition from child to adult services, participants highlighted key issues to address in the development of services for youth [216]. These included staff consistency, civility, provision of age-appropriate health information, and support which contextualised young people’s health in relation to emotional, social and developmental needs. Similar findings were reported in a focus group study with Australian young people, which concluded that ‘health education must enable (empower!) young people to make wise choices for the future. Young people desire a whole lifestyle approach to health rather than the traditional model based on diagnosis and disease’ [186]. In response to such feedback, a number of youth-specific health centres or ‘youth one stop shops’ (YOSS) have been developed in NZ, and there is a growing youth speciality with healthcare professionals undertaking further training in youth health and communication skills [68]. Youth one stop shops are named as such because they combine various youth health and wellbeing services under one roof, including sexual health, mental health and counselling, support for reducing drug, alcohol and smoking, as well as general primary health services. They are also frequently connected to youth recreation centres with additional facilities such as skate parks, employment services and mentoring [168, 214, 215, 217]. There are currently 13 YOSS across NZ which receive varying amounts of government funding [217]. Evaluations indicate that they have increased youth healthcare access and improved health outcomes for young people in NZ [214, 215].

Young people frequently rate interpersonal skills such as honesty, respect and attention to pain as more important in their judgments of quality than clinical aspects of care [128, 155, 186]. Although limited by the small number of respondents, these findings were echoed by a survey of young people attending NZ’s largest children’s hospital, which indicated that both young people and their parents rate honesty, confidentiality, and good listening skills as the most important qualities for a healthcare provider to have [125]. Comparisons of youth and provider perspectives, however, indicate that healthcare professionals may not always be aware of these preferences. For example, Australian youth health researchers compared the
perspectives of young people to those of GPs, community health centre staff and youth health workers regarding views on health concerns, access barriers and ideal service model [148]. The young people and service providers interviewed appeared to identify similar health concerns as priority issues for the youth population and there was some degree of congruence in views on ideal service models, however, the authors reported discrepancies between perceptions of youth healthcare access barriers. Whilst service providers placed high importance upon practical or structural barriers such as opening hours, appointments, cost and transport problems, young people tended to view these as less important than awareness of services, confidentiality concerns and embarrassment. Similar findings were presented in a large UK study which reported a ‘gulf’ between young people’s views about healthcare and the opinions held by primary care providers [185]. Such research is important in highlighting that providers may not always understand the difficulties young people experience in accessing health services, and perhaps help to explain why so few initiatives have been able to achieve demonstrable increases in young people’s use of services or improvements in youth health outcomes [149].

2.5. Community pharmacy’s role in youth health

2.5.1. Introduction

This section of the literature review explores the role of community pharmacy in youth health and the potential for pharmacies to increase youth healthcare access. The findings were published in the journal Youth Studies Australia [218]. This article (written by the candidate as the lead author) is presented below unchanged with permission from the journal editors.

2.5.2. Youth-Friendly Pharmacies: Exploring the role of community pharmacy in providing healthcare for young people in New Zealand

Young people, those between the ages of 12 and 24 years [13], constitute around 20 per cent of New Zealand’s population [14]. Whilst the health of New Zealanders overall is improving, this improvement has been much slower in youth populations when compared with other age groups. For example, rates of mental illness, alcohol and drug use, and sexually transmitted diseases are highest in this age group [11]. Furthermore, youth suicide and teenage pregnancy are more common in New Zealand than in other countries with similar socio-economic status [11], suggesting that more needs to be done to address these issues. As
providers of primary healthcare, pharmacies have a responsibility to respond to these unmet health needs.

Research conducted in other primary healthcare sectors has identified access issues as important barriers to young people receiving healthcare [26]. Although pharmacies are potentially one of the most accessible primary healthcare facilities available to young people, the role of community pharmacy in the delivery of youth-appropriate healthcare is relatively unexplored. Community pharmacies are defined as pharmacies providing products and services from pharmacy retail outlets (shops). In developed countries, as well as developing countries, pharmacies of this type exist in most cities and towns, and many other locations, including rural areas. A review of reproductive health services provided through pharmacies recognised that the physical accessibility of community pharmacies could potentially increase sexual healthcare access for young people [32]. Some of the advantages discussed in the review included that pharmacies are easy to get to, have convenient opening hours, there is no need to make an appointment, and there is no consultation fee.

Young people often underestimate health problems, and are consequently reluctant to seek medical help because they feel that the matter is too trivial [219]. Pharmacies offer an alternative service for young people with minor ailments which can be treated with over-the-counter medication (i.e. not requiring a prescription from a doctor). Where referral is necessary, pharmacists can offer advice and information.

This accessibility could also provide opportunities for health promotion activities and other services aimed at youth. Young people may visit a pharmacy for help with minor medical conditions or to purchase cosmetic products, and these encounters could provide a good opportunity to engage in health promotion material and provide information. For example, a young person purchasing after-sun lotion could be provided with information about skin cancer prevention.

Community pharmacists and pharmacy staff come into contact with young people through routine activities such as dispensing prescriptions and selling over-the-counter products, and it could be argued that these activities alone necessitate the need for a sound understanding of youth health issues. However, the role of community pharmacy in New Zealand has changed over recent decades, and is set to change further [220]. Traditional roles such as pharmaceutical compounding (e.g. making creams or lotions to treat skin conditions) have decreased significantly. Whilst prescription dispensing still constitutes a large proportion of
their workload, many pharmacists are keen to expand into other roles which utilise their knowledge and clinical skills. A study investigating New Zealand pharmacist’s attitudes towards extended clinical care roles found that 60% of those surveyed felt the future of pharmacy would depend on services other than dispensing [221]. Many pharmacies now offer an increasingly wide range of new health services that are relevant to young people. Therefore, the role of pharmacy in relation to youth health issues must be considered in the context of the industry’s changing role, as this could present new opportunities.

For example, the New Zealand Ministry of Health has identified several priority areas for youth health which are relevant to pharmacy, including sexual health, obesity, and alcohol and drug use [22]. At the same time, new pharmacy roles are being developed in these areas, including supplying emergency hormonal contraception [222], chlamydia screening [34, 223, 224], weight management services [36], and smoking cessation services [35]. There is therefore potential to improve healthcare access for young people, but pharmacy is so far lacking a youth health focus. This paper explores current services offered to young people, potential opportunities for community pharmacy to provide youth-appropriate healthcare, and some of the barriers identified by the literature to date.

2.5.3. Health promotion

Pharmacists registered in New Zealand have a professional responsibility to promote healthy lifestyles, as described in the New Zealand Pharmacy Council’s Code of Ethics [210]. Community pharmacy has made a significant contribution to improving public health, most notably with smoking cessation and emergency hormonal contraception services [225].

2.5.3.1. Smoking cessation

Most adult smokers start smoking and become addicted in their teenage years. Prevalence (including smoking during pregnancy) is highest amongst the youth population [11], and there is a need for smoking cessation services for young people. Many community pharmacies offer smoking cessation services, including treatment plans and counselling as well as nicotine replacement therapy. A Cochrane review evaluating the efficacy of community pharmacy smoking cessation programmes internationally [35] confirmed that behavioural interventions made by pharmacists or pharmacy staff increased abstinence rates compared to control groups. However, we could find no reports of pharmacy smoking cessation programmes specifically targeted at young people.
**2.5.3.2. Sexual health**

Many of the international developments for health promotion and disease prevention in community pharmacy have centred around sexual health. These services are very relevant to young people in New Zealand, who are at higher risk of sexually transmitted infections and unintended pregnancy [11, 140]. Emergency Hormonal Contraception (EHC) is available for sale without prescription from accredited pharmacists in New Zealand. This has been an important development in community pharmacy over the last decade and a review of international literature indicated that pharmacy sale of EHC seems to have been generally well received by the public as well as by pharmacists [222]. There were concerns that opportunities for referral for other sexual health needs, such as contraception and sexually transmitted infection (STI) screening, were being missed when EHC was obtained from pharmacies. This problem was investigated in a survey of 15-25 year olds who received EHC from pharmacies in Washington, USA [226] which found that 81% of participants required referral for contraception or STI evaluation, but, of these, over one-third had risk factors in relation to not receiving this care (such as repeated use of EHC). However, many participants reported that if the pharmacy service had not been available they would have waited to see if they got pregnant instead of seeking help elsewhere. Thus the authors concluded that the consultation actually represented an entry point into the health system for adolescents who might not have accessed care at all. Participants reported that convenience and privacy were two of the most common reasons for using the pharmacy. There was great satisfaction with the service, with 94% saying that they would recommend it to a friend. This overwhelming support for pharmacy EHC access was also reported by consumers interviewed about their experiences in Europe [227] and the UK [228].

There have also been a number of studies piloting the feasibility of chlamydia screening through pharmacies. For example, a Dutch study that supplied young women with test kits when they collected their regular contraception from pharmacies detected chlamydia in 14% of respondents aged 15 to 24 [224]. The authors suggested that pharmacists could contribute positively when provided with appropriate treatment referral pathways.

Pharmacists in two UK pilot studies [34, 223] offered chlamydia testing kits to young women requesting EHC, who could return for treatment with azithromycin (an antibiotic made available over-the-counter) following a positive result. Sexual partners were also contacted and treated, posing important ethical and logistical implications with regards to confidentiality. Some problems were experienced in the larger pilot study [34] in which test kits were offered to only
a quarter of eligible clients because pharmacists were worried about causing offence [183]. This may be a misperception, since clients surveyed in the earlier study [223] reported positive experiences, and valued the friendly, non-judgemental approach of the pharmacists. Interestingly, pharmacists were much more likely to offer kits to younger clients [183], which perhaps reveals some of their attitudes towards and beliefs about young people.

The UK’s Condom-Card (or C-Card) scheme is an initiative designed to promote safe sex in young people by removing the barriers of cost and embarrassment that may inhibit them from obtaining condoms [229]. After attending a consultation with a youth health worker, young people are issued with a wallet-sized card which they can present in pharmacies in order to obtain free condoms without having to ask for them over-the-counter. Participating pharmacies displaying the C-Card logo are supplied with stock and sexual health promotion material to disseminate. Unfortunately the programme has not yet been well evaluated in terms of health outcomes or client experience.

2.5.4. Managing chronic health

Many of the interactions between pharmacists and young people occur when pharmacists provide advice about prescribed medications and related queries. A survey of US pharmacists reported that over half felt they needed more training in youth health issues [206], suggesting a lack of confidence in interactions with adolescents, particularly in regard to issues of consent and confidentiality.

Young people’s adherence to medication for chronic conditions can often be erratic, and many explanations have been posited [50, 219]. Young people’s capacity for abstract thinking is still developing [58], which means that age-appropriate explanations and communication styles are important. For example, young people may not appreciate the benefit of preventative medication if they are not presently experiencing symptoms. As responsibility shifts from the parents to the adolescent themselves, they may simply forget to take their medication, or they may underestimate or ignore the severity of symptoms. Treatment regimens may not fit in with social activities, or may produce cosmetically unacceptable side effects which young people do not tolerate as well as older people. An intervention or discussion with a pharmacist represents another opportunity for these potential problems to be recognised and resolved.

Medicine management interventions like these may soon be performed by New Zealand pharmacists in the form of Medicine Use Reviews (MURs). Patients receiving regular medications are identified from patient medication records and invited to participate in a
consultation with the pharmacist to identify medication problems. Unfortunately, MURs are usually directed at patients taking three or more medications, and typically tend to be reserved for older individuals [230]. These criteria exclude a significant proportion of chronically ill young people, despite the clear potential for MURs to be of benefit in all age groups.

Pharmacists are also becoming more involved in disease management and, although still in their developmental stages, many studies have been able to demonstrate benefits in terms of improved health outcomes [231] and cost savings [232]. Much of this research has focused on asthma and diabetes. Again, even though these are common conditions in young people, (asthma affects one in eight young people in New Zealand and diabetes one in every 150 [140]) few pharmacy studies have focused on young people with these diseases. For example, research into the role of pharmacists in the management of diabetes has so far been limited to Type II diabetes [233] rather than Type I which is usually seen in young people.

A pharmacist asthma management service was piloted in a study conducted by Otago University in New Zealand’s South Island [234] in which pharmacists were trained to provide monthly consultations for established asthma patients. They identified medication-related problems and initiated interventions to resolve them over the course of a phased, two-year programme. The majority of interventions were compliance-orientated and included devising asthma action plans, providing medication counselling for patient education and referral to a medical practitioner where necessary. Using the patient’s baseline measurements as a control, the study demonstrated significant improvements in asthma management, including improved quality of life. Just over one-third of the patients recruited were less than 17 years old and around half had been diagnosed within the last 10 years, suggesting that the intervention performed well in younger age groups.

Pharmacists have also been involved in youth-focused asthma education. A study in rural Australia investigated the feasibility and impact of a pharmacist-led asthma awareness campaign [235]. Principles of youth development and community engagement were incorporated, as pharmacists were trained to facilitate outreach programmes to improve asthma knowledge in the community. Pharmacists visited local schools, where they trained 15 and 16 year old students to become asthma peer-leaders. Some of the young people from this phase were also involved in producing educational performances for public asthma forums facilitated by the pharmacists to promote community discussion about asthma issues. A validated asthma knowledge assessment tool showed an improvement in asthma awareness amongst the school students in the intervention group compared to a control group. This study
demonstrates the potential for pharmacists to become more involved in outreach activities, which should be investigated further, particularly since research conducted in New Zealand has indicated that outreach services have been suggested by young people as a method to increase their access to healthcare [168].

2.5.5. How can pharmacies become more youth-friendly?

Driven by the HIV/AIDS pandemic, several charitable organisations in developing countries have seen potential for community pharmacies to become more youth-friendly. They have focused on removing the barriers to young people’s use of pharmacies so as to increase access to sexual and reproductive health services. The ‘Reaching youth through pharmacies’ project in Africa [236] developed two interventions: training resources for pharmacy staff and a discreet advertising campaign with the “green Y” logo to promote the youth-friendly pharmacy services to young people. Useful example materials are available online in their ‘Youth-Friendly Pharmacy Implementation Kit’ [237]. Two similar projects have also trained pharmacy staff and developed targeted advertising to promote youth-friendly pharmacies in Mexico [27] and Bolivia [28], but with some important differences. In Mexico, researchers collaborated with the Mexican Ministry of Health and other stakeholders to facilitate implementation and ensure sustainability [27]. The organisers have reported the project as successful based on evaluation using mystery shoppers, but details are limited. The ‘Youth-Friendly Pharmacies in Bolivia’ project [28] took a different approach by concentrating on the engagement of young people in the community rather than stakeholders to facilitate its development and delivery. Adolescents contributed towards the pharmacy training and negotiated how services should be improved in a process termed “youth-defined-quality” by the authors. Evaluation surveys demonstrated improvements in the quality of service provided, increased numbers of young people visiting the youth-friendly pharmacies, and a fivefold increase in condom sales. This study was one of only two identified in a review by Tylee et al. [149] as having measurably increased adolescent’s access to healthcare. Although the concept of youth-friendly pharmacies has received little focus in developed countries, such research may be relevant to young people in New Zealand, who are at high risk of sexually transmitted infections and unintended pregnancy [11, 140].

In a preliminary focus group study which informed the Mexican project [31], young participants were asked to define what the term “youth-friendly” meant to them in the context of community pharmacy. The themes in their responses indicated that they thought youth-friendly pharmacists needed to be:
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- **advisors**: on contraceptives who can be consulted on this complex subject
- **trustworthy**: to listen to doubts and problems of adolescents
- **empathetic**: listeners who understand adolescents and their problems and put themselves in their shoes
- **courteous**: to adolescents; does not reject or mock
- **youthful**: because adolescents trust people who are young
- **quick solvers**: of immediate problems that adolescents may present

These findings suggest that “attitudinal” barriers may be very influential upon young people’s use of pharmacies, a theme also seen in Gray’s [29] exploration of the UK government’s youth health strategy [238] in the context of community pharmacy. In Gray’s article, three young women interviewed about their experiences of using pharmacy services identified issues including a lack of publicity and awareness of services available, a lack of confidence that confidentiality would be ensured, and the discouraging impact of negative or judgemental attitudes of pharmacy staff. These comments echo the findings of Conard et al.’s survey [206] conducted several years earlier, which identified confidentiality issues and age discrimination as potential barriers to young people’s use of pharmacies. Both papers recommended training and education of pharmacists and pharmacy staff to overcome these problems. More research is needed to explore these issues in the New Zealand context, since they are influenced by cultural attitudes towards youth and local legislation governing the delivery of healthcare to this age group.

2.5.6. Is pharmacy leaving young people behind?

Despite many international developments in the provision of youth-relevant healthcare from community pharmacies, potential opportunities for community pharmacy to improve the health of young people in New Zealand are being missed because the profession may not be actively considering youth health issues in the development of new roles. This situation has also been highlighted by youth-health and pharmacy practice specialists. In a review article Gardner and Oftebro [30] support pharmacists as partners in the care of adolescents and suggest how their developing clinical and public health roles can be utilised to improve youth health outcomes in areas such as asthma management and contraception. Similarly, Gray [29] identifies several areas which could potentially benefit from pharmacists’ involvement, including
transitioning of young people from child through to adult services, contraception, smoking cessation and weight management. More research is needed to explore how young people currently use pharmacies in New Zealand, what barriers exist and how these can be overcome. We believe there is untapped potential for community pharmacy to improve healthcare access for young people, and this issue deserves investigation. However, while research on the development of pharmacy services for young people is likely to be carried out by adults, it is essential for it to be youth informed with young people as research partners in this process.

2.6. Update on the literature since 2010

Since the publication of the paper presented in the preceding section, the role of the pharmacy profession in NZ has continued to evolve, with the development of further preventative, screening and medication management services in community pharmacies [239]. This section provides a brief overview of relevant developments in pharmacy practice research since the publication of the above paper at the end of 2010.

2.6.1. Developments in pharmacy-based sexual health services

Internationally, there has been some research conducted to evaluate the C-Card scheme from the perspectives of young people, and this service has also now been piloted in NZ. A qualitative study exploring the views of 17 nurses and pharmacy personnel involved in piloting the C-Card in NZ’s Hawke’s Bay reported broad support for the scheme [240]. Some attitudinal barriers were identified, however, including a lack of advertising where promotion of the scheme through schools had not been supported, and some evidence to suggest negative treatment of young people by pharmacy service providers in a minority of cases. Participants also speculated upon barriers to young people’s willingness to use the scheme such as concern about being recognised in the pharmacy or reluctance of young males to approach female staff. However, the authors highlight that research to investigate young people’s actual views and experiences of the scheme is essential. One UK study undertook this using a combination of focus groups, questionnaires and monitoring data to investigate the scheme’s effectiveness at improving young people’s sexual health literacy as well as access to condoms [241]. The findings concurred to some degree with that of the NZ study in that participants felt that the scheme needed to be better advertised to increase utilisation. The study provides evidence to suggest that the scheme is effective in increasing young people’s access to and knowledge of sexual healthcare, and youth consulted appeared to view it positively. Possible
limitations of these findings may be that only young people using the service were included in the sample, and by the relatively small number of participants (two focus groups and 55 questionnaires).

There have also been further pilots and evaluations of chlamydia screening in community pharmacies. A systematic review of pharmacy-based chlamydia screening conducted in 2013 analysed 12 studies drawn from the Netherlands, US, UK, Scotland and Australia [242]. Two main recruitment methods were identified. In some studies, pharmacists offered chlamydia tests as part of sexual health-related consultations, whilst in other studies customers could request chlamydia tests as part of a sexual health-promotion campaign. The former method relies upon pharmacists proactively offering tests, and the authors suggest that this may have increased testing of individuals who would not otherwise have been inclined to access this service. In most cases pharmacists reported selectively offering tests only to those they perceived as being at high risk, which frequently included young people. The majority of such screening opportunities occurred in relation to ECP consultations, and therefore generally excluded males. These results were similar to those of another systematic review, which also reported that pharmacists were reluctant to offer tests, and that those accessing chlamydia testing through pharmacies tended not to include men and ethnic minorities [243]. Since government funding for blanket screening as part of sexual health campaigns is costly, the authors of the 2013 review recommend either; 1) opportunistic screening by pharmacists with education and training programmes to overcome selectivity, or 2) ‘private’ population-based screening where chlamydia tests could be purchased from pharmacies by any customer over the age of 16 years. However, the latter option risks decreasing youth access to chlamydia screening as a result of the age limitation and cost barriers. One study highlighting this debate was an Australian pilot which offered a $10 cash incentive to young people accessing chlamydia testing through community pharmacies. Although this approach is unlikely to be feasible at a national level, it was unsurprisingly well received and 60% of questionnaire respondents reported that the payment did incentivise them to get tested [244].

2.6.2. Developments in pharmacy health promotion activities

Research regarding provision of pharmacy-based weight management services since 2010 has demonstrated mixed results in terms of consumer perspectives [245, 246] and cost effectiveness [247], although there is further evidence to show that interventions delivered through pharmacies are as effective as those provided in other primary care settings [247, 248].
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Results of a study surveying the views of over one thousand members of the Scottish public indicated that whilst participants agreed that it was easy and convenient to access weight management services through a pharmacist, many were unaware that these services were available, did not perceive pharmacists to be knowledgeable about this area, or would not feel comfortable speaking about weight related issues over the counter [245]. A further barrier identified by a survey of Australian consumers was that most pharmacy customers considered there to be a conflict of interest where pharmacies stood to profit from the provision of advice related to weight loss products [246]. Barriers identified by pharmacy personnel include a need for reimbursement to compensate for the additional time and staff required to provide weight management consultations [249]. No further research appears to have been conducted in NZ, where services remain predominantly product-orientated.

NZ researchers have been exploring the role of community pharmacy in alcohol health promotion. It has been suggested that such activities might involve screening for hazardous drinking behaviour using a short tool such as the validated Alcohol Use Disorder Identification Test (AUDIT-C) and provision of brief interventions to reduce harm [250]. International research has indicated this to be feasible, relatively low cost, and effective at reducing alcohol consumption in hazardous drinkers [251], although evidence of effectiveness in the NZ population has not yet been established [252]. Attitudes of pharmacy customers in the UK [251] and NZ [252] regarding these activities appear to be generally positive. However, various barriers from the perspectives of pharmacists in these countries have been described, including concerns about offending customers, lack of experience or confidence, time and remuneration [38]. Research indicates that training on screening and brief interventions for hazardous drinking may help to improve pharmacists’ knowledge and address some of these issues, although attitudes towards drinkers remained influential upon the number of alcohol interventions delivered [253]. These developments are of relevance to NZ youth who are estimated to have the highest hazardous drinking rates of any age group in NZ [112].

2.6.3. Developments in pharmacist-led medication management services

Systematic reviews of research conducted since 2010 have provided further evidence to suggest that pharmacist-led medication management interventions for long-term conditions improve health outcomes [254, 255], although it has been suggested that evidence in the community pharmacy setting may be more limited than in the hospital setting [256]. There are further studies to demonstrate positive health outcomes following pharmacist-led initiatives to improve medication management in patients with asthma [257-259] and diabetes [260, 261],
however, there still does not appear to have been any research to investigate efficacy in youth populations specifically.

One of the major developments for community pharmacy in NZ over recent years has been the introduction of Long Term Condition (LTC) service [262], whereby government funding for pharmacy has been restructured to allow commissioning of support services for patients at risk of medication management issues. Eligible patients are identified automatically from pharmacy patient records using flagging criteria, such as the number of medications being taken by the individual and how many conditions they are affected by. This means that young people may be inadvertently excluded, as they are less likely to be taking large numbers of medications for multiple conditions. In the light of new research such as a study which estimated that up to 60% of youth affected by side effects of psychotropic medications were non-adherent [263], this service model undoubtedly requires review.

2.6.4. Developments in mental health services provided by pharmacies

Mental health is an area which has received increasing attention from pharmacy practice researchers in recent years. There is evidence to suggest that pharmacy-based interventions can improve adherence to schizophrenia medications [264], collaborative prescribing roles for pharmacists in mental health managing have been explored [265], and roles for community pharmacy in mental health promotion have been proposed [266]. Pharmacists interviewed in a qualitative study in NZ [267] suggested patient education and medication management interventions as possible roles for the profession in this field. Challenges identified included poor mental healthcare inter-professional linkages and inadequate patient contact time. Service user perspectives were explored in qualitative interviews with 74 Australian mental health consumers and caregivers [268]. Results indicated that although some participants considered the role of community pharmacy in mental health to be limited, those with a regular pharmacy who had established relationships with pharmacy personnel supported development in this area. Elements of patient-centred care were found to be essential to this, and the authors recommend additional education and training for pharmacists to facilitate the development of mental health roles. For example, one study evaluating the provision of a ‘Mental Health First Aid’ training intervention for pharmacy students was able to reduce their stigmatisation of mental health issues, increase their recognition of mental disorders and improve their confidence in providing services to customers with mental health conditions in the community pharmacy setting [269]. Mental health first aid training for pharmacists and
pharmacy support staff is now one of the eight Community Services Support elements provided by pharmacies in Australia through the new Community Pharmacy Contract [270].

There appears to be potential for community pharmacy to engage positively with interventions to improve mental health and roles in this area are being explored. Given the threat mental health issues pose to youth health and wellbeing [75], young people should be a priority target population for future research in this field.

### 2.6.5. What the updated literature adds

The developments in pharmacy practice summarised in this section support the conclusion that there may be potential for pharmacies to improve youth health, and provide further evidence to strengthen the rationale for the present research. No additional studies appear to have investigated the role of pharmacies in provision of youth healthcare specifically since this date, except for the research conducted for this thesis which are presented in subsequent chapters.

### 2.7. Chapter summary

This chapter has reviewed relevant literature on the key health priority areas affecting the youth population in NZ and barriers to healthcare access experienced by young people. The accessibility of pharmacies and the changing scope of pharmacy practice suggest there may be a role for community pharmacy in meeting these health needs. The next chapter presents the theoretical and methodological approaches this thesis has used to explore this hypothesis.
Chapter 3. Theoretical Framework and Methodology

3.1. Introduction

Historically, the health sciences (including pharmacy) have been associated with the collection and analysis of empirical or quantitative data, and because research was regarded as the objective deduction of facts or knowledge there was often little reference to the subjective epistemological positioning or theoretical perspectives of the researcher [271]. However, as healthcare has moved to integrate holistic and patient-centred approaches, more research has investigated the views and experiences of patients. In their quests to explain human behaviour, health researchers have utilised methods and theories originating from the social sciences (such as interpretive approaches) and have recognised the need to reflect upon and define the beliefs, values and assumptions they may bring to the research process [272].

Authors who discuss theoretical frameworks in research design appreciate the importance of defining the values underpinning the researcher’s approach, because of the importance of these values in informing the selection of methodologies and methods [273-275]. Various models have been proposed to demonstrate this relationship, [273] and a mixture of terms have been used including ‘paradigms’ [276], ‘worldviews’ [275], and ‘epistemologies and ontologies’ [277]. Crotty [277] proposes a hierarchical model to show the praxis or translation of theory through the different levels of research design (Figure 1; adapted from The foundations of social research: Meaning and perspective in the research process [277]). This model will be used to explain the levels of theory which frame this thesis. Before exploring this relationship, it is important to define the terms used.
3.1.1. Epistemology

The term epistemology defines the researcher’s beliefs and assumptions regarding the nature of ‘knowledge’ and how (or whether) a phenomenon can be ‘known’. There are many different philosophical perspectives on epistemology, and in the context of research, each is associated with a set of assumptions and traditions which may be termed a research paradigm. Such assumptions and traditions tend to align with what is largely accepted as best practice amongst experts in the discipline at that time. Thus, contemporary developments in research techniques, philosophy, and the critique of old approaches may result in the emergence of new research paradigms, or new ways of knowing.

It is beyond the scope of this thesis to define and describe the myriad epistemological research paradigms available. However, a brief overview of some of the major movements and a discussion of their main advantages and limitations will be provided here in order to describe the theoretical positioning of the thesis and rationalise the approach taken.

3.1.2. Positivism

The positivist paradigm is commonly associated with quantitative research [275], for example using experimental or statistical techniques to deduce the likelihood of a hypothesis being true or false. The aim of positivist research is often to generate generalisable laws which can then
be used to predict the likelihood of a phenomena occurring or, (in the context of public health) whether an intervention is likely to result in the desired outcome. However, general laws may not be applicable to minority groups or situations. The reductionist philosophy of removing or minimising factors which may introduce bias risks lack of reproducibility when applied in the complexities of the real world. Furthermore, the emphasis of objectivity has raised unresolved questions as to whether research can (or should) be ‘value-free’. Such limitations have led to widespread criticism of the positivist approach [271].

3.1.3. Interpretivism

In contrast, the interpretivist philosophies are most commonly associated with qualitative research [278]. Knowledge is considered to be a social construct which is subject to interpretation and will, therefore, be perceived differently by different individuals. Research conducted in this paradigm is often theory-generating, working to explain and unravel the social world in order to make sense of processes, structures and mechanisms [279]. Correspondingly, however, the findings of such research are also subjective and specific to the context in which they were conceived.

3.1.4. Pragmatism

Philosophical disputes between quantitative and qualitative researchers resulted in views that the two approaches could not be combined because this represented a mixing of contradictory objective and subjective epistemologies [271, 280, 281]. However, the pragmatic philosophy considers this dichotomous tradition unproductive and suggests that the theoretical framework, methodology and methods should be selected based on their suitability to the research questions and practical application [275, 280, 281]. Recognising that qualitative and quantitative paradigms have different strengths and limitations, many pragmatic researchers use a combination of the two in mixed-methods approaches [280, 281].

Both pragmatism and mixed-methods are still emerging as research philosophies [275]. Some have criticised pragmatic approaches and described them as ‘a Trojan horse for positivism’ [282], especially in strategies where qualitative data are used to ‘confirm’ or ‘validate’ quantitative findings [283]. In addition, it has been suggested that researchers utilising the pragmatist paradigm may not adequately address epistemological issues or justify the rationale for mixed-methods [284] and, therefore, that research conducted this paradigm may be lacking in critical reflection [283].
3.1.5. Critical realism

This thesis has been based upon the critical realist paradigm, which may provide a more robust rationale for mixed-methods research than pragmatism [285]. Critical realists reconcile the “false oppositions between objectivism and subjectivism” [286] by reconsidering the importance of delineating between ontology and epistemology. Specifically, critical realists assume a realist ontological position (believing that there is a singular tacit reality), whilst recognising that each individual may perceive and experience this reality differently, resulting in multiple ‘experienced’ realities (a constructivist epistemological position) [287]. This essence of critical realist philosophy might be illustrated through the following analogy; a glass is filled to 50 percent capacity; is the glass half empty or half full? The amount of water in the glass may be real, fixed, and objectively measured, but interpretation and conceptualisation of it as knowledge is subjective.

Critical realist theory was developed by Roy Bhaskar [288-290]. In his first revolutionary work [288], Bhaskar describes three domains of reality: the ‘empirical level’, which comprises elements of reality which are experienced and known, the ‘actual level’, which comprises all components whether experienced or not, and the ‘causal level’, which comprises the (often invisible) mechanisms and structures which affect reality. It is this causal level upon which research frequently focuses [291], as researchers attempt to define laws which may predict patterns or outcomes, or describe social structures and mechanisms which explain differences between the actual and empirical domains of reality [286].

In this way, critical realism takes a very broad view of reality, considering elements which may be physical or measurable, the multiple perspectives of reality perceived by different individuals, and the social, historical, cultural and economic structures within which reality is set. Bhaskar suggests that all of these factors coexist and interact as part of a dynamic open system such that, although individual laws and theories may contribute towards explaining components of reality, they may never fully explain or predict phenomena [288]. This is complex, but critical realists accept that reality is often very complex and therefore a complex theory is required to explain it [286, 288, 291, 292].

Although utilised most frequently by researchers from sociology [286, 292], and management and business [293] backgrounds, critical realism has been suggested as an appropriate grounding for healthcare research [285, 287, 294] through its reconciliation of ‘factual reality’ with subjective experiences. For example, healthcare researchers may be required to consider
physical manifestations of a disease state or empirical population health data alongside the subjective perspectives of the individual patients and healthcare workers involved [294]. The critical realist paradigm accommodates this and provides scope for mixed-methods approaches which are being increasingly utilised in healthcare [271].

Furthermore, critical realism has been recommended as an appropriate paradigm for emancipatory research, since theories which attempt to explain social structure and mechanisms are likely to reveal inequalities [286]. Bhaskar advocates an ethical obligation for researchers to utilise information elucidated through critical realist approaches to develop interventions to address inequalities [290]. It has been suggested that the view of reality held by critical realists may aid the generation of theories with useful application in real world settings, and that the conceptualisation of reality as an open system enables scope for change or reform [295]. These concepts are relevant to the participatory methodology utilised for this these, which is described in section 3.3.

3.2. Theoretical perspective

3.2.1. The role of theoretical perspective in research

It has been suggested that whilst methodological decisions made by researchers may be underpinned by epistemology or beliefs about the nature of knowledge, the theoretical perspectives followed may be more related to the personal ethical values of the researcher [296]. In empirical research this may be considered as bias, and much effort may be invested in reducing personal influences or biases. In contrast, interpretive researchers suggests that no research can be ‘value free’, and instead support robust reflection upon and transparent discussion of the researcher’s theoretical perspective. In critical realism, theoretical perspectives may be used to help make sense of conceptual elements of reality such as social structures, or to elicit possible cause and effect relationships between events. They may also be used to provide possible explanations as to how reality is experienced and perceived differently by different people, or understand why some interventions do not result in the predicted outcome when applied in the real world. We will now briefly consider some of the theoretical perspectives upon which much youth health research and interventions have been based.
3.2.2. Zero tolerance

As been described earlier, many of the health issues affecting young people in developed countries such as NZ are connected with risk-taking behaviours. Historically, therefore, research and interventions in youth health have been directed towards risk-reduction strategies [95], targeting specific risky behaviours and associated negative outcomes such as unintended pregnancy, sexually transmitted infections, smoking, drug and alcohol use, obesity, and other areas such as youth delinquency and violence. Unfortunately, many of these ‘zero tolerance’ [95] campaigns have since been shown to be unsuccessful.

For example, Scared Straight was a ‘no-nonsense’ US programme which aimed to deter young people with social misconduct records and behavioural problems from repeat offending. Youth offenders were exposed to the harsh reality of prison life with prison visits and aggressive, confrontational presentations from inmates. It caught the imagination of the media, was well received by the general public and similar programmes were developed in the UK, Norway, Germany and Australia. However, subsequent evaluation of its effectiveness found that the intervention actually increased the likelihood that the young person would be convicted in later life [297].

Similarly, reviews of sexual health education programmes have also reported detrimental outcomes in some cases. DiCenso et al [298] conducted a systematic review of randomised control trials from North America, western Europe, Australia and NZ to evaluate the effectiveness of primary prevention strategies in delaying the initiation of sexual intercourse, increasing contraceptive use and avoiding unintended pregnancies. They concluded that whilst few of the interventions had any significant positive effects, those promoting abstinence resulted in an increase in unintended pregnancy rates.

DARE (Drug Abuse Resistance Education) programmes were a widely accepted and delivered intervention in schools in many European counties, the USA and Canada which aimed to reduce drug and alcohol use amongst adolescents. Local police officers were trained to deliver a knowledge-based package in a traditional lecture and assessment based teaching style. Despite being rolled out through school curricula on an international scale, it was later found to be relatively ineffective [63, 299]. Ennett [63] performed a meta-analysis of DARE programmes in the US and compared them against what they describe as ‘interactive’ programmes which focused on improving social competency using skill-building activities and peer-led teaching approaches. The authors suggest that these ‘interactive’ programmes were
more effective because they not only increased knowledge levels about substance use, but also helped to equip students with the skills to resist risky behaviour. They also suggest that the teaching styles used were more appropriate because the students could better relate to peers than to police officers. This was rationalised in the context of adolescents’ undeveloped capacity for abstract thinking, and perhaps offers an explanation as to why so many knowledge-based interventions have so far been ineffective [299].

3.2.3. Risk and resilience

The conceptual model of risk and resiliency in adolescence has been developing a growing body of research and interest for several decades [300]. This approach contrasts with the traditional risk-reduction interventions in that exposure to risk is assumed to be an inevitable phenomenon of adolescence [301]. Instead of focusing efforts on risk-reduction, resiliency research focuses on the identification and enhancement of protective factors which will help the individual resist or recover from risk-taking behaviour [66, 300, 301]. Risk and resiliency factors which have been shown by developmental researchers to influence adolescent development and long-term health and wellbeing outcomes [302, 303] are summarised in Table 4.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Resiliency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor expressive language</td>
<td>Social competence &amp; person skills</td>
</tr>
<tr>
<td>External locus of control</td>
<td>Internal locus of control</td>
</tr>
<tr>
<td>Lack of positive relationship with mother</td>
<td>Family connectedness and structure</td>
</tr>
<tr>
<td>Learning difficulties</td>
<td>Average (or higher) intelligence level</td>
</tr>
<tr>
<td>Changes of puberty</td>
<td>High self-esteem</td>
</tr>
<tr>
<td>Aggressive temperament</td>
<td>Sibling closeness</td>
</tr>
<tr>
<td>Poverty &amp; overcrowding</td>
<td>Spirituality</td>
</tr>
<tr>
<td>Lack of community engagement</td>
<td>Involvement in school/community activities</td>
</tr>
<tr>
<td>High stress levels</td>
<td>Caring adult other than parents</td>
</tr>
</tbody>
</table>

Luthar et al. discuss the difficulties in translation of the resiliency construct from psychological theory into practical applications [66]. One issue has been the dynamic interaction between risk and resiliency which has made resiliency interventions problematic to evaluate. Another has been the debate over resiliency as an innate characteristic as opposed to an adaptive
response [301]. Luthar et al. suggest a consensus in favour of the latter, which has important implications in the context of interventions to improve adolescent health [304]. The advantages of incorporating a resiliency-enhancing approaches into youth health interventions have been reviewed [70, 302], presenting numerous successful case studies to illustrate the potential for positive health outcomes.

3.2.4. Youth development

This thesis has been guided by a youth development (YD) theoretical perspective. The YD approach builds on risk and resiliency theory by promoting the engagement of youth in activities and environments designed to facilitate development of resiliency factors [303, 305]. Mechanisms through which YD programmes may aim to achieve this are summarised in Table 5 (adapted from Roth and Brooks-Gunn [306]).

Table 5 - YD programmes include skill-enhancing activities which promote resiliency

<table>
<thead>
<tr>
<th>Skill</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-social bonding</td>
<td>Mentoring</td>
</tr>
<tr>
<td>Cognitive competence</td>
<td>Academic support</td>
</tr>
<tr>
<td>Social competence</td>
<td>Group activities &amp; interactive discussion</td>
</tr>
<tr>
<td>Behavioural competence</td>
<td>Role playing</td>
</tr>
<tr>
<td>Emotional competence</td>
<td>Supportive counselling</td>
</tr>
<tr>
<td>Moral competence</td>
<td>Decision-making skills</td>
</tr>
<tr>
<td>Empowerment</td>
<td>Involving young people in the running of programmes</td>
</tr>
<tr>
<td>Self determination</td>
<td>Providing choices which allow autonomy</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Recognition and reward schemes</td>
</tr>
<tr>
<td>Self-confidence/esteem</td>
<td>Community showcasing of achievements</td>
</tr>
<tr>
<td>Identity formation</td>
<td>Encouraging untapped talents</td>
</tr>
<tr>
<td>Belief in the future</td>
<td>Career planning</td>
</tr>
<tr>
<td>Spirituality</td>
<td>Church involvement</td>
</tr>
<tr>
<td>Pro-social norms</td>
<td>Parental and peer bonding</td>
</tr>
</tbody>
</table>
Chapter 3 – Theoretical Framework and Methodology

YD recognises both the internal process at the level of the individual, as well as the external process at the level of organisations and society required for enhancement of young people’s health and wellbeing [307]. For example, by aiming to utilise young people as a resource rather than focusing on trying to externally ‘fix’ negative problems which society frequently associates with youth [47], YD aims to promote the development of competence and self-determination at the level of the individuals involved, whilst also supporting youth advocacy at a social level in the context of demonstrating the strengths of young people. To return to the glass analogy again, the YD lens used throughout this research has viewed the glass as half full.

Although YD is not exclusively health-orientated, it has been widely adopted as a framework to inform the development of strategies to address youth health issues such as unintended teenage pregnancy and drug and alcohol use. The CAS-Carrera programme was one of the first studies to produce robust evidence for the effectiveness of the YD approach, using a randomised control trial design [308]. The programme supported young people with risk factors such as economic deprivation, single-parent upbringing or those experiencing unemployment, substance use or domestic violence at home. Students participated in skill-building activities spanning five disciplines; job club, academic support, family life and sexuality education, artistic self-expression and sports. Where necessary they were also provided with access to mental health counselling and medical care such as annual health check-ups, STI testing and contraceptive advice. Support was sustained over a three year period and resulted in significant improvements in reproductive health outcomes, the most notable of which being a decrease in the incidence of unintended pregnancy by nearly 50 percent in the intervention group compared to the control who received no intervention.

The outcomes of many studies concur with these results, and the YD framework has been repeatedly reviewed as an effective approach in youth health as well as other fields [61, 307, 309, 310]. This has resulted in the principles of YD approaches being actively incorporated into youth health policies in many countries. Kreipe documents the adoption of YD throughout youth affairs research the USA during the previous decade [311].

Definitions of YD are often vague, fluid, and are still emerging [67, 306]. It is frequently discussed in terms of outcome goals for programmes and studies [307, 312, 313]. It has also been described as a translational theory which links theoretical ideologies (such as emancipation and empowerment) with positive outcomes for young people through the selection of appropriate methodological approaches [311]. YD has also been described a philosophy which aims to support and nurture the positive ways young people can contribute
to society [47, 314]. Most characteristically, this philosophy views young people as solutions rather than the problems, and treats youth as a social resource [313, 314]. In a healthcare context, this frequently involves the participation of young people in the development and design of interventions [61, 315]. In their review works of YD, Silbereisen and Lerner [316], Roth and Brooks-Gunn [306] and Denny [310] describe some of the various different approaches considered to fall within a definition of YD, presenting it as an umbrella term for a general philosophy or foundational theory. This is the capacity in which YD has been viewed in the context this research: that is, as the theoretical perspective underpinning the research design, methodology and methods used.

3.2.4.1. **Youth development as the theoretical framework underpinning this thesis**

The following definition of YD is offered as the guiding theoretical perspective of this thesis:

1. In order to be effective in reducing risky behaviour and promoting wellbeing in youth, programmes should aim to enhance protective factors by engaging them in activities that develop resiliency and life skills, and by promoting positive, supportive environments for this to occur.

New Zealand has been proactive in embracing the YD approach, with the development of the Youth Development Strategy Aotearoa (YDSA) [47], which is supported by the NZ Ministry of Health [22]. In 2003 the NZ Ministry of Youth Development was created to promote the national implementation of the YDSA. The document was developed with the collaboration of a youth advisory panel, and was informed by consultation with approximately 1450 young New Zealanders. Six key principles are identified:

1. Youth development is shaped by the ‘big picture’
2. Youth development is about young people being connected
3. Youth development is based on a consistent strengths-based approach
4. Youth development happens through quality relationships
5. Youth development is triggered when young people fully participate
6. Youth development needs good information

This research was designed to reflect the principles of YD outlined in the YDSA [47]. Table 6 outlines the planned application of the six principles in this research at the development stage.
### Table 6 - Aspects of the research plan relating to the 6 principles of Youth Development

<table>
<thead>
<tr>
<th>Principle</th>
<th>Aspects of Research Relating to Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth development is triggered when young people fully participate</td>
<td>This principle is the most developed aspect of the YD approach of this research. YAG members will be encouraged to participate as much as possible throughout. However, must be aware of their limitations (such as time) and the need for me to do the work for my own PhD.</td>
</tr>
<tr>
<td>Youth development is based on a consistent strengths-based approach</td>
<td>Putting confidence in the YAG to guide decision making for the thesis. Participation in the project will help to develop skills and strengths. Important that the reporting of research findings must also be strength-based and not focus on the negative connotations of youth.</td>
</tr>
<tr>
<td>Youth development happens through quality relationships</td>
<td>Research explores interactions between pharmacy staff and youth, and how these relationships can be improved. By involving young people in the research process we will be forming relationships with them, and must be conscientious of our responsibilities towards them. Trained facilitators will be present during the meetings and interviews to help out if one of the group members finds a discussion topic distressing. Contract will be drawn up between us and the YAG explaining our roles and expectations of each other.</td>
</tr>
<tr>
<td>Youth development needs good information</td>
<td>This principle can be supported by keeping YAG informed about the research and about how their ideas and suggestions are contributing. Building feedback loops into the research process is really important.</td>
</tr>
<tr>
<td>Youth development is about young people being connected</td>
<td>Plans for continuation of the social bonds and training opportunities arising from the young people’s involvement in the project will be very important. Organisation of a social event such as a meal or group activity as a thank you for the group members.</td>
</tr>
</tbody>
</table>
| Youth development is shaped by the ‘big picture’ | Development of an internet-based website like a Ning page that the group could use to keep in touch and communicate about future projects  
Pathways to connect the young people with the University for career and training opportunities |
| Research is based on a large body of youth health literature (national and international) describing what works for young people to explore application in community pharmacy  
Will view youth holistically by exploring potential role of community pharmacy in relation to wide range of health needs rather than isolated issues  
Quantitative studies will scope for potential at population level |
Chapter 3 – Theoretical Framework and Methodology

3.3. Research plan

Before exploring methodological considerations in relation to this thesis, it is necessary to provide a brief overview of the general research plan. The research reported in this thesis was made up of several sub-studies conducted to investigate different aspects of the research area.

2. Analysis of Youth’07 survey data

The University of Auckland’s Youth’07 study produced an extensive range of information relating to the health of NZ youth. This data was used to identify potential health needs or areas where there may be potential for community pharmacies to improve youth healthcare access.

3. Survey of pharmacies

A postal survey was used to collect information on the youth-friendliness of community pharmacies as a physical environment, describe the availability of pharmacy services which might be relevant to youth health, and the views of pharmacy personnel with regards to the appropriateness of services for youth.

4. Interviews with pharmacy personnel

Qualitative interviews were conducted with pharmacists and pharmacy support staff to explore their experiences and views on providing services to young people. Their perceptions on the role of pharmacy in youth health and potential barriers and facilitators in the development of services for this age group were explored.

5. Interviews with young people

Qualitative interviews were conducted with young people to explore their experiences and views on accessing healthcare through community pharmacies. Their perceptions on the role of pharmacy in youth health and potential barriers and facilitators in the development of services for this age group were explored.

6. Youth Advisory Group

A youth participation methodology was used in which a group of young people were consulted throughout the research process to guide the evolution and outcomes of the project. They had input into decision making at critical points, including planning and evaluation stages.
Chapter 3 – Theoretical Framework and Methodology

3.4. Mixed-methods methodology

As noted above, this thesis has used a variety of research methods, including both quantitative and qualitative approaches. Definitions of mixed-methods, multimethod and mixed research are still developing [317, 318], with debate over what authors mean when they describe ‘combining’ data obtained through different methods. Morse [319] and Bazeley [317] differentiate between mixed and multi method design at the point of data integration. Bazeley defines multimethod design as “when different approaches or methods are used in parallel or sequence, but are not integrated until inferences are being made” [317]. However, most authors suggest that mixed-methods research is more generally defined as that which uses both qualitative and quantitative techniques within the same programme of enquiry [271, 320, 321], and where studies are conducted within the same epistemological paradigm [317]. Therefore, this thesis is appropriately defined as mixed-methods research.

3.4.1. Challenges in mixed-methods research

Apart from the paradigmatic contests posed to mixed-methods by audiences which do not accept the ‘what works’ approach of pragmatic researchers [282, 322], the major challenges faced by researchers intending to use both qualitative and quantitative techniques are frequently practical considerations [321, 323, 324]. In a study investigating the barriers experienced by mixed-methods researchers in the UK, Bryman et al [323] identified issues such as the broad skill base required to utilise different research techniques, lack of time or resources, and difficulties in publishing mixed-methods research due to diverse audiences or word limits for journal articles. Ongoing debates regarding the types and strategies of data integration [322, 324], and the way quality can or should be assessed in research which transcends quantitative and qualitative domains [284, 325] may also be challenges to the utilisation of this approach, which need to be adequately addressed. However, mixed-methods studies have grown in popularity, particularly in the health sciences [271, 318, 326]. This has been attributed to the need for interpretivist research methods which reflect and describe patient perspectives [271], as well as a drive towards problem-solving approaches which respond to threats to public health [326]. Both of these considerations are relevant to the present research on the role of community pharmacy in youth health.

3.4.2. Rationale for mixing methods

Mixed-methods specialists recommend explicit explanation of the purpose and process of combining quantitative and qualitative techniques, in order to clarify the rationale behind the research design [320, 321]. In a review of mixed-methods approaches in primary care [318], Creswell et al identified three common rationales for mixing; these were instrument design,
triangulation and data transformation. The instrument design model frequently utilises qualitative methods in the development of a quantitative survey instrument [327]. The data transformation model has emerged following developments in analysis software which allow qualitative data to be analysed quantitatively or vice versa. For example, qualitative responses to open questions in a survey may be thematically coded before undergoing statistical analysis [328]. Triangulation models appear to be among the most common mixed-method designs described in healthcare [321, 326]. Qualitative and quantitative data are analysed to identify areas of convergence or divergence [321]. It has been suggested that triangulation as a rationale for mixing methods may be limited by assumptions that qualitative and quantitative findings will (or should) converge [282, 323]; however, critical applications of triangulation approaches aim to improve research quality and validity by providing a more comprehensive answer to the research question [324].

The rationale for combining the findings of both quantitative and qualitative studies in this thesis was complementarity as described by Morgan [327], who proposed that, “The core of this approach is an effort to integrate the complementary strengths of different methods through a division of labour”. Complementarity is frequently the rationale for health researchers combining methods as they attempt to address relatively complex research topics [318, 327], and the contribution of each qualitative and quantitative sub-study within the project as a whole has been likened to that of different pieces of a puzzle [326]. The role of community pharmacy in youth health is a complex research topic that would benefit from the complementary strengths of both quantitative and qualitative methods. The research questions have been generated in response to health inequalities and potential opportunities which require quantitative investigation at the population level, whilst also recognising the need for qualitative approaches to explore perspectives and interactions at the individual level. In addition, since so little literature is available in this field, the use of both approaches is necessary to provide a more complete picture of the present situation in order to guide decisions about how future research should proceed.

3.4.3. Approaches to mixing methods

Important considerations in the design of mixed-methods studies include the way in which data will be integrated or combined, the sequence in which qualitative and quantitative components are conducted, and their relative prioritisation [321].

3.4.3.1. Mixing strategy

The way in which the qualitative and quantitative data are combined generally relates to the rationale for mixing methods described above, such as instrument design, triangulation or
complementarity. Some authors have referred to this as the ‘mixing strategy’ [321]. The way in which data are combined may also be defined by the stage at which data are integrated [322]. Integration may occur during different stages of the research such as the development of research questions, development of sampling frames, instrument design, analysis or results interpretation [322].

3.4.3.2. Sequencing

The sequencing of qualitative and quantitative components within a mixed-methods research project may be concurrent or sequential. In concurrent designs, qualitative and quantitative data are collected and analysed in parallel, and integration usually occurs at the interpretation stage to examine convergence or divergence. For example, triangulation approaches frequently use concurrent mixed-method designs [320, 321]. In contrast, sequential mixed-methods researchers collect and analyse the different types of data one after the other. The purpose may often be to allow the results of the first study to inform development of the subsequent one, for example in studies utilising a mixed-methods approach for the purposes of research design, developing sampling frames or instrument design [322, 327]. The sequencing may either follow an exploratory or explanatory design. In exploratory mixed-methods approaches, qualitative data are collected first and used to inform the development of the quantitative phase (e.g. instrument design) [327]. Explanatory designs instead utilise qualitative methods to investigate quantitative findings in more depth and develop explanations for the observed results [329].

3.4.3.3. Prioritisation

Some mixed-methods designs may prioritise the quantitative component of the research, for example where the qualitative component acts as a supplementary study to enhance the understanding of a larger survey or evaluation study [275, 327]. Similarly, (but perhaps less frequently) the qualitative component is prioritised [327], such as when the paradigm or theoretical framework for the research is predominantly qualitative. Both strategies may be referred to as embedded mixed-methods designs, since one component is embedded within the prioritised component [320, 321]. Convergent or triangulation approaches frequently weight qualitative and quantitative components equally [321, 322]. Sequential designs may or may not feature prioritisation [321, 327].

3.4.3.4. Use of mixed-methods in this research

The research design selected for this thesis was an explanatory, sequential mixed-methods approach as described by Creswell and Plano Clark [321].
Quantitative data were analysed first to explore whether there was statistical evidence at a population level to support the hypothesis that youth healthcare access could be improved through pharmacies. When the quantitative results appeared to confirm this hypothesis, the second stage of the project was initiated. This was to gain a deeper understanding of the findings through qualitative interviews with pharmacy personnel and young people. The qualitative data were then used to provide possible explanations for the quantitative results obtained, develop theories to understand the social mechanisms involved in interactions between youth and pharmacy, and suggest strategies as to how pharmacy services could be improved and developed for this age group in the future. The use of mixed-methods for the purpose of extending understanding and explanation aligns with a critical realist epistemology [285, 330, 331]. A diagrammatic representation of the research plan showing the relationship between the quantitative and qualitative studies and their situation within the theoretical framework is outlined in Figure 2.
Figure 2 – Research plan
3.5. Participatory methodology

3.5.1. Youth participation framework

Participation is identified as a key principle of a YD approach [47] as it provides a forum for other principles such as utilising strengths of young people and further capacity-building. Cargo et al propose a theoretical framework which links participatory methodology to YD as a mechanism for enabling the empowerment of young people in a research situation [313]. It is, therefore, necessary to differentiate ‘involving young people in a participatory research approach’ from ‘getting young people to participate in research’, since otherwise all research might be considered as participatory.

The participatory paradigm is sometimes presented as an epistemological position, but has also frequently been used as a theoretical lens for mixed-methods research [275]. The idea that knowledge creation can be influenced by different perspectives forms the rationale for involving participants in a collaborative process, because in consideration of human rights the perspective one should view research from is that of participants themselves [332, 333]. In this capacity, youth participation research recognises the right of young people have a say in research about them [192].

Furthermore, the participatory perspective recognises the process of conducting research as more than inert factual elucidation (Figure 3). Being involved in research will likely have an effect of some sort upon the participants and it is ethically responsible to aim for those effects to be positive [334]. These outcomes may sometimes be considered of equal or greater importance than the research results themselves [335].

<table>
<thead>
<tr>
<th>Positivist</th>
<th>Idealist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results/findings all important</td>
<td>Growth of researcher/participants</td>
</tr>
<tr>
<td>Process of obtaining information is simply elucidation of facts- has no effect on researcher/participants</td>
<td>through research process all important</td>
</tr>
<tr>
<td>Results inconsequential</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3 - Participatory research as an epistemology
3.5.2. History of participatory approaches

Various terms have been used to describe participatory approaches in research across different disciplines, including action research, co-operative/mutual/constructivist inquiry, community-based participatory research and emancipatory/liberator research [336]. However, the common values applied throughout have their roots in Feminist, Marxist and Freirian emancipatory traditions [272, 337]. Such traditions emerged as it became clear that the empirical approach was not always a good match for research involving human beings, as one size invariably does not fit all. Critical philosophers argued that research conducted from the perspective of the privileged would likely (either purposefully or accidentally) result in political decisions which would perpetuate or worsen the situation of the unprivileged. Many of the critical research traditions set out to provide evidence of such power imbalances and give voice to minority groups.

In health research, participatory methodologies have been used with the aim of addressing inequalities, disparities, and poorer health outcomes experienced by specific populations [272]. As the youth population is also affected by health inequalities in many areas compared to other age groups [11, 143], this would suggest participatory approaches to be appropriate. They are now being used increasingly in youth health research, perhaps additionally because of their conceptual alignment with YD strategies [338]. They align well because of the common theme of empowerment.

3.5.3. Empowerment

Because of the focus on development and enhancement of competencies and skills which will equip young people to take positive action in their own lives, a key feature of both youth participation and youth development approaches is empowerment. The concept of empowerment may often be romanticised in the literature, and may be difficult achieve or even to define. Fitzsimons et al describe empowerment in terms of the relationship between empowerment and power, suggesting that the process of empowerment requires redistribution of power. They argue that this has the potential to create tension for professionals working with youth, because empowerment cannot occur unless the professional relinquishes some power in their relationship with the young person [339]. Similar ethical conflicts of interest have also been described in research contexts, for example it has been suggested that young people involved in youth-participatory approaches to evaluate interventions may be reluctant to highlight negative results to researchers, or that researchers might introduce bias through their dominance [340]. In their reflective accounts of youth participatory research, Stoudt [333] and Cahill [341] describe how they negotiated these tensions through the creation of ‘safe
spaces’ (physical, intellectual and social) which were designed to address power imbalances between the researcher and young people and promote empowerment through the co-construction of knowledge. Some of these methods were employed in this research and are described in section 3.6.

3.5.4. Evaluation of participatory approaches

Alongside the increasing popularity of participatory approaches has been a developing discussion of the challenges they pose to researchers and the potential limitations these may have upon the emancipatory values which motivate them [342-344].

Many authors describe a continuum of participation, ranging from participant-initiated and driven research at one end of the spectrum to researcher-controlled ‘tokenism’ at the other (for example Haart’s ladder of participation [345]). The model offered by Lowes and Hulatt [346] (Figure 4; adapted from Involving service users in health and social care research [346]) is useful because it also describes the nature of the relationship and power balance between the participants and researcher on a continuum;

<table>
<thead>
<tr>
<th>User Role</th>
<th>Subject</th>
<th>Partner</th>
<th>Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Researcher Role</td>
<td>Investigator</td>
<td>Partner</td>
<td>Mentor</td>
</tr>
</tbody>
</table>

Although some authors suggest that any research which is not participant-initiated is tokenism [342, 347], others recognise that participant-driven studies may not always be feasible, may not necessarily produce better results, and that community members may not want to take full control [348]. An additional consideration is the organisational, institutional or social constraints within which collaboration with youth participation must take place that may limit the extent to which empowerment processes can occur [349]. It has been suggested that this issue may be particularly applicable to academic research conducted as part of a tertiary qualification, where the researcher is obliged to initiate and take responsibility for the study as their own original work [350]. Such concepts clearly have relevance to this research.

Despite these debates, the majority of authors situate themselves somewhere along the middle of the continuum, with the general consensus that greater participant involvement and control in a project is preferable [334, 344, 348, 351-353]. There is little discussion of the specific level or amount of participation expected, but numerous case studies, models and
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criteria have been put forward. Israel et al [354] suggest nine key principles definitive of community-based, participatory research which focus on working with community groups collaboratively to identify issues of concern or importance and generate knowledge to aid the implementation of changes for improvement. Whilst they emphasise the importance of fostering capacity-building among community members as part of this process, they acknowledge the challenges this may pose in practice. Similarly, Nolan et al [272] offer authenticity criteria by which to assess participatory research on the basis of how its epistemological and theoretical values have been actioned.

This research was developed to follow the quality criteria put forward by Reason and Bradbury [355], who propose five criteria against which to evaluate participatory research which succinctly incorporate the common principles outlined by Israel, Nolan and other participatory authors. These are:

1. Quality as relational praxis
2. Quality as a reflexive/practical outcome
3. Quality as plurality of knowing
4. Quality as engaging in ‘significant’ work
5. Enquiry towards enduring consequence

The project was initiated with the aim that the findings should provide useful evidence to promote positive improvements in pharmacy service delivery to youth, as well as contributing information on how best to action this. This aim was also consistent with the youth advocacy perspective, because is not just about simply describing ‘problems’. Table 7 illustrates how the research planned to translate the quality criteria into practice; the extent to which this has been achieved will be explored later in the discussion chapter. The following section provides a detailed description of the research design and the role of the Youth Advisory Group.
### Table 7 - Development of research to follow Reason and Bradbury quality criteria for participatory research

<table>
<thead>
<tr>
<th>Quality criteria</th>
<th>Research design element reflecting this criteria (taken from postgraduate Expression of Interest)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality as relational praxis</td>
<td>A Youth Advisory Group (YAG) who will guide the project throughout</td>
</tr>
<tr>
<td>Does the study fully involve others and take a 'relational' stance?</td>
<td>An important aim of this project is to maximise the involvement of young people throughout the research process by consulting a ‘panel’ of young people to guide the evolution and outcomes of the project. They will have input into decision making at critical points throughout the project, including planning and evaluation stages. They will also be highly involved in the development and piloting of the intervention.</td>
</tr>
<tr>
<td>Quality as a reflexive/practical outcome</td>
<td>Development and piloting of an intervention (dependant on the time available)</td>
</tr>
<tr>
<td>Is the study potentially useful or applicable?</td>
<td>Provided there is adequate time available, the exploratory studies will inform the development and piloting of an intervention (such as a training programme for pharmacists/pharmacy staff) designed to address the needs identified by the previous studies.</td>
</tr>
<tr>
<td>Quality as plurality of knowing</td>
<td><strong>Interviews with young people</strong></td>
</tr>
<tr>
<td>Methodology must also be relational and anchored in people’s experiences</td>
<td>Qualitative interviews eliciting the experiences, attitudes and opinions of young people towards community pharmacies will be conducted in friendship pairs or focus groups. Topics discussed will include the barriers to using pharmacy services, and how they think these problems could be overcome. Potential opportunities for the future will also be explored. <strong>Interviews with pharmacists and pharmacy staff</strong></td>
</tr>
<tr>
<td></td>
<td>Qualitative interviews will be conducted with pharmacists and pharmacy staff to explore their experiences, attitudes and opinions towards young people. Topics discussed will include the problems experienced when working with young people, and how these problems could be overcome. Potential opportunities for the future will also be explored.</td>
</tr>
</tbody>
</table>
### Chapter 3 – Theoretical Framework and Methodology

<table>
<thead>
<tr>
<th>Quality as engaging in 'significant' work</th>
<th>Analysis of Youth2007 survey data</th>
</tr>
</thead>
<tbody>
<tr>
<td>That is likely to make a difference</td>
<td>The University of Auckland’s Youth’07 study produced an extensive range of information relating to the health of NZ youth. This data will be used to identify potential youth health needs where intervention by community pharmacy could be of benefit in terms of improving healthcare access for young people.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enquiry towards enduring consequence</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the work likely to lead to real/lasting changes (transformational potential)</td>
<td>Most health interventions have the greatest effect if made early in life, and the experiences of young people at this time can set trends for their health behaviour later in life. Investigating how pharmacy services are viewed and used by the next generation provides an opportunity to optimise service delivery and show how they might be best developed to promote long term health.</td>
</tr>
</tbody>
</table>
3.6. Role of the Youth Advisory Group

The participatory method used in this research was collaboration with a Youth Advisory Group (YAG) throughout the research process. Consulting with young people in an advisory capacity such as this has been used by other researchers following a YD approach [356].

During the development of the participatory component of the research, two main options were considered. These were either to search for a pre-existing group of young people who would be willing to collaborate, or to recruit a new YAG for the purposes of the project. The latter option would have allowed the purposive sampling of young people, and would also have extended the potential benefits of being involved in a YD project to a ‘new’ group of youth. However, there was not enough literature available to guide the selection of young people from specific demographic groups. It also seemed likely there would be a recruitment bias amongst young people who might volunteer to be involved; for example those who use pharmacies frequently or were considering pharmacy as a career option. Furthermore, retention and continued recruitment issues are well described in youth participation research [344, 356, 357], and could potentially have proved very time consuming or jeopardised the participatory approach altogether. Therefore, it was decided that this option would not be feasible, and a pre-existing YAG was sought.

The NZ charitable organisation, Youthline³, was consulted at the onset of the PhD project to provide advice on engaging young people in participation research. Youthline is best known for its telephone support helpline, but also undertakes youth advocacy roles in the community. In addition, its members help to coordinate several YAGs in NZ and it was suggested that the Counties Manukau District Health Board (DHB) YAG⁴, based at the Youthline Manukau branch, would likely be interested in the research, as they had worked on health projects previously with the DHB. The YAG was approached and invited to be involved, and accepted. Their participation in this project was voluntary, and members received no remuneration for their time and energy.

The Youthline Manakau YAG was an established group of young people who already knew each other through working on other projects and activities outside the context of this research. It was believed that this would be beneficial for the research because it meant that the young people were confident around one another and well placed to be able to express their views

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³ Permission has been provided to acknowledge Youthline as an organisation in this thesis and publications arising from it.
⁴ All group members have provided individual consent to be acknowledged in this thesis and publications arising from it.
in a constructive and articulate way, as has been found in previous participatory research with children and youth [333]. As the group was run by an external youth organisation, it also had youth workers available who knew the group members well and were able to coordinate and facilitate the meetings. The youth workers were the point of contact between the researcher and the YAG members, creating a safer process for communication (for example, this avoided the young people having to provide the researcher with personal contact details). The youth workers were also responsible for recruiting and integrating new group members to replace any that left during the course of the research. The demographic characteristics of all the YAG members participating throughout the project are shown in Table 8. Please note that not all members were present for all meetings; in general each meeting was attended by six to eight young people.

Table 8 – Demographic characteristics of YAG

<table>
<thead>
<tr>
<th>Age*</th>
<th>Gender</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>F</td>
<td>NZ Samoan</td>
</tr>
<tr>
<td>16</td>
<td>F</td>
<td>NZ Samoan</td>
</tr>
<tr>
<td>17</td>
<td>F</td>
<td>NZ European</td>
</tr>
<tr>
<td>18</td>
<td>F</td>
<td>Maori</td>
</tr>
<tr>
<td>17</td>
<td>F</td>
<td>Maori</td>
</tr>
<tr>
<td>17</td>
<td>M</td>
<td>NZ European</td>
</tr>
<tr>
<td>20</td>
<td>M</td>
<td>NZ Samoan</td>
</tr>
<tr>
<td>16</td>
<td>M</td>
<td>NZ Samoan</td>
</tr>
<tr>
<td>18</td>
<td>M</td>
<td>NZ Samoan</td>
</tr>
<tr>
<td>17</td>
<td>M</td>
<td>NZ Fijian</td>
</tr>
<tr>
<td>19</td>
<td>F</td>
<td>NZ Samoan</td>
</tr>
<tr>
<td>16</td>
<td>M</td>
<td>Maori</td>
</tr>
<tr>
<td>19</td>
<td>F</td>
<td>Maori</td>
</tr>
<tr>
<td>21</td>
<td>M</td>
<td>NZ Samoan</td>
</tr>
</tbody>
</table>

(*Age at time of joining YAG)

Processes regarding how YAG meetings were conducted were designed to create a safe atmosphere in which the YAG members felt comfortable discussing health topics and were able to contribute their candid opinions on pharmacies [333, 341]. As the young people were aware that the researcher was a pharmacist, it was important to address and minimise the potential power imbalance as far as possible, and reflect upon the extent to which this could affect the feedback obtained [343]. Interactions with the YAG followed the principles outlined
in the youth participation resource ‘Keepin' It Real: A Resource for Involving Young People in Decision Making’ [358]. This resource was produced by the NZ Ministry of Youth Development as a practical guide for organisations involving NZ young people as project advisors, and provided useful information for this project.

A code of conduct was agreed at the outset of the research, which specified the responsibilities and expectations of the researcher and the YAG members towards one another. In summary, the researcher’s responsibilities were to provide food and soft drinks at meetings, support the health and wellbeing of the YAG members if the group discussion highlighted pre-existing health or emotional issues (e.g. by helping to arrange referral options), provide certificates of appreciation for the YAG members’ résumés, and ensure that there was a feedback loop to demonstrate how the group’s input had been translated into action. The responsibilities of YAG members were to attend meetings wherever possible and to engage in the activities. They were generally expected to get themselves to and from meetings; however, transport was provided if necessary. Both the researcher and the YAG members had responsibilities regarding confidentiality. Confidentiality could not be guaranteed in a group setting, and this was made clear to the young people who were advised that they did not have to discuss anything they did not feel comfortable talking about. All involved also signed confidentiality agreements stating that they would not discuss any personal information disclosed during meetings. In addition, it was important that YAG members understood that they would be acknowledged and thanked in any published reports, and written consent was sought to confirm that they were happy with this.

Meetings were conducted at times which were convenient for the young people; this varied throughout the project but was usually on a weekday evening or Saturday morning. Meetings were held at the Youthline venue, with the intention of helping them feel more in control as it was their ‘home turf’. Efforts were made to ensure the atmosphere of meetings was relaxed and casual. Time was allocated towards group bonding and ice breaker activities at the start of each meeting which were facilitated by the youth workers, such as the ‘What Rocked, What Sucked’ game in which YAG members talked about the good and bad points of their week so far. Food was generally consumed first before moving on to activities, with the researcher frequently using this time to update the group on progress since the last meeting. Although a meeting agenda and plan were prepared for each meeting by the researcher, this had to remain flexible and responsive to the number of young people present, their energy levels, and the time available. This was one of the challenges of the participatory approach experienced which will be discussed in later chapters.
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Feedback provided in the meetings through group discussion was not electronically recorded, as it was felt that this would make the YAG members feel uncomfortable. The use of a recording device is associated more with a researcher/participant relationship and may have detrimentally affected the atmosphere [333]. Instead, feedback was collected using brainstorming and feedback sheets created for the activities, and detailed meeting notes were recorded using a meeting report template. In early meetings with the YAG, a second researcher was present and helped to record the discussion points; later meetings were attended by the lead researcher only and the youth workers helped to record feedback. The meeting template (represented in Table 9) was used to show how the YAG’s feedback and ideas were being incorporated into the research. Outcomes arising from the previous meetings were discussed as the first agenda point at the start of the next meeting. Copies were forwarded to the group facilitators to check interpretation of the discussion points and document the feedback loop.

Table 9 - Meeting report template for Youth Advisory Group meetings

<table>
<thead>
<tr>
<th>Agenda</th>
<th>Discussion points</th>
<th>Plan</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue/item to be discussed; This column will be prepared before the meeting</td>
<td>The main discussion points and opinions expressed by the youth group members will be recorded during the meeting.</td>
<td>Ideas will be assimilated into an action plan and any agreed action points resulting from the discussion will be recorded. The meeting report will then be checked by a member of the YAG to verify interpretation.</td>
<td>The translation of the youth feedback into outcomes must be documented to ensure that their opinions have been listened to and actioned upon.</td>
</tr>
</tbody>
</table>

An indicative timeframe, based on the key phases of the research, was proposed to guide expectations. Critical stages of the research, which would require input from the YAG, were signalled in advance. Ten meetings were planned over a two year period; approximately one meeting every two months:

- Interpretation of literature review findings
- Youth’07 study development
- Interpretation of Youth’07 results
- Planning of pharmacy survey
- Interpretation of pharmacy survey results
- Planning of pharmacy interviews
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- Interpretation of pharmacy interview results
- Planning of youth interviews
- Interpretation of youth interview results
- Collation of ideas and planning of intervention/training

However, it was not possible to plan exact details and dates of YAG meetings in advance as the schedule had to remain flexible for the young people [358] and the researcher. Details of the YAG meetings conducted for each study are reported in relevant chapters.

3.7. Quantitative methodology

As limited literature was available regarding the provision of community pharmacy services to youth prior to the commencement of this research, two quantitative studies were conducted to obtain baseline descriptive data to address the following research questions;

1. What proportion of young people in NZ are affected by unmet health needs relevant to community pharmacy?

2. What proportion of young people in NZ are affected by barriers to healthcare access which community pharmacies may be able to help with?

3. How accessible and youth-friendly are community pharmacies in NZ as a physical healthcare environment?

4. What proportion of community pharmacies in NZ offer services relevant to youth health needs, and how are these services distributed?

5. What proportion of pharmacy personnel in NZ view services to be appropriate for young people, and are these views affected by demographic characteristics?

3.7.1. Choice of quantitative approach

Some of the quantitative approaches used in pharmacy practice research are analysis of pre-existing data, survey research using questionnaires [359], and direct observation studies\(^5\) [360] and are the most relevant to answering the above questions.

\(^5\) Direct observational studies such as simulated patients can be considered qualitative research, but in the context of pharmacy practice research results are often reported quantitatively against predetermined standards.
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Administrative or funding-related datasets such as prescribing data or pharmacy dispensing records may be analysed to explore medicines use or appropriateness of prescribing [361]. Other sources of pre-existing data may include datasets established as part of previous research studies, which may undergo secondary analyses to address new research questions [361].

Surveys may be conducted where new information is required that has not been previously collected, or where there are gaps in pre-existing datasets [274]. They are also frequently used by pharmacy practice researchers to collect information about the opinions, knowledge and practices of pharmacy personnel and customers [361]. Self-completion questionnaires are considered to be an effective method for collection of factual data from a large number of respondents, but have a number of important limitations [361, 362], which are discussed in more detail later in this section.

One of the main limitations of survey data is that they are reliant upon self-reporting of information by participants, which may not always provide an accurate reflection of the true picture [362]. Direct observation techniques such as mystery shopper or simulated patient studies may be used in pharmacy practice research to avoid these issues, and can be important in assessing quality or consistency of care in studies exploring the practices of pharmacy personnel [361].

The types of information required to address the quantitative research objectives of this thesis determined the choice of quantitative approaches taken. The availability of the Youth’07 youth health and wellbeing survey data set in NZ provided a unique opportunity for this research, as it contained a large, pre-existing source of information for use in youth health research. These data had been collected in an a statistically and methodologically robust manner [2]. Permission was granted for relevant portions of this data to be accessed and analysed to investigate how many young people in NZ are affected by unmet health needs and barriers to healthcare access that community pharmacies may be able to help address (i.e. the first two quantitative research questions listed above).

Direct observation techniques were considered as a possible method to explore the youth-friendliness of community pharmacies, since simulated patient studies have previously demonstrated that young people may be treated differently compared to adults by pharmacy personnel [205]. A mystery shopper study may have been appropriate if the aim of this research had been to evaluate quality of care in the provision of pharmacy services to youth [361]. However, the objectives were first to investigate the accessibility of pharmacies and their youth-friendliness as a physical healthcare environment, the availability and distribution of youth-relevant pharmacy services, and to explore the views of pharmacy personnel
regarding the appropriateness of these services for youth populations (i.e. questions 3, 4 and 5 listed above). As there were no pre-existing data available on these topics, secondary analysis of existing data was not an option. A cross-sectional survey of community pharmacies was selected as an appropriate [359] method for collecting 'snap shot' descriptive data relating to these objectives. Postal questionnaires were chosen as opposed to an online survey, since response rates have been shown to be higher for healthcare professionals using this method [363], and pharmacy personnel do not always have access to the internet at work [359].

The nature of the research questions meant that the pharmacy survey collected predominantly categorical data (i.e. yes/no answers) rather than continuous data. Therefore, descriptive statistics and logistic regression were used in the analysis of these data. Logistic regression models are used to analyse associations between categorical variables, and investigate the extent to which an outcome or dependent variable may be predicted by independent variables [364]. Several key assumptions which must be met in order for logistic regression modelling results to be valid [365] are that; 1) the sample is representative of the research population and is of sufficient size to support the model, 2) explanatory variables included in the model must not be interrelated or exhibit collinearity between one another, and 3) all potentially important explanatory variables are included in the model. Logistic regression techniques have been used to investigate associations between categorical demographic variables (such as pharmacy location and type) and dependent variables in research questions relating to youth-friendly criteria (Chapter 4), and availability of youth-relevant services (Chapter 5). Generalized linear mixed modelling (GLMM) analysis is considered similar to logistic regression except that data clustering effects are also simultaneously analysed [366]. GLMM analyses were used in Chapter 5 to account for any associations between the paired data received from pharmacist and pharmacy support staff at the same pharmacy. The methodological considerations addressed in the design of the pharmacy questionnaire in order to meet the assumptions required for logistic regression and GLMM analysis are outlined below.

3.7.2. Questionnaire design

Research questionnaires are commonly referred to as ‘research instruments’, and questions as ‘questionnaire items’ [364]. In designing a questionnaire, it is important to ensure that the research instrument is constructed to collect information which answers the research objectives, and that questionnaire items can be answered easily, reliably and unambiguously by respondents. Goodyear-Smith et al describe important factors which should be considered in the development of pharmacy practice questionnaires [359]. These include content validity, question structure, and questionnaire layout.
3.7.2.1. Content validity

The content of the questionnaire should reflect the research objectives, and content validity describes the degree to which the research instrument covers all relevant content and collects all the data needed to answer the research objectives. Questionnaire items may be developed from information obtained from previous research, preliminary studies, or from a review of the literature [359]. The research instrument for the pharmacy survey was developed from seminal studies identified in the literature review (including the You’re Welcome criteria [367]), and through consultation with youth health experts and the Youth Advisory Group.

3.7.3. Question structure and response options

Poorly worded questionnaire items or response options cause confusion for participants and can result in unreliable or missing data [362]. In designing the research instrument it is important to ensure that questions are easy to understand and answer. Double-barrel questions (i.e. those which ask two things at once) and complex questions where multiple responses can be selected tend to be problematic, and should be avoided if possible [364]. The questionnaire should be piloted to obtain feedback on the interpretation of the questions, and to ensure that response options are included reflective of the range of answers likely to be provided [359].

Closed questions are generally preferred to open questions for quantitative health services research [359, 368] because they must be answered in a more specific manner, allowing discrete and concise responses to be obtained which may undergo statistical analysis. Closed questions also make questionnaires quicker and simpler for participants to complete [359]. Open questions may often be included at the end of a questionnaire to allow participants to add comments, which can be used as an additional check of content validity [359].

Response options may include either subjective or objective quantifiers. For example, in their study investigating practitioner attitudes towards adolescents [369], Viet et al asked GPs to estimate how frequently they saw young people in their professional practice. Participants could select ‘never’, ‘rarely’, ‘sometimes’ or ‘frequently’. These quantifiers are subjective because they may be interpreted differently by different individuals; therefore, this study collected participants’ perceptions of how frequently they saw adolescents, rather than objective data on how often they actually saw adolescents. Similarly, Likert scales are often used in pharmacy practice research to collect data relating to the views and opinions of pharmacy personnel and consumers [359], for example in questionnaires asking participants to rate to what extent they agree or disagree with a statement. It is difficult to demonstrate objectively whether such questionnaire items are able to provide a true measure of the
opinions and values of participants (i.e. that the instrument has construct validity). Likert scales are not true linear scales, and should be treated as ordinal or categorical data [364].

3.7.3.1. Questionnaire layout and structure

Layout and presentation of the research instrument are important because they determine respondents’ first impressions of the questionnaire and may, therefore, affect the response rate [359]. For example, participants may glance through the questions to judge the complexity and time required, or even the value of the study. Boynton et al [370] suggest the following practical recommendations regarding questionnaire layout and presentation in the health sciences; i) the number of questions and pages should be kept to a minimum, ii) the print should be easy to read, iii) the layout should be clear and easy to follow with questions presented in a logical order. Generally, participants tend to miss later questions if they return partially completed questionnaires [359, 371]. Therefore, questions collecting essential information should be situated at the start of the instrument, and supplementary questions (such as open questions) towards the end if required.

3.7.4. Sampling

3.7.4.1. Sampling strategy

In quantitative research, the sample needs to be representative of the general population in order for the results to be considered generalisable and have ‘external validity’ when they are extrapolated outside of the study to real life situations [364]. A sample is considered to be representative where participants recruited have similar demographic characteristics to the population under investigation [362]. Because demographic characteristics can often have an influence upon dependent variables being investigated, it is important that all sub-groups (e.g. males and females) are well represented. If some subgroups are less well represented than others, this could bias the results of the study and mean that the findings are not generalisable outside of the context of the research [362, 364].

Random samples, whereby a sample is selected at random from the population under investigation are generally considered to be the gold standard [362, 364, 365]. Stratified sampling may be used where random sampling is not possible, or where sampling bias is anticipated or otherwise unavoidable. This technique involves stratification of the sample population into sub-groups from which a pre-determined quota of participants are recruited [359]. The proportion of participants recruited for each sub-group is not necessarily reflective of the proportion in the general population, but this method is used essentially to deliberately introduce sampling bias to ensure that certain groups are well represented. For example, in
population health research this may include participants living in areas with a high deprivation index or of a specific ethnicity, since these variables are frequently known determinants of health outcomes [365]. Cluster samples may be used to investigate associations pertaining to location-specific variables, such as example urban or rural demographics [359]. As will be discussed in the relevant chapters, both the Youth’07 data (Chapter 4) and pharmacy survey data (Chapters 5 and 6) analysed in this thesis were collected using random sampling methods.

3.7.4.2. Sample size

A prerequisite of any statistical model, including logistic regression [365] and GLMM [366] is that the sample size must be large enough to enable the study to have enough power to detect statistically significant results [359, 362]. Where the sample size is too small, the confidence intervals will be wide, resulting in the generation of P-values greater than 0.05 (conventionally considered to be not significant [364]). This can lead to the erroneous conclusion that no significant difference exists between the phenomenon being investigated, when there may in fact be a difference, but the study does not have the power to detect it as statistical significance [372]. This is known as a type II (beta) error and is thought to be common amongst medical research due to difficulties in recruiting large numbers of participants [365].

It is usual to estimate the required sample size by conducting a power calculation which is determined using standardised formulae and tables [373] or a computer programme [374]. This, however, requires an estimate of the effect size and standard deviation expected, based on results of similar previous research [362, 375]. As no such pre-existing research was available in this area, it was not possible to do a power calculation for the pharmacy survey. Instead, a sample size of 500 was estimated in order to achieve a minimum of 150 completed questionnaires needed to undertake the descriptive analysis planned. This was based on an anticipated response rate of around 30%, since response rates of 20-40% had been reported in pharmacy practice literature in NZ [376]. Results approaching statistical significance have been reported in case type II error may have occurred.

The sample size of the Youth’07 was predetermined as this data had been previously collected. Although it is a large sample (n = 9017), subgroups of participants selecting individual responses for unmet health needs and healthcare access barriers are frequently much smaller. Furthermore, there are some limitations to this data due to possible sampling bias which are discussed in the limitations section in Chapter 4.
3.7.5. Limitations of self-completion questionnaires

Self-completion questionnaires are widely used in pharmacy practice research to collect quantitative data from many respondents quickly and efficiently. However, there are some well-recognised and important limitations of self-completion questionnaires which require consideration [359].

As has been discussed above, participants may not interpret a questionnaire item as intended because they do not understand it, or because they perceive the response options to be ambiguous. Although piloting the instrument amongst a small number of the sample population in order to assess the content and face validity of questionnaire items is designed to reduce this problem [359], it is likely that some questions will be interpreted differently by different individuals in practice. Missing data on specific variables may be indicative of such questions; for example certain questions may have remained unanswered by many participants because they were poorly designed or ambiguous [362]. Such data should be excluded from analyses because it cannot be considered reliable [359, 364].

A further limitation of questionnaire items which collect data relating to past events is that participants may not remember events or details accurately [359]. Questions which rely upon participants to recall past events or specific information accurately should generally be avoided where possible [359, 370].

Lastly, an important limitation of self-completion questionnaires is that participants may not answer honestly [359]. This may be a particular problem if potentially sensitive information is being collected, even if participants are reassured about confidentiality. The socially sensitive nature of youth health issues and the legal grey areas surrounding them are of relevance in this context regarding the present research.

3.7.6. Non-responder bias

Non-responders (individuals included in the sample who do not participate) may also introduce bias which reduces the generalisability of the study findings to the study population, because they are likely to differ from self-selected participants [359, 362, 364]. For example, they may have less interest in the research topic than respondents, have less time, or represent a different demographic group of the population who were less well recruited through the recruitment strategy used.

Studies with low response rates are likely to be subject to a greater degree of bias from non-responders [364]. Unfortunately, low response rates are frequently obtained in pharmacy practice research [359, 376]. In a systematic review of studies investigating strategies to
improve survey response rates amongst GPs, VanGeest et al [363] concluded that small financial incentives appeared to be the most effective. Postal and telephone surveys were found to be more successful than fax or internet-based approaches. Although this study focused on general practice research, these findings may be applicable to other community-based healthcare professionals such as pharmacists. As discussed in chapters 5 and 6, some of these strategies were employed in the present research to help boost the response rate for the pharmacy survey.

Where a low response rate is obtained despite the use of such strategies, follow up of non-responders may be undertaken to investigate the possible effects of non-responder bias and thereby provide information which can be used to guide the interpretation of the results when they are extrapolated to the general population [362]. Non-responder follow up generally involves the researcher contacting a small number of non-responders by phone to collect data on a selection of questionnaire items abstracted from the larger instrument, which are essential to the research or are believed to be key predictor variables [359]. A request to undertake non-responder follow up was included as part of the ethics application for the pharmacy survey, unfortunately however, this was not approved. The small population size in NZ means that the number of pharmacies which can be sampled is limited, and with so much pharmacy practice research being generated at present, the ethics committee was concerned that follow up phone calls to non-responders would be considered too invasive by the sample population. Non-responder follow up was not undertaken for the Youth’07 survey because this could have identified responders and non-responders amongst the students sampled, and because it was considered unfeasible [2].

3.8. Qualitative methodology

3.8.1. Quality in qualitative research

The application of quantitative quality terminology such as ‘reliability’ has been debated by key qualitative researchers such as Lincoln and Guba [279, 377], who suggest that the development of standardised quality criteria in this discipline risks undermining the critical foundations from which much qualitative research has arisen. However, qualitative researchers in the healthcare disciplines are required to demonstrate rigour in the context of the evidence-based research movement and acceptance of gold standard methodological approaches such as randomised control trials [378, 379]. Although advising caution in the application of quality criteria in qualitative research, Mays and Pope [380] propose that evidence of quality in qualitative studies may be provided through triangulation, respondent validation, detailed and transparent reporting of methods, reflexivity, attention to negative
cases, and purposive sampling. Similarly, Malterud [381] suggests that different types of qualitative research may require different evidence of validity, and presents three general parameters of quality in qualitative healthcare research. These are reflexivity, interpretation and transferability. This framework will be used to discuss the quality issues considered for the qualitative components of this thesis, before the choice of qualitative approach to data analysis is discussed. Interpretation and reflexivity in terms of the role of the YAG and thesis supervisors and the worldviews held by the lead researcher are discussed in this chapter; the use of purposive sampling frames and their implications for transferability are discussed in the method sections of the relevant chapters.

3.8.2. Reflexivity

Reflexivity, in the context of qualitative research, is defined as “an attitude of attending systematically to the context of knowledge construction, especially to the effect of the researcher, at every step of the research process” [381, 382]. This demands that the researcher reflect upon the preconceptions and agenda he or she may bring to the research and the impact subsequent methodological decisions may have upon the findings. Rather than attempting to approach research objectively or minimise bias as in empiricist research, quality in qualitative research is enhanced by a commitment to reflexivity and its transparent reporting [380].

The ontological, epistemological, theoretical and ethical positioning of the researcher which have underpinned the research decisions made for this thesis have been described in Chapter 3, in order to present the foundations and agenda of this research transparently. A research log with detailed notes on each of the interviews was kept by the researcher to aid reflection upon the possible ways in which this background theory is likely to have influenced the process of inquiry, the results obtained, or the conclusions drawn. A summary of the researcher’s background with a focus on experiences influential to the development of research questions and methodological decisions is described below, which is presented in the first person tense to convey subjectivity.

3.8.2.1. Views of the researcher on the stereotyping and stigmatisation of ‘youth’

As an adolescent growing up in England during the 1990’s I remember regular reports in the media declaring that my generation would be the first to die before our parents; I did not experience this as a positive or constructive environment in which to grow. I was sensitive to the views of adults, who appeared to feel young people deserved this fate because they drank too much, had too much sex or were too lazy to exercise. It struck me that it would not be considered politically correct for society to talk about the health inequalities of other minority
groups in this way. Further, as I developed into a young adult in the process of becoming a ‘trained health professional’, I felt very aware of the poor treatment I sometimes received when describing myself as a ‘student’, which contrasted sharply with the respect I was given as a ‘trainee pharmacist’.

These issues have influenced my views on the stereotyping and stigmatisation of ‘youth’ as a culture. I found that the strengths-based principles of YD really resonated with me, and felt determined to demonstrate the strengths of young people in my research.

3.8.2.2. Views of the researcher on the changing role of the pharmacy profession

These views were balanced against the practical considerations I knew would be required if change were to occur in pharmacy as a profession. As a pharmacy-practice researcher and pharmacist I have had to acknowledge that I would inevitably approach this project from an intrinsic ‘pro-pharmacy’ perspective. As an academic researcher I need to be aware of it and to be transparent about it [353].

A methodological result of this position was that I wanted to ensure that the perspectives of pharmacy were also represented in addition to those of youth. At the commencement of my PhD I had recent experience of implementation problems with chlamydia screening and C-Card initiatives in which I was involved in my internship in the UK, and therefore I thought it important that the views of pharmacy personnel should be considered in any future developments in this area. Interviewing both youth and pharmacy perspectives was intended to facilitate the development of recommendations which are amenable to both parties [383]. Ultimately, recommendations which are feasible and practically possible for pharmacies to implement stand the best chance of having a positive effect on the health of young people. This stance is consistent with the action-orientated agenda of the participatory methodology described in the next section. However, I have endeavoured to recognise and address power imbalances between myself and the young people I have worked with throughout the research. These issues will be revisited in the thesis discussion (Chapter 11).

3.8.3. Interpretation

Although some authors suggest that multiple analysts should be used for the purposes of improving consistency or reliability [384], the appropriateness of inter-rater reliability as a concept in qualitative research is contested. Cook [385] and Armstrong [386] argue that qualitative studies involving consistency checking through the use of multiple coders may risk reporting ‘surface level’ thematic analyses which lack depth or are incomplete [385]. Therefore, validity assessments involving coding consistency checks by other researchers
were not performed for the qualitative studies in this thesis. This approach was consistent with
critical realist epistemology, which purports that although a tacit reality exists, individuals
perceive it differently [295], providing little rationale for seeking input from other researchers
for the purposes of verifying interpretation or checking the reproducibility of thematic coding
frames. Emerging themes were, however, discussed with the thesis supervisors to explore
possible meanings and implications for practice. The potential benefits of involving other
researchers in this capacity has been described by Barry et al [387], who suggest group
discussions can improve the quality of qualitative research by stimulating a critical approach
to analysis and promoting reflexivity.

A key strategy to achieving quality in this project was through the input of the YAG. The YAG's
involvement was considered as 'stakeholder checks' [388], and their feedback was not sought
to validate or confirm coding of the data, but to ascertain what the results might mean to young
people and youth health. It was also undertaken to provide the young people with the
opportunity to participate and have an influence upon the findings of research about their
subculture [389], in respect of the participatory and YD principles discussed above. Their
interpretation and ideas informed the subsequent analysis and interpretation of the data by
the researcher. The participatory approach may be limited in the context of a PhD project,
because the researcher must lead the inquiry in order to fulfil their academic obligations [350,
353]. Participation may also be limited by practical aspects such as how much time
collaborators have available [351, 354]. For these reasons it was not possible for the YAG to
analyse the qualitative data or write up the results for the studies presented. Thus, that which
is reported in this thesis is, in the main, the researcher’s interpretation of the data, which has
been influenced by their perspectives.

3.8.4. Choice of qualitative approach

A General Inductive Approach (GIA) as described by Thomas et al [390] was selected for the
analysis of the qualitative data collected for this thesis. The GIA was chosen for several key
reasons.

Firstly, the approach taken needed to be compatible with the critical realist perspective and
mixed methodology, in accepting the ontological assumption that an extant reality exists. Many
qualitative approaches (e.g. hermeneutics and narrative approaches) are rooted in
interpretivist traditions which fundamentally reject this premise [278] and are, therefore, not
compatible with the underlying ontology and strategy of this thesis. A GIA, however, has been
indicated as a suitable methodology for qualitative research based on the philosophical
assumptions of critical realism [390].
Chapter 3 – Theoretical Framework and Methodology

Secondly, the interviews were conducted to investigate theories and trends identified in the literature review, the quantitative studies, and by the YAG. As such, a method requiring the absence or minimisation of prior preconceptions or theories (such as grounded theory or phenomenological approaches [391]) would have been inappropriate. However, predominantly deductive approaches such as content analysis [391] would also have been unsuitable, since there was still relatively little research in the field. The GIA involves both inductive and deductive processes in the analysis.

Lastly, the involvement of the YAG in the research necessitated an accessible approach which facilitated their engagement. Complex, abstract or jargon-laden qualitative analysis techniques would have been difficult to explain, risking the potential for disempowerment or disengagement. The process of thematic analysis following a GIA (as outlined by Thomas et al [390] is relatively straightforward and easy to understand, and as such is recommended for those who are novices to research. Furthermore, many qualitative methodologies (e.g. grounded theory) require that data be collected as analysis proceeds [276]. For this research this may not have been possible depending on the availability of YAG facilitators for the youth interviews (described in Chapter 8). An approach which was flexible in terms of timescale was needed in order to accommodate collaboration with the YAG; the GIA met this prerequisite.

3.9. Chapter summary

This chapter has outlined the critical realist epistemology, YD theory, mixed-method and participatory methodologies, as well as the quantitative, qualitative and YAG consultation methods used for this thesis. The rationale for the use of these approaches has also been described. The following three chapters comprise the quantitative components of the research.
Chapter 4. Youth’07 Analysis

4.1. Chapter background

This chapter presents the secondary analysis of data from the 2007 Youth health and wellbeing survey of secondary students in NZ, which was conducted to investigate potential for community pharmacy to increase healthcare access and address unmet health needs of youth in NZ. The findings were published in the International Journal of Pharmacy Practice [392]. This article (written by the candidate as the lead author) is presented below unchanged with permission from the journal editors. The demographic characteristics of the Youth’07 sample as reported in the Youth’07 The Health and Wellbeing of Secondary School Students in New Zealand Technical Report [2], are summarised in Appendix 1 at the end of this thesis.

_Filling the gaps; opportunities for community pharmacies to help increase healthcare access for young people in New Zealand_

4.2. Introduction

Young people (aged 12-25 years [13]) may be considered to be at a time of transition from parental to self-care. Although they may be generally considered as fit and healthy, there are many health issues and unmet health needs that adversely affect this age group [11, 13, 393]. The New Zealand Youth Health Status Report [11], identified several priority areas including obesity, sexual and mental health, and drug and alcohol use. These issues are reflective of those affecting youth populations internationally [13]. However, rates of youth suicide and unintended teenage pregnancy in New Zealand (NZ) are higher than those seen in similar developed countries [11]. The incidence of sexually transmitted infections such as chlamydia is markedly higher among younger people, with 70% of cases in 2010 occurring in the 15-25 year old age group [394], and although the prevalence of smoking is decreasing, the highest prevalence is still seen in the youth population [11]. These factors affect the immediate health status of adolescents, but many of the behaviours established during adolescence also persist into adulthood [395]. Establishing appropriate health seeking behaviours and lifestyles during adolescence is associated with improved outcomes [396].

Young people are often portrayed negatively in the public media [397], particularly since adolescence is traditionally a time for risk taking behaviour. Access to services, anticipatory guidance and support may assist youth to negotiate this developmental period thereby reducing potential for harm [50, 58]. However, barriers to accessing needed health services can result in negative outcomes. There has been considerable international research in this
area to identify the barriers young people may experience. Many of these are practical issues such as difficulty arranging or attending appointments, lack of transport and consultation costs [13, 22, 214, 367, 398]. In NZ the Youth’07 health and wellbeing survey found that 16.8% of secondary school students had been unable to access healthcare when needed in the preceding 12 months [2]. These figures were higher for 15- and 16-year-old students and those in more deprived areas [2], and among Maori and Pacific young people (22.8% [151] and 27.0% respectively [152]).

Community pharmacies are usually located among local shops, and in this context may have the potential to improve healthcare access for young people because they are not affected by many of the practical barriers that impede their access to other primary healthcare providers. There is no need to make an appointment, no consultation fee, and advice is readily available for the treatment of minor conditions which young people may otherwise perceive as too trivial to seek help for [50]. The pharmacist is often the last link in the service delivery chain and has an opportunity to help optimise therapy. There have already been calls for pharmacy to be more youth focused in its dispensing role to aid the transitioning of young people with chronic diseases from child through to adult services [29, 30, 218]. In addition to these traditional services, the profession is also developing its public health role [220] and many pharmacies offer preventative services in areas relevant to youth health, including smoking cessation [35] and emergency contraception (EC) [158, 222, 228]. Other health promotion and screening opportunities such as chlamydia screening [34, 223, 224] are also being explored. However, very few are being designed specifically with the needs of young people as a focus.

Despite this clear potential, there is very little research regarding pharmacy services for young people. This paper aims to explore the potential for community pharmacy to help meet unmet youth health needs and improve healthcare access for young people in NZ through the secondary analysis of data from the Youth’07 survey. Historically it has been difficult to obtain data from general youth populations as national surveys tend to group them either as children or adults. The Youth’07 study in NZ is unique in this respect, having managed to successfully obtain permission to conduct the survey in secondary schools and collect information on the health and wellbeing of students across NZ in 2007. We would like to thank the Adolescent Health Research Group for approving our request to analyse these data and granting us access to the subset of variables used for this study.

The main objectives of this analysis were to quantify the proportion of NZ secondary school students experiencing healthcare-access barriers that are unlikely to be barriers in a community pharmacy setting; to characterise and quantify the unmet health needs of young people in NZ secondary schools for which community pharmacies could provide services, and
to determine whether there was overlap between these groups (i.e. to investigate whether students citing pharmacy-relevant unmet health needs also cited barriers to healthcare access that are unlikely to affect pharmacies).

4.3. Method

4.3.1. Youth’07

A detailed description of the Youth’07 survey method is given elsewhere [2]. Ethics approval from the University of Auckland Human Subjects Ethics Committee and consent from participating schools and students was obtained before data were collected. Students aged 12-18 years old from 96 randomly selected schools were invited to participate, and 9,107 (74%) students completed the computerised questionnaire anonymously using handheld tablet computers. The full questionnaire contained 622 items, but most students completed fewer items because of its branching design. It should be noted that questions relating specifically to access of community pharmacy services were not part of the survey, however, the survey contained questions on general healthcare access and unmet health needs which are relevant to pharmacy. Respondents are representative of the general secondary school student population.

4.3.2. Youth advisory group

The Youthline Manukau Youth Advisory Group (YAG) were consulted to decide which variables to include in analyses. The group comprises an extant group of young people aged 16-25 years who meet regularly to work on local youth projects; this is facilitated by a youth worker. The demographic characteristics of the group members involved are provided in Table 10. They advised which barriers they felt would not be a problem if they were accessing healthcare from a pharmacy and which health issues would make them consider visiting a pharmacy for help. They also provided feedback on the interpretation of the results. The involvement of the YAG in this way was designed to provide a youth voice in the research and enable the analyses and interpretation to be youth-informed. This youth participation approach follows current best practice guidelines [22].
4.3.3. Analysis

Descriptive data analyses were conducted using SAS software. In all analyses the clustering and weighting was adjusted to account for survey design and disproportionate sampling to ensure that students from schools where a larger proportion were enrolled were not over represented. Proportions of students affected by unmet health needs and healthcare access barriers relevant to pharmacy are presented as weighted frequencies with 95% confidence intervals (CIs).

4.4. Results

The demographic characteristics of the 9107 students who participated in the Youth’07 survey have been described in detail elsewhere [2]. They are representative of the secondary school student population in NZ, with 54% being male, and roughly 20% of students in each age range (13 or under, 14, 15, 16 and 17 or over). The majority of students answered the questions on not accessing healthcare (N = 8818) and unmet health needs (N = 8359).

4.4.1. Healthcare access barriers pharmacies could help with

Participants who had experienced barriers to healthcare access were selected using a screening question (see Figure 5). A list of common barriers for young people was provided. Participants could select any reason(s) that had ever applied to them. Of these, the barriers the YAG felt would not to be problems for accessing pharmacies were; ‘didn't know how to’, ‘couldn't get an appointment’, ‘didn't want to make a fuss’, ‘had no transport to get there’, ‘cost too much’, and ‘couldn't contact the health professional’.

The proportion of students selecting one or more of these ‘pharmacy-relevant’ barriers was calculated as a percentage of the students who had been unable to access healthcare. As participants could select more than one barrier, responses were converted into a binary format (those who selected none of the pharmacy-relevant barriers were allocated a 0 and those selecting one or more were allocated a 1). This avoided students who selected more than one option being counted twice.
Chapter 4 – Youth’07 Analysis

Of the students who had been unable to access care when needed in the last 12 months, 86% selected one or more healthcare access barriers that are unlikely to be barriers in a community pharmacy setting ($n = 1,278$; 95% CI = 83.3-88.7%). This represents 13.5% (95% CI = 12.5-14.5%) of the total Youth’07 sample (Figure 5).

![Diagram showing analysis performed for pharmacy-relevant healthcare access barriers. YAG, Youth Advisory Group.](image-url)
4.4.2. Unmet health issues pharmacies could help with

Students were provided with a list of common health issues and were asked to select those with which they had experienced difficulty accessing help for in the last 12 months (Figure 6). In order to select students with unmet health needs, only students who had ticked one or more health issue(s) were included in the analysis. The health issues that the YAG felt they would consider visiting a pharmacy for were; ‘help with stopping smoking’, ‘a long term health condition. e.g. asthma’, ‘a condition that does not last very long e.g. a cold’, ‘contraception/sexual health’, and ‘pregnancy or pregnancy test’.

The proportion of students selecting one or more of these ‘pharmacy-relevant’ health issues was calculated as a percentage of the students who had experienced difficulty accessing healthcare. Again, as participants could select more than one health issue, responses were converted into a binary format to avoid students selecting more than one option being counted twice.

Some 29.6% of students (n = 2,475; 95% CI = 27.9-31.2) reported difficulty accessing help for one or more of the health issues listed in the last 12 months. The proportion of these students selecting one or more health issues for which community pharmacy offers services was 53.6% (n = 1,326; 95% CI = 51.2-56.1). This was 15.9% (95% CI = 14.7-17.0) of the total Youth’07 sample (Figure 6).

Figure 6 - Pharmacy-relevant unmet youth health issues. Flow diagram showing analysis performed for pharmacy-relevant unmet health issues.
4.4.3. Associations between students’ pharmacy-relevant health issues and healthcare access barriers

Cross-tabulations were performed in order to investigate whether there was overlap between the students affected by unmet health needs and access barriers that pharmacies could potentially help with. Individual cross-tabulations were performed for each pharmacy-relevant health issue to calculate the proportion of these students who also reported a healthcare access barrier that the YAG felt would not be a problem in a community pharmacy setting. (Figure 7).

The cross-tabulations showed that there was overlap between the students with pharmacy-relevant unmet health needs and those experiencing healthcare access barriers that pharmacies could potentially help with. The results of the cross-tabulation analyses are shown in Figure 7. Each bar represents the proportion of students citing an access barrier that does not affect pharmacies for each of the pharmacy-relevant health issues. The barriers that pharmacies could potentially help with were reported more frequently by students who were also affected by pharmacy-relevant health needs compared to the Youth’07 sample as a whole. For example, ‘didn’t know how’ was cited more frequently amongst those students who also reported difficulty getting help for stopping smoking.
Bars represent the percentages of students reporting barriers which pharmacies may be able to help with among each of the groups citing a pharmacy-relevant unmet health need. Didn’t know how; couldn’t get an appointment; didn’t want to make a fuss; no transport; cost too much; couldn’t contact health professional. Figures marked * are from Youth’07 Technical Report.

Figure 7 - Results from cross-tabulations of individual healthcare access barriers and unmet health needs.
4.5. Discussion

The majority of students (86.0%) who had been unable to access healthcare in the previous 12 months reported barriers to access unlikely to be a problem if they were accessing healthcare from pharmacies. Just over half (53.6%) of the students surveyed had needed help for a health issue for which pharmacies provide a service. Students who cited pharmacy-relevant unmet health needs were equally or more likely to also report barriers to access that pharmacies could potentially help with.

4.5.1. Limitations

A limitation of this study was that the inclusion of healthcare access barriers and health issues in the analysis for this study was based on feedback from the youth advisory group consulted. This Auckland-based group is not able to be representative of the youth population in NZ, and this limits the generalisability of these findings. For some young people, barriers we have included may also be barriers to accessing pharmacies. For example, barriers experienced by rural youth are likely to be different [169]. The group members were aged 16-25 years and may therefore have different perspectives compared to the younger participants (aged 12-18) of the Youth’07 survey. However, this compromise allowed us to work with a pre-existing group with experience of working on youth health projects who were able to contribute confidently and articulately because they already knew each other. It was also for the purpose of promoting a safe and relaxed atmosphere for discussion that we did not record and transcribe the group discussions. This was in line with principles of a youth development approach where the YAG were considered as a steering group as opposed to research participants.

A statistical limitation was that the question on health issues that students had difficulty accessing help for relates to the previous 12 months, whereas the healthcare access barrier question had no timeframe specified. This may limit conclusions drawn from the cross-tabulations. Furthermore, the branching nature of the questionnaire reduced the number of students that were able to answer both questions, with relatively small numbers selecting individual healthcare access barriers and health issues relevant to pharmacy. This resulted in fairly wide confidence intervals, and meant that numbers were too small to allow sub-analysis by demographic groups.

We recognise that service provision for some of these health issues can vary between pharmacies, or may still be developing in some areas. However, we emphasise that the aim of this study was to explore a potential role for community pharmacy and identify areas for
further investigation. At the time of this study was carried out the Youth’07 data was the most recent data available, although its age may now be a limitation. As youth health needs do not appear to have altered substantially and service delivery from pharmacies in NZ has remained relatively stable during that time, the findings of this study are still relevant. Youth 2012 data have now been collected, which we are keen for future research to investigate in the light of these developments.

4.5.2. Healthcare access barriers pharmacy could help with

The majority of students (86.0%) unable to access help when needed reported healthcare access barriers that are unlikely to be a problem in a community pharmacy setting. This equates to 13.5% of the total Youth’07 sample, suggesting that a large number of NZ secondary school students could potentially benefit from increased healthcare access through pharmacies. This concept has been suggested in previous literature [32, 218], and by charitable organisations working with community pharmacies to increase youth access to sexual health services in developing countries [27, 28]. The findings of this study give some quantitative evidence to support further investigation in this area.

Most of the healthcare access barriers that the YAG felt pharmacies could help with were structural in nature (e.g. lack of transport, opening times). However, other studies and reviews have indicated structural or practical barriers to be less influential upon youth healthcare access compared to other more ‘personal’ barriers such as embarrassment, concerns about confidentiality or lack of trust in healthcare professionals. A systematic review by Gleeson et al [26] concluded that the main barriers to teenagers accessing primary care were lack of trust that confidentiality would be maintained, embarrassment and unsympathetic treatment. These findings were echoed by the NSW Access study [148]. Similarly, results from a focus group study investigating young people’s views on youth-friendly pharmacies in Salvador [31] suggest that trust and communication issues are likely to be important barriers to young people’s use of community pharmacy services. This is also reflected in the choices made by our YAG, who believed that the more ‘personal’ healthcare access barriers listed in the Youth’07 survey could equally apply to community pharmacies. For example, they felt that concerns about privacy and confidentiality could be a barrier to young people using pharmacies, suggesting that some might choose to visit a pharmacy where they were not known to avoid being recognised. Privacy is a recognised issue for community pharmacies and many have introduced private consulting rooms/areas to address this. These types of barriers and their importance in relation to community pharmacy service for young people warrants further research.
4.5.3. Unmet health issues pharmacy could help with

Just over half of the students experiencing difficulty accessing care had needed help with a health issue for which community pharmacies provide services. This means that a substantial proportion (15.9%) of the secondary school students in the sample were affected by an unmet health need that pharmacies might have been able to help with. This figure challenges perceptions of youth as a population with low health needs or health needs irrelevant to pharmacy, and supports calls for increased investment in the youth population by the pharmacy profession [29, 151, 218].

Furthermore, as these results represent only those students who had tried to access healthcare and had experienced difficulty, this may only be the ‘tip of the iceberg’, since the number of young people who have not actually tried to access help is likely to be much higher [162, 198, 398]. One of the reasons for young people not accessing help that has been suggested is that they often do not perceive their health to be at risk, particularly regarding long term chronic illness or preventative health interventions [50, 399, 400]. In this context, community pharmacies may have the potential to benefit many more NZ youth in a health promotion capacity, and there is some evidence to support this role. Pharmacies were discussed as viable health information source by young people in Sydney [186], and the authors suggest further investigation of a multi-disciplinary approach towards youth-targeted health promotion.

A potential barrier to extending pharmacy’s role in youth health could be the profession’s perception that there is no demand for pharmacy services for this age group. One explanation for this could be limited awareness amongst young people regarding the existence of pharmacy services that could be of benefit to them. This issue was evident in the feedback from the YAG members, and has also been indicated in the literature. A recent Australian survey investigating knowledge and attitudes about emergency contraception among university students indicated a lack of awareness that emergency contraception is available without prescription [158]. Only a third of students were aware that emergency contraception is available from pharmacies, and only 10% recognised the product (Postinor-2 at the time of the survey). This was despite media attention about over-the-counter emergency contraception in the months prior to the survey dissemination, suggesting that awareness of less prominent pharmacy services such as smoking cessation may be even lower.

An alternative explanation could be that although community pharmacies already offer services in youth health areas, service provision is not tailored to suit the specific needs of younger people and so does not attract this age group. Although our YAG members reported mostly positive interactions with pharmacies, their perception was that pharmacies tend focus...
towards the needs of older or elderly people and are not places for young people. Youth perceptions of pharmacy and pharmacy services clearly require further investigation, since when young people in the NSW Access study [398] were asked what resources they would consider accessing for healthcare community pharmacies and pharmacists did not feature in their list. Although the findings of this study indicate potential for community pharmacies to improve healthcare access for young people, careful consideration and consultation will be required to ensure that any developments in this area are youth-informed and youth-appropriate.

The highest peaks in Figure 7 represent areas with the greatest degree of overlap, and indicate where pharmacies would most likely be able to improve healthcare access for youth. The advantages of community pharmacies which appear to have the most potential are (1) that they wouldn’t feel as though they were causing a fuss, (2) that they are easy to contact, (3) they don’t need to make an appointment, (4) there is no consultation fee. It would be important to both retain these advantages and also address those considered a problem for pharmacy (e.g. privacy) if pharmacy’s role in youth health were to be developed. The health areas where pharmacies might be most useful to young people are minor ailments, smoking cessation and sexual health. Therefore, pharmacies should focus on tailoring service provision and health promotion in these areas for youth.

4.6. Conclusion

Since many youth health issues are lifestyle-related, it can be tempting to label them as social rather than health issues, or to even place the blame upon young people for engaging in risky behaviour. However, these unmet health needs are affecting the current and adult health of our young people. They are the responsibility of all health professionals, and as providers as primary healthcare, community pharmacies also have a role to play. This research indicates that there is potential for community pharmacies to help improve healthcare access and address the unmet health needs of young people. Pharmacy’s role in youth health should be explored further. More research is needed to investigate how community pharmacists and pharmacy staff perceive their role in this area, their training and education requirements for this unique population, and to explore the views and needs of young people themselves.
4.7. Chapter summary

This chapter has presented the findings of a secondary analysis of a nationally representative sample of secondary school students which provided statistical evidence to suggest that community pharmacies may be able to increase youth healthcare access. The results were also presented as an academic poster designed by the YAG at the 2012 Australian Pharmaceutical Science Association conference (Figure 8).
Chapter 4 – Youth’07 Analysis

Could Community Pharmacies Help to Meet the Unmet Health Needs of NZ’s Youth?

Introduction

Although young people are generally considered to be fit and healthy, many have unmet health issues. The NZ Māori have identified several priority areas [1], including obesity, sexual and mental health, and drug and alcohol use. The Pharmacy profession is developing new services in many of these areas, and pharmacies are one of the most easily accessible healthcare providers available to young people. Fig 1 shows some pharmacy-relevant statistics from the Youth’07 health and wellbeing survey [2]. However, there has been very little research on pharmacy services for young people. This analysis explores the potential for community pharmacy to help meet unmet youth health needs and improve healthcare access for young people in NZ.

Some youth stats Pharmacy should know

- Health issues young people struggle to get help for
  - Sexual health
    - 4.9%
  - Chronic condition
    - 3.7%
  - Stopping smoking
    - 3.2%
  - Minor/persistent illness
    - 7.2%

- Reasons young people can’t access healthcare
  - Couldn’t get an appointment
    - No 83%
    - Yes 17%
  - Cost too much
    - 23.2%
  - Didn’t want to make a fuss
    - 55.0%
  - No transport
    - 26.9%
  - More?

Youth Advisory Group

A group of six young people aged 16-25 years were consulted about which barriers they felt would not be a problem if they were accessing healthcare from a pharmacy, and which health issues they would consider visiting a pharmacy for help with (shown in Fig 2 and 3 as green). Health issues and barriers they thought pharmacy could not help with are shown in grey.

Results

- Of students who had difficulty accessing healthcare for the listed health issues in the last 12 months:
  - Just over half of these students cited a health issue for which community pharmacies provide services.

Discussion

This research indicates that there is potential for community pharmacies to improve healthcare access for young people in NZ, and the role of pharmacy in youth health should be explored further. However, in order for young people to benefit from any developments in pharmacy, the profession needs to become more youth-oriented. Services must be tailored for youth to meet their unique health needs. Young people deserve more of our attention and more pharmacy research about this age group is needed.

Conclusion

There is potential. Pharmacy needs to recognise opportunities to improve healthcare access for young people

References

Acknowledgements

Thank you to the Youth’07 participants, the Auckland Uni Adolescent Health Research Group and Youthline Manukau Youth Advisory Group

Figure 8 – Academic poster presenting Youth’07 findings designed by YAG
Chapter 5. Pharmacy Survey Part 1

5.1. Chapter background

This chapter presents part 1 of the data collected in a survey of pharmacies in NZ, which investigates the youth-friendliness of community pharmacies as a physical environment. The findings were published in the journal of Research into Social and Administrative Pharmacy [401], and the article (written by the candidate as the lead author) is presented below with permission from the journal editors. Part 2 of the survey data relating to the availability of youth-relevant pharmacy services in NZ and the attitudes of pharmacy personnel with regards to their appropriateness for youth is presented in the next chapter.

*How youth-friendly community pharmacies are in New Zealand? Surveying aspects of accessibility and the pharmacy environment using a youth participatory approach*

5.2. Introduction

Community pharmacies may be visited by young people (usually defined as those aged 12 to 25 years [13]) to buy products or collect prescription medicines. The development of pharmacist prescribing [402] and medicines management roles [403] for conditions which affect young people (such as asthma [234]) could increase opportunities for medication-related interventions in youth. The developing health promotion role of the profession [225] may also be relevant to this age group, as the increasing selection of services offered by pharmacies in addition to prescription dispensing and over the counter (OTC) treatments include many in youth health areas. Sexual health, substance use, mental health and obesity are recognised as major health issues affecting youth populations globally [13]. This is also true for New Zealand (NZ) [11], where many young people have unmet health needs in these areas [143]. Pharmacy health promotion interventions such as the provision of sexual health services (e.g. supply of condoms or emergency contraception [404]), smoking cessation [35] and weight management consultation services [36], and needle exchange [405] may therefore represent an opportunity to help improve youth health. Furthermore, newer services such as community pharmacy-based chlamydia screening [223] and health promotion interventions for alcohol use [406] (both of which have been piloted) could also be relevant to youth health, as could recent research into the role of pharmacy in mental health [407]. However, very few services have been developed with the specific needs of young people in mind, and it is not
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known how appropriate the community pharmacy setting is for provision of services to this age group.

The majority of the literature describing the acceptability and appropriateness of primary healthcare services for youth has focused on the barriers to healthcare access for young people [26, 149, 398]. In the context of primary care, problems impeding youth healthcare access can be grouped into those which are caused by the physical attributes of the facility, and those related to healthcare personnel. ‘Physical’ barriers may include practical issues such as lack of transport, expense, difficulty making or attending appointments, opening hours, lack of advertising/promotion of service availability or processes, and concerns about the level of privacy provided by the environment [26, 398, 408]. Barriers associated with healthcare personnel may include communication problems or attitudes which make health professionals difficult to approach and trust, or result in them being perceived as being unhelpful or disrespectful [26, 138, 148].

The term “youth-friendly” has been used in the context of improving health service delivery to better meet the needs of young people [149]. The World Health Organisation has developed criteria [23] that defines adolescent friendly health facilities as those which offer privacy, provide a safe and appealing environment, have convenient locations and opening hours, and offer health information materials [13]. The “You’re Welcome Criteria” [367] were developed by the United Kingdom’s Department of Health to assist healthcare providers assess and / or improve the youth-friendliness of the services they provide by providing detailed quality criteria. A youth-friendly pharmacy toolkit [237] was also developed to reduce barriers to young people’s use of sexual health services provided by pharmacies in developing countries. Two similar initiatives [27, 28] have been run by charitable organisations to utilise pharmacies to promote youth health. They combined training toolkits with advertising campaigns targeted at young people, and have been among the few studies able to demonstrate increased youth healthcare access [149]. However, very little additional literature exists in this area.

This paper explores the ‘youth-friendliness’ of community pharmacies in New Zealand. It focuses on physical and practical factors which could affect young people’s use of pharmacies such as opening times and the pharmacy environment. The study also collected data on personnel factors and staff views which will be discussed elsewhere. The study design and data interpretation were informed by consultation with a youth advisory group.
5.3. Objectives

- To obtain information on physical factors which could affect young people’s use of community pharmacies in New Zealand, including accessibility, opening times and the physical youth-friendliness of the pharmacy environment.

- To involve and utilise young people as advisors in the research process, in order to understand their needs and interpretation of survey data.

5.4. Methods

5.4.1. Youth advisory group

Current guidance [11, 22, 42] advocates the involvement of young people in youth health research in line with evidence based youth development [47] and youth participation [358] approaches. Youth participation can benefit the research by adding new ideas and a youth perspective, but also aims to be of benefit to the young people involved by valuing and empowering them, and by providing opportunities for them to build skills [272].

This study used a cross sectional survey design, informed by sequential consultation with a Youth Advisory Group (YAG) during questionnaire development and interpretation of the results. Consistent with the principles of a youth development approach, they had a decision-making role in the project, and were consulted as an advisory or steering group rather than as research participants. The process is illustrated in Figure 9.

Figure 9 – Sequential consultation research design
The pre-existing Youthline Manukau YAG with which the researcher (EH) had already developed a working relationship were approached to provide feedback and advice for the study. Youthline is a charitable organisation which provides counselling and advocacy services for NZ youth [409]. The group consisted of around ten young people aged 16-25 and held regular meetings that were facilitated by a youth worker outside the context of this research. Group members were invited to participate in two YAG meetings for this study: the first during the development of the questionnaire and the second during the interpretation of the results. Each meeting took around two hours. The youth consultation process was conducted following the guidelines outlined in the NZ Ministry of Youth Development’s “Keepin’ it Real” youth-participation resource [358]. A code of conduct was agreed at the outset outlining responsibilities of researcher and group members, including keeping information discussed confidential. All members signed informed consent in relation to their participation in the research process. Meetings were held at the groups’ regular venue, food and soft drinks were provided by the researcher and transport as required. Recording the young people’s feedback electronically for verbatim transcription was not deemed to be feasible or appropriate as it would have detrimentally altered the atmosphere of the meetings and the power balance in the relationship between the researcher and the YAG members [382]. Instead, detailed meeting notes formed the main data collection method for the qualitative component of the research. A meeting template was developed to record the agenda items, points discussed, research plan and outcomes of the meetings. Copies of these notes were sent to the group facilitators as part of a feedback loop.

5.4.2. Youth consultation 1- questionnaire development

Six group members participated in the first meeting, and their feedback was used to help define ‘youth-friendliness’ in a community pharmacy context and guide decisions about the parameters of youth-friendliness to be measured. The YAG was first asked to brainstorm ideas about community pharmacies and factors they thought might affect whether or how young people access them. They were then asked to review and discuss a draft questionnaire that the researcher had prepared from items adapted from the United Kingdom’s “You’re Welcome Criteria” [367] and other key resources identified in the literature [23, 237]. The brainstorming exercise was purposefully conducted before exposing them to the draft questionnaire to encourage group members to discuss their own agenda and ideas. Questionnaire items were added and amended in accordance with the ideas from the brainstorming exercise and members’ feedback.
5.4.3. Piloting and sampling

The questionnaires were piloted with three pharmacists who were not included in the sample. Minor amendments were made to improve understanding and interpretation of questions. Potential participants were identified using publicly available contact details from the Pharmacy Guild’s national database of 924 community pharmacies in NZ. The random number generator function in Microsoft Excel was used to randomly select the 500 pharmacies of the sample. Questionnaires were posted to “the pharmacist in charge” between May and September 2011.

5.4.4. Data collection

The questionnaire items covered three areas: 1) potential barriers to youth access relating to physical aspects of pharmacies, including accessibility, extended opening hours and the youth-friendliness of the pharmacy shop environment; 2) availability and distribution of youth-relevant pharmacy services; and 3) the views of pharmacy personnel on providing services to young people and training needs. Pharmacy and participant demographics data were also collected. The findings for potential physical barriers (1) will be described here; other data will be reported elsewhere.

Advertisements for the survey were placed on the Pharmacy Guild of NZ and ProPharma (a pharmaceutical wholesaler) websites during this time to boost response rates. All participating pharmacies returning at least one completed questionnaire were entered into a prize draw to win $100 of gift vouchers. Participants were asked to return completed questionnaires in the prepaid envelopes provided, or return blank questionnaires if they did not wish to participate. Reminders were mailed to all pharmacies that had not returned blank questionnaires after 4 weeks, and again after a further 12 weeks (Table 11).

5.4.5. Analysis

Data were analysed using SPSS version 20 [364]. After data entry, the data were cleaned and checked for errors. Descriptive analysis was performed to provide an overview of the findings and logistic regression analysis to investigate associations between youth-friendliness and pharmacy demographics. Details of logistic regression analyses performed and the results obtained are shown in Table 12. In all cases the demographic variables entered into the regression were pharmacy location (urban/rural), setting (retail/healthcare) and business type (individually owned/group pharmacy). Results are presented as adjusted odds ratios (AOR) with 95% confidence intervals (CI). Associations were considered statistically significant where the P value was found to be less than 0.05. AORs are provided as an estimate of effect...
size, with values less than one indicating a negative association and more than one a positive association.

5.4.6. Youth consultation 2 - results interpretation

The researcher met with the YAG to explore their interpretation of the results of the survey. Eight group members participated in this meeting, including some new group members not present at the first meeting. A PowerPoint presentation was prepared summarising the findings of the descriptive analysis and logistic regression associations. The YAG was asked to comment on the results; for example, whether the figures higher or lower than they had expected, and what the implications might be for young people accessing pharmacies. A second researcher made detailed notes of the group’s discussion and comments using a feedback sheet to record points raised for each of the results described. Their feedback provided a youth perspective in the discussion and conclusions of this paper.

5.4.7. Ethical approval

Ethics approval for the study was obtained from the University of Auckland Human Ethics Committee (approval number 2010/590).

5.5. Results

5.5.1. Youth meeting 1- questionnaire development

The group discussion highlighted several key points which were translated into questionnaire items. With regards to opening hours, the group felt that young people were most likely to use pharmacies outside of school or work hours. To reflect this we asked pharmacies to give details on late-night (after 6 pm) and weekend opening hours. They agreed that going into a pharmacy for personal things can be quite embarrassing, and that although having a private consultation area would make it a bit easier, they thought most young people would not know this was available. Therefore, as well as surveying the availability of a private consultation area in the pharmacy, we also asked whether they had a notice regarding its existence. Some group members took the opportunity to ask what pharmacists and pharmacy support staff do and what qualifications they have. They felt this was important information, and it is not always easy to know whom you are talking to unless they are wearing a uniform or badge. Job title badges for pharmacy personnel were included as a questionnaire item. There was some confusion regarding what pharmacies do, what services are available and how to access them. The group felt that pharmacies should have publicity material available which is designed to
be understandable and appropriate for young people (defined as “youth-specific”). This was also included as a questionnaire item.

5.5.2. Survey response rates

Three questionnaires were returned to the sender with address unknown, making the denominator 497. After three mail shots, completed questionnaires were received from pharmacists at 251 pharmacies, achieving a response rate of 50.5%. The demographic characteristics of participating pharmacies are summarised in Table 11.

Table 11 - Demographic characteristics of participating pharmacies

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban/Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>78.0</td>
<td>191</td>
</tr>
<tr>
<td>Rural</td>
<td>22.0</td>
<td>54</td>
</tr>
<tr>
<td>Business type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individually owned</td>
<td>52.4</td>
<td>129</td>
</tr>
<tr>
<td>Group/banner/franchise</td>
<td>47.6</td>
<td>117</td>
</tr>
<tr>
<td>Location/Setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail setting&lt;sup&gt;a&lt;/sup&gt;</td>
<td>76.9</td>
<td>190</td>
</tr>
<tr>
<td>Healthcare setting&lt;sup&gt;b&lt;/sup&gt;</td>
<td>23.1</td>
<td>57</td>
</tr>
</tbody>
</table>

<sup>a</sup> “Retail setting” includes pharmacies among local shops (n/161), supermarkets (n/5) and malls (n/24)

<sup>b</sup> “Healthcare setting” includes pharmacies in health centres (n/51), hospitals (n/3) and college or university campuses (n/3)

5.5.3. Accessibility and opening hours

Almost all pharmacists reported that the pharmacy was accessible by public transport (85.2%, n = 208), and had disabled access (97.1%, n = 238). Rural pharmacies were significantly less likely to be accessible by public transport (40.4%) compared to those in urban areas (97.9%) (P < 0.0001).

The minimum weekday closing time was 5 pm, with the mode being 6 pm. Fifteen per cent (n = 37) stayed open after 6 pm (“late”) every weekday, and 24.4% (n = 66) opened late at least one evening per week. Most pharmacies (79.8%, n = 197) opened on Saturdays and of these, just over half (n = 100) opened for a full day (more than 4 hours). Just over a quarter (27.5%, n = 68) opened on Sundays, with 85.2% (n = 58) of these opening for a full day. Descriptive results are presented in Table 13 alongside interpretive feedback from the YAG.

Logistic regression analysis reported associations between extended opening hours and pharmacy demographics (Table 13). The odds of opening late on weekday evening(s) were 5 times less among rural pharmacies compared to urban pharmacies (AOR = 0.20, CI = 0.07-0.59, P = 0.003). Similarly, the odds of rural pharmacies opening on Sundays were six times less than among urban pharmacies (AOR = 0.16, CI = 0.06-0.47, P = 0.001). The odds of
opening on Saturdays were around three times lower among pharmacies in healthcare settings compared to those in retail settings (AOR = 0.36, CI = 0.19-0.72, P = 0.004).

5.5.4. Pharmacy environment

The descriptive results for questionnaire items relating to the physical pharmacy environment are presented in Table 13. The majority had a private consultation area (82.9%), had both male (62.4%) and female (95.9%) staff available, and wore job title badges (75.8%). However, much fewer had notices about private consultations (18.4%) or confidentiality (27.8%), or had youth health information available (31.3%).

Logistic regression analysis found few associations between these pharmacy environment variables and the pharmacy demographics (Table 12). The odds of having a private consultation area were approximately three times greater among group or chain pharmacies (AOR = 3.06, CI 1.45–6.48, P = 0.003), and the odds of staff wearing job title badges were also greater for group pharmacies compared to those that were individually owned (AOR = 4.51, CI = 2.28–8.95, P < 0.001). The availability of youth-specific health information among pharmacies in healthcare settings was reportedly triple that of pharmacies in retail settings (AOR = 2.95, CI = 1.55–5.64, P = 0.001). No significant associations were found regarding whether the pharmacy had a notice about a private consultation area, whether the pharmacy explained the confidentiality rights of young people, or provided opportunities for them to make suggestions.
Table 12 – Logistic regression analysis

<table>
<thead>
<tr>
<th>Predictor Variables (for all analyses)</th>
<th>Outcome variable (Yes/No)</th>
<th>Significant results ($P &lt; 0.05$)</th>
<th>$P$ value</th>
<th>Size of effect Adjusted Odds Ratio (AOR)</th>
<th>95% Confidence Interval (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location - Urban/rural Setting</td>
<td>Open late on weekday evening(s)</td>
<td>Location</td>
<td>0.003</td>
<td>0.20</td>
<td>0.07 - 0.59</td>
</tr>
<tr>
<td></td>
<td>Open Saturdays</td>
<td>Setting</td>
<td>0.004</td>
<td>0.36</td>
<td>0.19 - 0.72</td>
</tr>
<tr>
<td></td>
<td>Open Sundays</td>
<td>Location</td>
<td>0.001</td>
<td>0.16</td>
<td>0.06 - 0.47</td>
</tr>
<tr>
<td>Location - Retail/healthcare Setting</td>
<td>Private consultation area available</td>
<td>Business type</td>
<td>0.003</td>
<td>3.06</td>
<td>1.45 - 6.48</td>
</tr>
<tr>
<td>Business type - Individual/group</td>
<td>Youth specific health information available</td>
<td>Location</td>
<td>0.001</td>
<td>2.95</td>
<td>1.55 - 5.64</td>
</tr>
<tr>
<td></td>
<td>Staff wear job title badges</td>
<td>Business type</td>
<td>$&lt; 0.001$</td>
<td>4.51</td>
<td>2.28 - 8.95</td>
</tr>
</tbody>
</table>
Table 13 - Descriptive results and summary of the interpretive feedback from the youth advisory group

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>Summary of YAG Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accessibility and extended opening hours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy is accessible to disabled young people</td>
<td>97.1</td>
<td>Most YAG members were within walking distance of a pharmacy or could get a lift from a friend with a car and did not experience difficulty accessing pharmacies.</td>
</tr>
<tr>
<td>Pharmacy is accessible by public transport</td>
<td>85.2</td>
<td></td>
</tr>
<tr>
<td>Late opening on weekday evening(s)</td>
<td>24.4</td>
<td>Good if pharmacies open late, especially in emergencies. Extended opening hours could benefit young people when surgeries are shut. Sunday morning opening could be particularly valuable.</td>
</tr>
<tr>
<td>Open Saturdays</td>
<td>79.8</td>
<td></td>
</tr>
<tr>
<td>Open on Sundays</td>
<td>27.5</td>
<td></td>
</tr>
<tr>
<td><strong>Youth-friendliness of the pharmacy environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private consultation area available</td>
<td>82.9</td>
<td>Privacy is really important to young people. Most of the YAG members were not aware that pharmacies have private consultation rooms/areas. They suggested that these areas should be well signposted and have a door.</td>
</tr>
<tr>
<td>Notice about private consultation area</td>
<td>18.4</td>
<td>Good that pharmacies have private consultation areas but not useful if young people don’t know about them. Pharmacies should have a notice or ask young people ‘would you like to speak privately?’</td>
</tr>
<tr>
<td>Confidentiality rights of young people explained (notice/verbal)</td>
<td>27.8</td>
<td>The YAG felt this was one of the most important things that could affect access. Pharmacies should have a notice (written in youth-appropriate language) and also verbally explain confidentiality rights to young people.</td>
</tr>
<tr>
<td>Female staff available</td>
<td>95.9</td>
<td>Female YAG members reported a preference to discuss health issues with female staff, whilst male YAG members had no preference or else also preferred to talk to female staff members. They did acknowledge that this depends on what the health issue is.</td>
</tr>
<tr>
<td>Male staff available</td>
<td>62.4</td>
<td></td>
</tr>
<tr>
<td>Staff wear job title badges</td>
<td>75.8</td>
<td>Difficult to know who to ask to find information when staff don’t wear badges, and can be embarrassing if young people ask the wrong person or have to repeat themselves.</td>
</tr>
<tr>
<td>Youth specific health information displayed</td>
<td>31.3</td>
<td>Information must be designed for young people, not adults or children. None of the YAG members had seen youth specific health information in a pharmacy - and some couldn’t remember seeing any health information at all.</td>
</tr>
<tr>
<td>Youth specific publicity/advertising</td>
<td>10.6</td>
<td>Young people won’t know pharmacies could help. Why can’t pharmacies promote youth services instead of weight loss programmes? They need eye catching posters in the window and in schools to grab young people’s attention.</td>
</tr>
<tr>
<td>Young people have opportunities to make suggestions</td>
<td>62.2</td>
<td>YAG members didn’t feel that they had ever been given this opportunity outside the research. One member had seen a suggestion box. Group members expressed that it was no wonder they don’t see many young people.</td>
</tr>
</tbody>
</table>
5.5.5. Youth meeting 2- results interpretation

Feedback from the YAG in relation to the interpretation of the results is presented in Table 13 alongside the descriptive data results. In summary, the YAG thought the physical accessibility and flexible opening times of pharmacies would be useful to young people, but many may not know what services are available if pharmacies do not have youth-specific publicity material and health information. Similarly, although they viewed the high proportion of pharmacies with a private consultation area as a positive finding, they felt that privacy and confidentiality would still be concerns for young people because pharmacies do not promote their availability or provide reassurances about youth confidentiality rights. Female YAG members said they preferred to speak to female staff, whilst for male YAG members it depended what the issue was. They all preferred pharmacy staff to wear job title badges as this makes it easier to know who to approach and avoid the embarrassment of having to repeat themselves.

5.6. Discussion

The majority of community pharmacies participating in this study showed good potential as youth-friendly healthcare access point in terms of their accessibility, extended opening hours and private consultation areas. However, improvement is needed in many areas, especially with regards to communicating information to young people. Most pharmacies do not actively inform young people about the services offered, the availability of private consultation areas or their confidentiality rights, and many do not provide youth-specific health information.

Extended opening hours and availability of services without the need to make an appointment have been identified as key success factors of youth specific and youth one stop shop health services [168, 214, 215], and are, therefore, also likely to be important considerations in the context of community pharmacies. Many pharmacies in this study had extended opening hours, with just under a quarter opening late at least one evening per week, four fifths opening on Saturdays and just over a quarter opening on Sundays. Feedback from the YAG indicated that these extended opening hours and the ability to access services without having to make an appointment could potentially be of value to young people in need of out of hours services.

Ideally, youth health services should be conveniently located amongst other community facilities [168] and should be accessible by public transport [367]. The majority of pharmacies participating in this survey were conveniently located in retail settings amongst local shops or in malls or supermarkets, and nearly all reported that they were accessible by public transport, a finding supported by YAG feedback as most of them lived within walking distance of one. However, the logistic regression analysis indicated that rural pharmacies were less likely to
Chapter 5 – Pharmacy Survey Part 1

be accessible by public transport and also less likely to have extended opening hours, implicating potential access issues for rural youth who have been reported to be affected by additional healthcare access barriers [169].

Whilst nearly all pharmacies in this study had a private consultation area available, only one in five had a notice explaining this. Similarly, few pharmacies indicated that they reassure young people of their confidentiality rights either verbally or with a written notice. Concerns about privacy and confidentiality are important barriers to young people accessing healthcare [26, 398]. Privacy issues in community pharmacies have been highlighted in previous research such as chlamydia screening pilots [34, 223], and are an important consideration in the context of youth. Even though most pharmacies offered a private space and confidential service for sensitive conversations, young people are unlikely to approach unless they are made explicitly aware of this. Furthermore, the YAG indicated that they were not aware that pharmacies had private consultation areas, and felt that privacy and confidentiality issues could be important factors influencing young people’s use of pharmacies. However, they suggested that these could be easily addressed with simple notices or by proactively offering young people the opportunity to talk privately.

Nearly all the pharmacies surveyed had female staff available, and most also had male staff available. Of the YAG group members consulted, the young women reported a preference for female staff, whilst the young men had no preference or else also preferred to talk to female staff members. These findings concur with literature on this issue [367]. In pharmacies with one male pharmacist on duty, young people may not have an option to speak with a female regarding prescription or restricted medicines. This could have potential implications for healthcare access, for example young females requesting the emergency contraceptive pill may be reluctant to see a male pharmacist.

Young people like any consumer have a right to know the name and job title of the person they are talking to [410]. The YAG members highlighted that it can be difficult to know who to approach in pharmacies where staff do not display their job titles, and that having to repeat information about personal health issues to multiple staff members could constitute a major barrier to younger customers. This issue has not been described in literature regarding other primary healthcare providers and may be unique to pharmacy.

Around a third of pharmacies surveyed reported displaying youth-specific health information. However, this figure may be exaggerated by participants reporting the availability of generic health information that might be relevant to youth health needs, as opposed to “youth-specific” information designed specifically for young people. For example, most pharmacies in NZ display Self-care information leaflets on various topics including ECP and acne [411].
Unfortunately, the YAG’s feedback suggested that young people would be unlikely notice them or pick them up, even if they were about health issues relevant to their needs. Furthermore, young people will not access services if they feel uncomfortable in the environment [398], and initial impressions influence perceptions of youth-friendliness. Displaying youth-specific health information provides a resource, and also helps young customers feel welcome because an effort has been made to think about their needs and how to engage their attention [168]. Since pharmacies have been identified as a potential health information source by youth [186]. We suggest that this issue deserves further investigation and the development of a youth-specific range of resources for community pharmacies.

5.6.1. Strengths and limitations

One of the key strengths of this research has been in the use of a youth participation approach. This study allowed young people an opportunity to make a valued contribution, ensuring the research questions and the findings were youth-informed. This is based on best practice in relation to the principles of youth development [47] and youth participation [358]. The pharmacy profession has an ethical responsibility to try and address some of the barriers identified. Many of the new services and roles being developed for community pharmacy are in key youth health domains, and their success may in part be dependent upon our ability to engage and deal effectively with younger populations. Moreover, the points the YAG has raised may be relevant to all pharmacy customers, and many of the improvements they have suggested have the potential to be of benefit across age groups.

However, the YAG consulted for this study consisted of ten self-selected young people from Auckland, and is not representative of the youth population in NZ. Although this may limit the generalisability of the issues they highlighted (particularly with regards to rural youth), their involvement provided a valuable perspective not previously explored in pharmacy practice research. Working with a pre-existing group provided advantages in that group members already knew each other and the researcher and were therefore able to contribute with confidence. It was also for the necessity of maintaining a safe and relaxed environment for group discussion that the method selected for collection of YAG feedback data was detailed meeting notes instead of audio recordings. It is possible that some detail may have been lost or interpretation altered by summarisation. We attempted to counter this by creating a feedback loop with the group facilitators.

The low response rate for this survey means caution is advised when extrapolating to community pharmacy in general. Ethical requirements did not allow us to undertake non-responder bias follow-up.
5.7. Conclusion

Community pharmacies demonstrated good potential as youth-friendly healthcare access points. The areas where most pharmacies need to improve relate to communication of the availability of private spaces for consultations and related confidentiality processes, and raising awareness about youth relevant services. Such improvements will require a greater youth focus from the profession, and should be undertaken in consultation with young people. We recommend the use of youth participation approaches in future pharmacy practice research into youth health services.

5.8. Chapter summary

The results presented in this chapter suggest that community pharmacies in NZ would need to become more youth-friendly in order to optimise potential to increase youth healthcare access. The following chapter comprises data from the second part of the pharmacy survey.
Chapter 6. Pharmacy Survey Part 2

6.1. Chapter background

This chapter presents part 2 of the data collected in a survey of pharmacies in NZ, which investigates the availability of youth-relevant pharmacy services in NZ and the attitudes of pharmacy personnel with regards to their appropriateness for youth. The findings are presented as an article accepted for publication by the International journal of Public Health in 2014 which was written by the candidate as the lead author. The journal editors have given permission for its inclusion in this thesis.

*Could community pharmacies help to improve youth health? Service availability and views of pharmacy personnel in New Zealand*

6.2. Introduction

The international youth population is growing [13], and around one in five people in New Zealand (NZ) are aged 12-25 [399]. This age group is often viewed as a population with low health needs, because the majority of youth are strong, resilient and healthy. Nonetheless, health issues such as drug and alcohol use, mental health issues, unintended pregnancy, sexually transmitted infections (STIs) and obesity in young people are major public health concerns both in the immediate and long term [10]. Many barriers to youth healthcare access have been identified including concerns about confidentiality and embarrassment, cost, inability to attend appointment times, and lack of publicity and awareness regarding service availability [149]. As a result a substantial number of young people internationally have unmet health needs [13]. The Youth’12 Health and Wellbeing survey found that around 19% of secondary school students in NZ had been unable to access healthcare when needed in the preceding twelve months [12].

Tailoring of existing primary care services in the community to better meet the needs of youth has been identified by The NZ Ministry of Health as an important step in addressing these issues [22]. Community pharmacies are retail pharmacy outlets which supply medications and associated health products and provide health-related services. In NZ, as in many other countries, the scope of community pharmacy practice is expanding beyond a focus on medicine supply to encompass new preventative and primary healthcare services [412, 413]. It has been suggested that pharmacies may present fewer barriers to youth healthcare access because they are accessible, convenient and visible [32, 392]. Community pharmacies already provide many services relevant to the health needs of young people [30, 392] and...
more may emerge as the profession's role in health promotion and preventative interventions develops [413].

In particular, pharmacies have been identified as a potential resource for increasing youth access to sexual health services [32], and are already being utilised by charitable organisations in developing countries to combat the spread of HIV [28]. Pharmacies supply pregnancy tests and condoms, and the emergency contraceptive pill (ECP) is available from pharmacies in many countries without a prescription or 'over-the-counter' (OTC) [222]. International evaluations have indicated success in terms of customer satisfaction and positive health outcomes [222]. This has led to the development of other pharmacy-delivered sexual health services including chlamydia screening [223], and the Condom Card ('C-Card) scheme whereby young people are supplied condoms discreetly and free of charge via pharmacies [176].

Community pharmacy services could also help to further to positive trends in youth health behaviour such as reports of decreasing prevalence of smoking, substance use and binge drinking amongst NZ adolescents [12]. There is evidence to support the efficacy of pharmacy-based smoking cessation services [35] where pharmacies offer treatment plans and advice alongside nicotine replacement therapy (NRT). Methadone dispensing and needle exchange services may be offered by community pharmacies in NZ [120], and some studies have also investigated the potential for pharmacy-based screening and brief interventions to reduce harmful drinking behaviour [250].

Weight management products and programmes are also widely available in pharmacies in NZ. There is evidence indicating that weight management services delivered by pharmacy personnel are at least as effective as those delivered by nurses [36]. Although it is uncertain how appropriate they may be for younger customers, young people are likely to be aware of them and therefore, this area deserves investigation.

Some of these services are relatively new to pharmacies and may not be offered by all. More data are required to describe their availability and distribution. Furthermore, most of these services currently target the adult population and there is little information concerning the provision of services to young people specifically, or the perspectives of pharmacy personnel with regards to their appropriateness for younger age groups. Pharmacists surveyed in the United States reported being less likely to supply ECP to younger females [206], and a more recent study indicated that a researcher posing as a young person would be more likely to be told ECP was not available than a researcher posing as a General Practitioner (GP) [208]. Research on the views of young people also suggests that the attitudes and approach of pharmacy personnel may be important factors determining young people’s use of pharmacies.
The views of pharmacy support staff (PSS), including technicians and assistants, remain largely unexplored. This study sought to explore these knowledge gaps, using a youth participatory approach.

6.3. Objectives

1. To obtain information on the availability of youth-relevant community pharmacy services in NZ.

2. To investigate the opinions of pharmacy personnel regarding the appropriateness of these services for young people of different ages.

6.4. Methods

6.4.1. Study design

A youth participatory approach [332] was used in which a Youth Advisory Group (YAG) was consulted to provide advice and feedback on the study design and interpretation of results. The rationale for involving young people in the research process follows a strength-based Youth Development perspective which aims to utilise the valuable skills and insights youth have to offer [47]. The theoretical positioning and methodology for this study have been described in more detail elsewhere [401].

6.4.2. Survey design

The survey instrument was developed in consultation with the YAG. The YAG consisted of eight young people aged 16-25 who already knew each other and the researcher (EH), and the group was facilitated by a trained youth worker. Their feedback informed which community pharmacy services were 'youth-relevant' and should be included in the survey. The YAG also defined the age ranges of young people about which pharmacy personnel were questioned (i.e. age 12-15, 16-18 and 19-25 years). The YAG felt that it was important to survey the views of PSS as well as pharmacists. Therefore, both pharmacist and PSS questionnaires were developed.

Piloting, sampling and data collection methods for this study have been reported previously [401]. In summary, 500 pharmacies were randomly selected from the NZ Pharmacy Guild’s national database of community pharmacies. Each pharmacy received one pharmacist and one PSS questionnaire via post in an envelope addressing 'the pharmacist in charge', together with a cover letter requesting they be distributed to a pharmacist and PSS member at the pharmacy. Envelopes were provided for participants to return completed questionnaires (or
blank questionnaires if they did not wish to participate) free of charge. Three mailshots were issued between May and September 2011. All participating pharmacies returning at least one questionnaire were entered into a prize draw to win $100 of supermarket vouchers for the pharmacy.

6.4.3. Service availability

Data on availability of youth-relevant services were collected via the pharmacist questionnaire only. Pharmacists could select 'yes', 'no' or 'would consider offering this service in the future'. The services included in the survey were: ECP (on prescription and OTC); supply of condoms and pregnancy tests; supply of NRT and smoking cessation consultation services; weight management products and consultation services; methadone dispensing and needle exchange services.

6.4.4. Views of pharmacists and pharmacy support staff

The opinions of pharmacy personnel regarding the appropriateness of these services for youth were collected in both pharmacist and PSS questionnaires. Participants were asked whether the services listed above were appropriate for young people aged 19-25, 16-18 and 12-15 years old, with response options of 'yes', 'no' or 'not sure'.

Data on possible predictor variables which might affect pharmacy personnel's views on appropriateness of services were also collected, such as participant demographics including age, gender and job description. Participants were asked to estimate how frequently they interacted with young people through their work, and the response options were recoded into a binary variable 'never/rarely' or 'sometimes/often'. Similarly, participants were asked to rate their confidence in their knowledge regarding youth health topics such as sexual health, mental health and weight management, and their responses were again recoded into a binary variable 'very confident/reasonably confident' or 'not very confident/totally lacking in confidence'. Lastly, participants were asked at what age they would provide prescription dispensing and OTC medicine services to young people without a parent/caregiver present to investigate views on independence from parents. Response options were 'all young people aged 12 or over' or 'young people aged 16 or over only'.

6.4.5. Analysis

Data were entered into an SPSS 20 database which was cleaned and quality checked [364]. Descriptive data analysis reported service availability and views of pharmacy personnel regarding service appropriateness for young people aged 12-15, 16-18 and 19-25.
Generalised linear mixed models (GLMM) were run in SAS [366] to investigate variables associated with respondent opinions on appropriateness of services for young people. A separate GLMM was run for each of the opinion questions with the binary outcome of ‘yes’ or ‘no/not sure’. Participant demographics and relevant pharmacy characteristics were included as explanatory variables. The pharmacy identifier number was included as a random effect to account for associations between responses of pharmacists and PSS working at the same pharmacy. The specific variables included in each analysis are shown in Table 16 and results are presented as adjusted odds ratios (AOR) with 95% confidence intervals (CI). Associations with $P$ values of less than 0.05 were considered statistically significant.

6.4.6. Interpretation of the results

Results were presented to the YAG and their feedback informed the interpretation of the findings. Implications for practice and service delivery raised in the discussion of this paper reflect the YAG’s perspectives on the data.

6.4.7. Ethical approval

Ethics approval was obtained from the University of Auckland Human Ethics Committee for this study (approval number 2010/590).

6.5. Results

6.5.1. Response rates

Three envelopes were returned from pharmacies with address unknown, reducing the denominator to 497. Completed questionnaires were received from pharmacists at 251 pharmacies (50.5%), and PSS questionnaires from 184 (37.0%). Both pharmacist and PSS questionnaires were returned by 172 pharmacies, resulting in a response rate of 33.4% for paired data.

Questionnaires were returned by respondents working in a range of community pharmacies, including group and independent businesses, urban and rural locations, and retail and healthcare settings. Participant demographics are summarised in Table 14.
Table 14 - Demographic characteristics of participating pharmacy personnel

<table>
<thead>
<tr>
<th>Gender</th>
<th>Pharmacists</th>
<th>Pharmacy support staff</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Male</td>
<td>107</td>
<td>42.6</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>144</td>
<td>57.4</td>
<td>171</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 and under</td>
<td>32</td>
<td>12.8</td>
<td>63</td>
</tr>
<tr>
<td>26-35</td>
<td>73</td>
<td>29.2</td>
<td>39</td>
</tr>
<tr>
<td>36-45</td>
<td>46</td>
<td>18.4</td>
<td>28</td>
</tr>
<tr>
<td>46-55</td>
<td>62</td>
<td>24.8</td>
<td>33</td>
</tr>
<tr>
<td>56 and over</td>
<td>37</td>
<td>14.8</td>
<td>15</td>
</tr>
</tbody>
</table>

Overall 27.3% of participants were male, with most of these being pharmacists. Participating PSS were, on average, younger than pharmacists.

6.5.2. Service availability

Availability of youth-relevant services reported by pharmacists is summarised in Table 15.

Table 15 - Availability of youth-relevant pharmacy services in NZ

<table>
<thead>
<tr>
<th>Service</th>
<th>Yes we already offer this service %</th>
<th>Would consider offering this service in the future %</th>
<th>No, would not consider offering this service %</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECP on prescription</td>
<td>97.6</td>
<td>0.8</td>
<td>1.6</td>
</tr>
<tr>
<td>ECP over the counter</td>
<td>94.3</td>
<td>1.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Condoms</td>
<td>98.8</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Pregnancy tests</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>NRT products</td>
<td>97.6</td>
<td>1.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Quit smoking consultation service</td>
<td>25.4</td>
<td>66.0</td>
<td>8.6</td>
</tr>
<tr>
<td>Weight management products</td>
<td>71.1</td>
<td>18.7</td>
<td>10.2</td>
</tr>
<tr>
<td>Weight management consultation service</td>
<td>39.6</td>
<td>42.4</td>
<td>18.0</td>
</tr>
<tr>
<td>Methadone dispensing</td>
<td>56.3</td>
<td>8.1</td>
<td>35.6</td>
</tr>
<tr>
<td>Needle exchange</td>
<td>19.5</td>
<td>17.1</td>
<td>63.4</td>
</tr>
</tbody>
</table>
The majority of respondents confirmed the availability of products relevant to youth health needs including emergency contraception (94.3%), condoms (98.8%), pregnancy tests (100.0%), NRT (97.6%) and weight management products (71.1%). A quarter also offered services relevant you youth, including quit smoking services (25.4%) and weight management (39.6%) consultation services. The majority of those not currently offering these services stated that they would consider doing so in the future. Methadone dispensing and needle exchange services were available from 56.3% and 19.5% of pharmacies respectively, but few non-providers indicated future willingness to participate in these services.

6.5.3. Views of pharmacists and pharmacy support staff

Responses indicated that 69.2% of pharmacists and PSS felt that young people could collect their own prescriptions if they were aged 12 or over. The remaining 31.8% felt a parent or caregiver should be present with those aged under 16. Just over half (52.3%) of participants felt that young people could buy OTC medications without a parent or caregiver when they were aged 12 or over; the other half (47.7%) indicated that young people should be aged 16 or over.

Descriptive results of the opinions of pharmacists and PSS regarding the appropriateness of services for young people of different ages are presented in Figure 10.
Participants could select Yes, No or Not sure. Responses were collected for young people of different ages (19-25 years, 16-18 years and 12-15 years). ECP emergency contraceptive pill, Rx prescription, OTC over the counter, NRT nicotine replacement therapy
The majority of pharmacists and PSS indicated that they believed that all services were appropriate for young people aged 19-25 years, although some respondents did not feel harm reduction services for drug use were appropriate. The lower the age of the customer, the more likely participants were to select ‘no, not appropriate’ or ‘not sure’. Statistically significant differences between pharmacist and PSS responses were also evident, with PSS less likely than pharmacists to feel services were appropriate for young people.

Details and results of generalised linear mixed modelling performed to investigate associations between participant characteristics and views on appropriateness of services are shown in Table 16. Significant associations between predictor variables and responses were found for all opinion questions analysed. Whether the participant was a pharmacist or PSS was found to be a statistically significant predictor variable in nearly all analyses, with the odds of pharmacists indicating pharmacy services were appropriate for young people two to five times higher than PSS. Responses on whether young people aged 16 years or under can buy OTC medications or collect their prescription without a parent or carer were also a common predictor variable. The odds that the participant would consider services appropriate were usually around twice as high amongst those who reported customers aged 12 and over could buy OTC products independently compared to those who felt an adult should be present until age 16. In the case of weight management services, confidence in knowledge with regards to this area was also found to be a significant factor, with participants who were not confident in their knowledge being less likely to feel weight management services were appropriate for youth. With regards to methadone dispensing, participants working in pharmacies where this service was already available appeared to be more likely to believe it was appropriate for young people.
Table 16 - Generalised linear mixed models investigating potential influences upon views regarding the appropriateness of providing services for young people.

Significant results are in bold text and are presented as Adjusted Odds Ratios (OR) with 95% Confidence Intervals (CI) in parentheses. OTC over the counter, ECP emergency contraceptive pill, YP young people, PSS pharmacy support staff.

<table>
<thead>
<tr>
<th>Outcome variable (modelling probability of yes)</th>
<th>Predictor variables</th>
<th>OR (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is OTC ECP appropriate for 16-18 year olds? N/414</td>
<td>Questionnaire type (PSS v pharmacist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age of participant</td>
<td>0.27 (0.12-0.59)</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Gender (male v female)</td>
<td>0.99 (0.96-1.02)</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>Estimated frequency of interaction with YP (sometimes/often v never/rarely)</td>
<td>0.55 (0.19-1.62)</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>Confidence in knowledge about contraception (confident v not confident)</td>
<td>2.88 (1.32-6.29)</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>Can YP under 16 buy OTC products without a parent? (yes v no)</td>
<td>1.37 (0.62-3.0)</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.71 (0.86-3.39)</td>
<td>0.12</td>
</tr>
<tr>
<td>Are smoking cessation consultation services appropriate for 16-18 year olds? N/380</td>
<td>Questionnaire type (PSS v pharmacist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age of participant</td>
<td>0.31 (0.14-0.68)</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Gender (male v female)</td>
<td>1.01 (0.98-1.04)</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>Estimated frequency of interaction with YP for improving health (sometimes/often v never/rarely)</td>
<td>1.06 (0.41-2.73)</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Confidence in knowledge about smoking cessation (confident v not confident)</td>
<td>1.64 (0.74-3.64)</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Can YP under 16 buy OTC products without a parent? (yes v no)</td>
<td>1.26 (0.50-3.18)</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td>Does this pharmacy already offer a quit smoking service? (yes v no)</td>
<td>2.05 (1.02-4.13)</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.71 (0.50-3.18)</td>
<td>0.79</td>
</tr>
<tr>
<td>Are weight management consultation services appropriate for 16-18 year olds? N/384</td>
<td>Questionnaire type (PSS v pharmacist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age of participant</td>
<td>0.54 (0.30-0.96)</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>Gender (male v female)</td>
<td>1.00 (0.98-1.02)</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Estimated frequency of interaction with YP for improving health (sometimes/often v never/rarely)</td>
<td>0.70 (0.35-1.43)</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Confidence in knowledge about weight management (confident v not confident)</td>
<td>1.35 (0.74-2.45)</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Can YP under 16 buy OTC products without a parent? (yes v no)</td>
<td>3.68 (1.72-7.86)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Does this pharmacy already offer a weight management service? (yes v no)</td>
<td>2.38 (1.37-4.12)</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.46 (0.82-2.60)</td>
<td>0.20</td>
</tr>
<tr>
<td>Is methadone dispensing appropriate for 16-18 year olds? N/391</td>
<td>Questionnaire type (PSS v pharmacist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age of participant</td>
<td>0.20 (0.12-0.33)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Gender (male v female)</td>
<td>1.01 (0.99-1.03)</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>Estimated frequency of interaction with YP (sometimes/often v never/rarely)</td>
<td>1.20 (0.68-2.13)</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>Confidence in knowledge about drug use (confident v not confident)</td>
<td>0.80 (0.41-1.57)</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>Can YP under 16 collect their prescriptions without a parent? (yes v no)</td>
<td>1.29 (0.79-2.11)</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Does this pharmacy already offer methadone dispensing? (yes v no)</td>
<td>1.52 (0.93-2.48)</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.98 (1.23-3.18)</td>
<td>0.005</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Age of participant</td>
<td>1.00 (0.98-1.02)</td>
<td>1.03 (0.99-1.03)</td>
<td>1.00 (0.99-1.02)</td>
</tr>
<tr>
<td>Gender (male v female)</td>
<td>1.01 (0.60-1.70)</td>
<td>0.92 (0.52-1.64)</td>
<td>0.62 (0.37-1.06)</td>
</tr>
<tr>
<td>Estimated frequency of interaction with YP (sometimes/often v never/rarely)</td>
<td>0.92 (0.49-1.74)</td>
<td>1.47 (0.93-2.32)</td>
<td>1.46 (0.91-2.34)</td>
</tr>
<tr>
<td>Confidence in knowledge about contraception &amp; family planning (confident v not confident)</td>
<td>1.38 (0.71-2.67)</td>
<td>1.75 (0.97-3.14)</td>
<td>1.09 (0.53-2.23)</td>
</tr>
<tr>
<td>Can YP under 16 buy OTC products without a parent? (yes v no)</td>
<td>2.21 (1.42-3.45)</td>
<td>0.54 (0.33-0.89)</td>
<td>2.26 (1.45-3.51)</td>
</tr>
<tr>
<td>Questionnaire type (PSS v pharmacist)</td>
<td>0.46 (0.28-0.76)</td>
<td>0.54 (0.33-0.89)</td>
<td>2.31 (1.47-3.63)</td>
</tr>
<tr>
<td>Age of participant</td>
<td>1.00 (0.98-1.02)</td>
<td>1.03 (0.99-1.03)</td>
<td>0.66 (0.40-1.09)</td>
</tr>
<tr>
<td>Gender (male v female)</td>
<td>1.01 (0.60-1.70)</td>
<td>0.92 (0.52-1.64)</td>
<td>0.62 (0.37-1.06)</td>
</tr>
<tr>
<td>Estimated frequency of interaction with YP (sometimes/often v never/rarely)</td>
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</tr>
<tr>
<td>Age of participant</td>
<td>1.00 (0.98-1.02)</td>
<td>1.03 (0.99-1.03)</td>
<td>0.66 (0.40-1.09)</td>
</tr>
<tr>
<td>Gender (male v female)</td>
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<td>0.92 (0.52-1.64)</td>
<td>0.62 (0.37-1.06)</td>
</tr>
<tr>
<td>Estimated frequency of interaction with YP (sometimes/often v never/rarely)</td>
<td>0.92 (0.49-1.74)</td>
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</tr>
<tr>
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<td>1.09 (0.53-2.23)</td>
</tr>
<tr>
<td>Can YP under 16 buy OTC products without a parent? (yes v no)</td>
<td>2.21 (1.42-3.45)</td>
<td>0.54 (0.33-0.89)</td>
<td>2.26 (1.45-3.51)</td>
</tr>
</tbody>
</table>
6.6. Discussion

6.6.1. Service availability

This study has found almost universal availability of selected youth-relevant health services from community pharmacies in NZ, thus providing evidence to suggest that community pharmacies could help to increase youth healthcare access. Almost all of the pharmacies reported providing ECP, condoms and pregnancy tests. NRT was available in the majority of pharmacies surveyed, and around a quarter also offer smoking cessation consultation services. Methadone dispensing services were provided by just over half and needle exchange by around a fifth of pharmacies. Similarly, weight management products were available in around two-thirds, and weight management consultation services were provided by just over one-third of pharmacies surveyed.

Although these results confirm the availability of pharmacy services which may be relevant to young people in NZ, it is likely that such services may need to be adapted to better meet the specific needs of this age group. For example, the current product-based weight management programmes offered by pharmacies in NZ may be less suitable for youth than motivational counselling which focuses on healthy diet and exercise [414]. Similarly, in the context of substance use, the development of health promotion activities in this field by pharmacies may be more appropriate for youth than existing methadone and needle exchange services [99].

Furthermore, there may be barriers preventing young people from accessing these pharmacy services. Evidence suggests that youth awareness of pharmacy services is low [158]. This is understandable since only 10% of pharmacies in NZ report having youth-specific publicity material to inform young people about services offered [401]. Another important, practical barrier for youth is cost, and healthcare access will be inequitable unless services are free [23]. Community pharmacies cannot meet this criterion without funding to subsidise costs to young patients and customers, but there is evidence demonstrating that this is both feasible and cost effective; for example for services such as chlamydia screening [223]. Condoms and ECP are already provided to young people for free in other countries and this is currently being piloted in NZ [176].

6.6.2. Views of pharmacy personnel

Responses from pharmacy personnel participating in this study indicate that there may not always be a consensus on whether it is appropriate to provide these services to younger customers in the community pharmacy setting. It has been suggested that the attitudes of
healthcare professionals regarding the provision of services to young people may be affected by personal views on what is ‘the right choice’ [203], and there is some evidence to show that healthcare professionals (including pharmacists) may deny sexual health services to young people where this contradicts their underlying views about sexual activity or risk taking behaviour [205, 208, 415]. In this case, we believe that pharmacy personnel’s knowledge and views on the legal aspects of providing services to young people may be more influential upon their decisions when dealing with this age group than their individual perspectives on sex or drug use. Some evidence for this is apparent in that the majority of participants felt all services were appropriate for 19-24 year olds, indicating that generally they are comfortable providing these services and products. Furthermore, decision-making processes which are subject to personnel’s moral perspectives might be expected to exhibit associations with demographic characteristics such as age or gender, but no such associations were found in any of the analyses run. The two factors consistently identified as influential were participant responses regarding the age at which young people could use pharmacies independent of their parents or caregivers, and whether the respondent was a pharmacist or PSS. We will consider both of these concepts in more detail.

6.6.3. Independence from parents

Opinions were divided regarding the age at which participants considered young people could buy OTC products without a parent or carer present, with a roughly fifty-fifty split between those selecting age 12 or over and age 16 or over. This question was found to be a key predictor variable in many of the GLMM analyses for views on the appropriateness of other services, with participants selecting age 16 and over less likely to feel ECP, condoms, smoking cessation and weight management consultation services were appropriate. This association suggests that views on independence from parents may be an important factor in the decision-making process of pharmacy personnel with regards to providing services to young people. Legal and ethical considerations surrounding the provision of healthcare to minors can be complex, as the laws pertaining to healthcare access and confidentiality may not always be congruent with laws pertaining to legal majority and consent [416]. In NZ for example, although young people have the right to access sexual healthcare irrespective of their age, the legal age at which they can consent to sexual intercourse or refuse medical treatment is 16 [64]. This may create grey areas for pharmacists who have a professional responsibility to ensure that young people have access to sexual healthcare even if they are younger than 16 and do not present with a parent. Parental views and confidentiality have been identified as a potential source of legal and ethical dilemmas for pharmacists providing sexual health services such as ECP to young people [206, 417], and the findings of this research indicate that this
may apply to other youth health issues in youth as well. We suggest that more research is needed to investigate this issue in a community pharmacy context, and that the development of legal guidelines specific to the provision of services to young people may be beneficial.

6.6.4. The importance of pharmacy support staff

Statistically significant differences between responses for pharmacists and PSS were found for the majority of services explored, with PSS responding more cautiously overall. Differences in legal responsibility and in levels of training, and confidence regarding professional decision making may explain these findings. There is little literature available regarding the views of pharmacy personnel other than pharmacists towards youth, however, pharmacy technicians and assistants are likely to be the first and perhaps in some cases the only personnel member a customer may talk to in the pharmacy [213]. Therefore, their views and practices could have an important influence in youth healthcare access. Research investigating the role of PSS in NZ [213] has highlighted their capacity as potential ‘gate-keepers’, not only in terms of accessing the pharmacist and pharmacy services but also perhaps the broader healthcare system in cases requiring referral. In this context, issues identified by research investigating decision making processes of GP receptionists [187] may also be relevant in the community pharmacy setting. We suggest that adequately trained PSS offer an accessible healthcare resource for young people, and that future research regarding pharmacy services for youth should consider the role of pharmacy technicians and assistants as well as pharmacists.

6.6.5. Limitations

This study has some limitations. Although better than anticipated, the response rate for this survey was still relatively low. As it was not possible to undertake non-responder follow-up to investigate the potential effects of responder bias, the generalisability of these results is limited. It is possible that there were associations which were too small to reach statistical significance due to the sample size. Results approaching statistical significance have also been reported. These were associations between confidence in knowledge about contraception and views on appropriateness for condoms for 12-15 year olds ($P = 0.06$), and between whether participants reported that young people can collect their own prescriptions and their views on appropriateness of methadone for 12-15 year olds ($P = 0.05$).

The YAG consulted for this study were eight self-selected young people from Auckland who cannot be representative of the youth population in NZ.
Lastly, although the results of this study confirm the availability of pharmacy services in NZ which may be relevant to youth, it did not explore whether these services are provided in an appropriate manner for youth.

6.7. Conclusion

This study has found almost universal availability of youth relevant services in community pharmacies, signifying potential for pharmacies to have a positive impact on youth access to healthcare in NZ. There have been calls for community pharmacy as a profession to be more youth-focused [30, 218], but there is a lack of professional guidance in this area. Many pharmacy personnel may not feel confident regarding the provision of products and services to young people, and previous research has highlighted training needs which may impact upon service provision [206]. More research is required to investigate the manner in which these services are provided and whether this is appropriate for youth, the barriers to young people accessing services from pharmacies, and also the barriers to pharmacy personnel in providing services to this age group.

6.8. Chapter summary

The previous three chapters have explored the role of community pharmacy in youth health through quantitative methods. Although there appears to be statistical evidence to support the hypothesis that pharmacies could increase youth healthcare access in NZ, potential barriers in terms of the youth-friendliness of pharmacy environment and views of pharmacy personnel have also been identified. The following chapters describe the qualitative studies used to expand and explain these findings.
Chapter 7. Qualitative Interviews with Pharmacy Personnel

7.1. Chapter background

This chapter presents qualitative data which explores the development of community pharmacy service for youth from the perspectives of pharmacy personnel in NZ. To be consistent with previous chapters of this thesis, the findings have been prepared as a manuscript written by the candidate as the lead author. It is intended that this manuscript will be submitted for publication in a youth or population health research journal in the near future.

Development of community pharmacy services for young people; what do pharmacy personnel in New Zealand think?

7.2. Introduction

The most recent government guidelines available on youth health in New Zealand (NZ) were published by the Ministry of Health in 2002 [11, 22]. These documents highlighted several areas of concern which were threatening the immediate and long term wellbeing of young people, including unintended pregnancy and sexually transmitted infections (STIs), smoking, alcohol and substance use, obesity, and relatively high rates of depression, self-harming and suicide amongst youth compared to other developed countries. Such trends echoed international literature on youth health which called for the improvement of health services to better meet the needs of the 12 to 25 year old age group [10, 13]. Since then many initiatives aimed at improving the health of young people have been established (such as Youth specific health centres [215]), and NZ now has a growing body of professionals specialising in the provision of youth specific health services [68, 215]. Comparative data from the Youth 2000, 2007 and 2012 surveys which investigated the health and wellbeing of secondary school students across NZ indicate substantial positive progress such as decreasing rates of binge drinking and cigarette and marijuana use amongst young people aged 11 to 18 [12]. However, there is also evidence that access to healthcare among students appears to be decreasing with almost one in five (19%) students reporting being unable to access healthcare when needed within the previous year compared to one in six in 2007 [12].

Community pharmacies (retail pharmacy shops) have been suggested as an accessible and convenient source of primary healthcare for young people [28-30, 218]. Pharmacy practice in NZ is currently in a state of transition, as the government has recently made changes to the way the profession is funded in order to encourage development of clinical and health
promotion roles [262]. New pharmacy services are being developed in many key youth health areas. For example, pilot studies have investigated the feasibility of providing the Emergency Contraceptive Pill (ECP) free of charge to under 25 year olds [175] and supplying screening kits and treatment for chlamydia from community pharmacies [418]. These developments are in addition to more traditional ways pharmacy personnel might be involved in providing healthcare to young people, such as providing advice on prescription medications supplied to the 20% of young people in NZ with a long term health condition [12], and over-the-counter (OTC) consultations for minor conditions.

However, the views of pharmacy personnel regarding the delivery of services to young people remain largely unknown. One survey investigating the attitudes and practices of pharmacists towards adolescents indicated the potential for confidentiality breaches or instances where young people might be denied treatment, and called for training to address these issues [206]. As this study mostly focused on provision of ECP and was conducted in the United States where societal views on contraception may differ, it is difficult to make any comparisons to pharmacists in NZ.

Three quantitative studies have been carried out by the authors [392, 401, 419]. The first [392] was a series of secondary analyses conducted using the Youth’07 Health and Wellbeing survey data [2], which provided some statistical evidence to suggest that community pharmacies may be able to help increase youth healthcare access in NZ and support the development of pharmacy services for young people. It was found that among the students surveyed who had been unable to access healthcare in the previous 12 months, 86% reported reasons which were unlikely to be barriers to accessing pharmacies (e.g. lack of transport or not being able to make an appointment). Furthermore, 53% of those who had experienced difficulty accessing healthcare reported health issues which community pharmacies may be able to help with (e.g. short-term conditions like a cold, stopping smoking or contraception/sexual health). The second study was a survey of community pharmacies in NZ which found that although pharmacies in NZ were accessible to youth, the youth-friendliness of their physical environments could be improved [401]. The third study [419] explored the availability of youth-relevant pharmacy services, as well as the opinions of pharmacists and pharmacy support staff with regards to whether such services were appropriate for young people. The results indicated potential for pharmacies to help address unmet health needs of young people, in that nearly all participating pharmacies offered some services relevant to youth health (e.g. ECP, smoking cessation, weight management). However, it was also found that many pharmacy personnel had reservations about the appropriateness of such services for young people, particularly for those aged under 16. For example, 98% of pharmacists considered ECP appropriate for 19-25 year olds, compared to 43.1% who considered it
Chapter 7 – Qualitative Interviews with Pharmacy Personnel

Appropriate for 12-15 year olds. Views on young people accessing pharmacy services independently from parents/cares were found to be a key predictor of whether participants would consider services as appropriate or not, and pharmacists were more likely to view services as appropriate than pharmacy support staff.

Using an explanatory mixed-methods approach [321], we sought to investigate these statistical results in more detail using qualitative interviews. This paper focuses on the potential opportunities for and barriers to development of community pharmacy services for youth, from the perspectives of pharmacy personnel.

7.3. Objectives

1. To gain an understanding of pharmacy personnel’s views on the role of the profession in youth health areas, and the possible opportunities for and barriers to future service development.

2. To explore possible explanations as to why pharmacy personnel may not consider some services to be appropriate for youth.

3. To involve young people in the development of the interview guide questions and in providing a youth perspective on the potential implications of the results for youth.

7.4. Method

7.4.1. Study design

Qualitative interviews using a semi-structured interview guide were chosen to describe the perspectives of pharmacy personnel in rich detail, in order to gain an in-depth understanding, and provide possible explanations for the data observed in the quantitative studies. A semi-structured interview guide was developed to ensure the conversation collected data addressing key topics of interest, whilst also allowing flexibility for adaptation to investigate new or emerging themes which may not have been previously identified or described [276].

7.4.2. Development of interview guide

A participatory approach [355] was used for the development of the interview guide in consultation with the Counties Manukau District Health Board Youth Advisory Group (YAG). The group was facilitated by a youth worker and consisted of eight young people with whom the researcher had worked on previous projects. They had previously provided feedback during the development and interpretation of the quantitative research described above. Table
Chapter 7 — Qualitative Interviews with Pharmacy Personnel

17 provides a summary of the relationship between the quantitative data previously reported [392, 401, 419] and interview guide questions, shown on the right. These included questions relating to commonly encountered conditions amongst younger customers, perceptions on barriers and facilitators which might affect young people’s use of pharmacies or the ability of pharmacy personnel to help them, and views on the role of pharmacies in providing sexual health, mental health and health promotion services to youth. Three pilot interviews were conducted by the lead researcher (EH) and minor adaptations were made to the interview guide to aid understanding of the questions.

Table 17 - Development of interview guide questions for the pharmacy interviews using an explanatory mixed-methods approach

<table>
<thead>
<tr>
<th>Quantitative Finding</th>
<th>Interpretation</th>
<th>Qualitative Interview guide questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majority of Youth'07 students unable to access healthcare reported reasons which were unlikely to be barriers to accessing pharmacies</td>
<td>Provision of services through community pharmacies may be able to help address barriers to youth healthcare access</td>
<td>Do you see many young people in your pharmacy?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What barriers do you think prevent young people from using pharmacies?</td>
</tr>
<tr>
<td>Over half the Youth'07 students experiencing difficulty accessing healthcare reported health issues which community pharmacies may be able to help with</td>
<td>Provision of services through community pharmacies may be able to help address unmet youth health needs</td>
<td>What types of health issues do you tend to see young people for?</td>
</tr>
<tr>
<td>Nearly all surveyed pharmacies in NZ offer services which may be relevant to young people</td>
<td></td>
<td>What health issues do you think pharmacies could help young people with?</td>
</tr>
<tr>
<td>Pharmacy personnel may not consider some services appropriate for young people (esp. under 16 years)</td>
<td>Pharmacy personnel may have reservations about providing services to young people due to legal, ethical or personal reasons</td>
<td>Is there anything that makes it more difficult for you to help young people?</td>
</tr>
<tr>
<td>Views on young people accessing pharmacy services independently from parents/cares key predictor of whether participants would consider services appropriate</td>
<td></td>
<td>Do you find the law is clear on legal issues relating to young people?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do you think it makes any difference if you are a parent yourself?</td>
</tr>
</tbody>
</table>
Pharmacists more likely to view services as appropriate than pharmacy support staff

Differences in views could be attributable to different levels of training and confidence in dealing with young people

Perceptions of pharmacists, technicians and assistants were sought

Do you think pharmacy personnel need any training on youth health?

(If so) do you think training should be just for pharmacists or for all pharmacy staff?

### 7.4.3. Sampling and recruitment

Purposive sampling frames were used to capture perspectives of participants representing a broad range of individuals [420]. Ideal sampling criteria might have included role/job description, age, gender, ethnicity, and location of the pharmacy. However, as it was not feasible to conduct this number of interviews, the recruitment criteria selected for the sampling frame were role and age. Participants were purposefully recruited to include pharmacy assistants, technicians, pharmacists and pharmacy owners in the study. These criteria were prioritised following the findings of the previous pharmacy survey results, which indicated differences between the views of pharmacists and support staff towards the provision of services to youth [419]. Although the quantitative results had not indicated differences in participants responses associated with age, anecdotal reports suggested that age may be a factor affecting communicating with youth and rapport. An arbitrary division between ‘older’ and ‘younger’ at age 30 was made, since there is some evidence to suggest that those under the age of 30 years are likely to associate themselves with the youth population and youth culture [46]. Gender was of relevance for pharmacists and pharmacy owners only since nearly all pharmacy support staff are female. Although it was not feasible to sample for pharmacy location (e.g. urban vs rural), the location of pharmacy was recorded.

<table>
<thead>
<tr>
<th>Table 18 – Purposive sampling frame for the pharmacy interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacist</td>
</tr>
<tr>
<td>Younger Male</td>
</tr>
<tr>
<td>Older male</td>
</tr>
<tr>
<td>Younger female</td>
</tr>
<tr>
<td>Older female</td>
</tr>
</tbody>
</table>
Participants were recruited using a number of methods. Some were contacted after responding to a request for interviewees at the end of the survey used in our quantitative study [401, 419]. Advertisements were placed in the websites of the NZ professional magazine Pharmacy Today, the NZ Pharmacy Guild, and Propharma (a pharmaceutical wholesaler). Flyers were also distributed in Propharma order deliveries to community pharmacies for the purposes of reaching pharmacy personnel who may not routinely access the internet at work, nor have an interest in those websites. Prospective participants were offered $30 gift vouchers as a thank you and provided written informed consent for taking part.

7.4.4. Data collection

Nineteen semi-structured, qualitative interviews were conducted with six pharmacists, five technicians, five retail staff and four pharmacy owners between August and November 2012. The approximate duration of each interview was 30-50 minutes. Recruitment and data collection continued until theme saturation became evident. All interviews were conducted by the lead researcher (EH), either face-to-face or over the telephone, and were audio recorded using an electronic recording device.

7.4.5. Data analysis

Verbatim transcriptions of the audio recordings were made either by the lead researcher or by an experienced contracted transcriber. All transcriptions were subsequently checked for accuracy by EH, before being analysed. Data were analysed using a general inductive approach [390] to identify themes both deductively (relating to topics addressed in the interview guide) and inductively (new or emergent themes), and the qualitative research programme Nvivo7 was used for data management. Preliminary findings were presented in a PowerPoint presentation to the YAG and their feedback was used to guide the subsequent analysis and interpretation of the results. As the researchers were not originally from NZ, themes were also discussed with two native pharmacy practice experts to check the interpretation of socially and culturally sensitive themes.

7.4.6. Ethical approval

Ethics approval was obtained from the University of Auckland Human Ethics Committee for this study (approval number 7600).
7.5. Results

The demographic characteristics of participants are summarised in Table 19. On three occasions two participants working at the same pharmacy were interviewed (i.e. a pharmacist and a pharmacy support staff member).

Table 19 - Participant demographics

<table>
<thead>
<tr>
<th>Interview</th>
<th>Personnel type</th>
<th>Gender</th>
<th>Age</th>
<th>Pharmacy location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technician</td>
<td>F</td>
<td>Older</td>
<td>Urban</td>
</tr>
<tr>
<td>2</td>
<td>Pharmacist</td>
<td>F</td>
<td>Younger</td>
<td>Urban</td>
</tr>
<tr>
<td>3</td>
<td>Pharmacist</td>
<td>M</td>
<td>Younger</td>
<td>University campus</td>
</tr>
<tr>
<td>4</td>
<td>Retail assistant</td>
<td>F</td>
<td>Younger</td>
<td>University campus</td>
</tr>
<tr>
<td>5</td>
<td>Pharmacist</td>
<td>M</td>
<td>Older</td>
<td>Rural emergency health centre</td>
</tr>
<tr>
<td>6</td>
<td>Pharmacist</td>
<td>M</td>
<td>Younger</td>
<td>Urban area</td>
</tr>
<tr>
<td>7</td>
<td>Pharmacist</td>
<td>F</td>
<td>Older</td>
<td>Centre of university city</td>
</tr>
<tr>
<td>8</td>
<td>Technician</td>
<td>F</td>
<td>Older</td>
<td>Urban</td>
</tr>
<tr>
<td>9</td>
<td>Retail assistant</td>
<td>F</td>
<td>Older</td>
<td>Urban</td>
</tr>
<tr>
<td>10</td>
<td>Pharmacy owner</td>
<td>M</td>
<td>Younger</td>
<td>Urban</td>
</tr>
<tr>
<td>11</td>
<td>Technician</td>
<td>F</td>
<td>Older</td>
<td>Rural</td>
</tr>
<tr>
<td>12</td>
<td>Technician</td>
<td>F</td>
<td>Younger</td>
<td>Urban</td>
</tr>
<tr>
<td>13</td>
<td>Pharmacy owner</td>
<td>M</td>
<td>Younger</td>
<td>Urban</td>
</tr>
<tr>
<td>14</td>
<td>Pharmacy owner</td>
<td>F</td>
<td>Younger</td>
<td>Urban</td>
</tr>
<tr>
<td>15</td>
<td>Technician</td>
<td>F</td>
<td>Younger</td>
<td>Urban</td>
</tr>
<tr>
<td>16</td>
<td>Retail manager</td>
<td>F</td>
<td>Younger</td>
<td>Centre of university city</td>
</tr>
<tr>
<td>17</td>
<td>Retail assistant</td>
<td>F</td>
<td>Younger</td>
<td>Rural</td>
</tr>
<tr>
<td>18</td>
<td>Retail assistant</td>
<td>F</td>
<td>Older</td>
<td>Rural</td>
</tr>
<tr>
<td>19</td>
<td>Pharmacy owner</td>
<td>F</td>
<td>Older</td>
<td>Rural</td>
</tr>
</tbody>
</table>

Experiences of participants regarding the presenting conditions of young people and general perceptions regarding developing the role of pharmacies in youth health areas will be presented first, followed by potential challenges and facilitative factors which may affect this.
7.5.1. Perceptions regarding pharmacy’s current and future role in youth health

7.5.1.1. Health issues pharmacy personnel tend to see young people for

Although nearly all reported seeing younger customers frequently, many seemed to find it difficult to specify what sorts of health issues this age group tended to visit the pharmacy for. Many participants also required prompting regarding what youth health areas they thought pharmacies might be able to help with. The most common areas to be suggested without prompting were minor and acute conditions, skin conditions and sexual health. Participants were then also asked specifically about the potential for service development in other youth health areas including sexual health, mental health and health promotion activities for young people.

In general, it was felt that young people were more likely to present with acute or minor conditions or to buy non-medical products than for prescriptions for long term conditions. Participants reported seeing more young people in the evening after school/college hours and at weekends, especially for urgent issues such as injuries and ECP. Commonly encountered health issues in young people included coughs and colds, acute infections, headaches, injuries, rashes, acne, stress, and emergency and regular contraception. Some participants described variation in reasons to visit the pharmacy depending on the age range, with older adolescents more often presenting for sexual health;

“12 year olds to like pre-teens it’s normally acne, um antibiotics, coughs and colds. I mean, as they get a bit older, I mean, then you get the variety of, you know, there may be 16 year old girls coming in for the pill, also for contraception and things like that.” (Technician 11)

As might be expected due to their difference in role, pharmacy assistants often dealt with young people visiting the pharmacy to purchase non-health items such as cosmetics, whilst the pharmacists tended to talk more about medical conditions and ECP requests.

7.5.1.2. Sexual health

For many participants, sexual health services were the first topic to be raised. Links were made between access to sexual health services from pharmacies and privacy and confidentiality issues as a barrier for youth. A proposed limitation to the development of sexual health services was a lack of privacy in the retail pharmacy environment, which will be discussed later.
“When I’m dispensing condoms I try to make it as discreet as possible. And even then I mean I can still see patients getting all blushed, yeah.” (Pharmacist 2)

Participants were provided with a brief explanation of some of the sexual health interventions piloted in pharmacies (such as free ECP for under 25 year olds, and chlamydia screening) and asked to comment on whether they could see any potential for development of these services in the context of youth health. The majority felt that such initiatives would be received positively by both pharmacy personnel and young people, to the extent that a potential limitation might be the popularity of the service and cost implications for the government.

“Ultimately there, I’m not talking about the pilot – I mean, when it’s established in a medical way um are you going to get a teenager to pay for the kit?

Researcher: That was one of the issues that has come up because actually in one of the pilots they paid the young people to take the tests

No (laughs) yeah I’ve got this idea – let’s break the bank in one foul swoop.” (Pharmacy owner 10)

7.5.1.3. Mental health

Participants reported seeing young people for mental health issues frequently, both through dispensing prescriptions for depression and Attention Deficit Hyperactivity Disorder (ADHD) medications, as well as requests for OTC products to help with insomnia, stress and anxiety. Many were empathetic and worried about the general wellbeing of these young people, and also expressed concern about the increasing prevalence of mental health disorders amongst youth, which they often related to increased pressures of studying. However, participants were less certain about how pharmacy as a profession could help to improve youth mental health, and there was often a sense of caution around approaching young people about this topic for fear of causing offence or upset.

7.5.1.4. Health promotion and prevention

Participants were prompted to elicit their views on provision of health promotion and preventative initiatives in key youth health areas including weight management, smoking cessation and alcohol or drug use.

Although participants saw potential for healthy lifestyle interventions in the youth population, there was a view that this age group was one of the most difficult to target because of the perception that young people were less receptive to advice about long term health outcomes.
“No one is really going to listen to you telling them you know you need to eat healthy, because I think at the back of their heads they all know. But I think they need the education, the consequences of things, you do this now and you look at yourself 50 years on” (Pharmacist 2)

There was a view that pharmacy-based weight management services were not appropriate for overweight young people, particularly with regards to younger adolescents, in part because such services would be unaffordable for young people. There was also a view that healthy eating and exercise would be more appropriate strategies for weight management than calorie restriction for this age group.

“For younger people we don’t believe in Lemon Detox diet so we don’t encourage it and if anybody came asking for it we would tell them why we didn’t think it was a good idea as well and just try to give them a bit more option and just inform them” (Retail Manager 16)

Similarly, there were mixed views on the provision of smoking cessation services for young people. All participants were supportive of encouraging young smokers to quit, recognising that adolescence is frequently a time for experimentation and the establishment of nicotine addiction. Again, participants seemed unsure of pharmacy’s role, with several commenting that young people nowadays make a conscious decision to smoke and are not ready to quit;

“I mean some young people are smoking because it’s cool anyway so yeah it’s just their mind-set, you know,” (Pharmacy assistant 17)

Participants expressed concerns about supplying products such as NRT to minors because this was proof of their engagement in illegal activities, presenting the profession with an ethical dilemma.

“…because if smoking is illegal under 18 then why would we be giving them sort of nicotine patches or gum or whatever…” (Technician 12)

Whilst discussion of any potential role for pharmacy in youth alcohol or drug use was mostly limited to dispensing of prescribed treatments, several pharmacists indicated they would like more training on this topic because they perceived it as an important youth health issue.

“There’s more people coming in asking for detoxing for drug screening, you know, when they go for a job and things, like that kind of stuff than asking for advice for how to…you know, I’m taking this…sometimes they might ask that, you know yeah,
because I guess when they think about pharmacies they think about ‘drugs!’ like all drugs, so we should know about that too.” (Pharmacist 6)

7.5.2. Challenges

7.5.2.1. Youth health areas seen as social, not health issues

The most frequently reported barriers to service development were barriers perceived for young people. These included concerns that young people tend not to prioritise their health or seek help when needed, that they may not know what services are available from pharmacies, that they may be too embarrassed or worried about confidentiality to use pharmacies, and issues relating to young people being unable to afford treatment. However, there was also a sense that participants viewed youth health issues such as weight management and substance use as social issues rather than health issues. For example, health education from schools and parents to help improve youth health were frequently mentioned, but participants appeared less sure about what role pharmacy could play.

“Researcher: What about promoting healthy lifestyles in youth? Do you think that’s an area where pharmacies could do anything? Or not really?

Not really. No, those sorts of things you’ve got the background from the families, and the school, and the workmates, and their peer-groups normally affect them most. Like binge drinking, taking drugs, smoking…we can only tell them which one is bad for you. But the choice is theirs.” (Technician 1)

Participants frequently initiated discussion about referral in response to questioning about specific youth health issues, implying they did not really see this as within the scope of community pharmacy. There was a view that young people were likely to require referral to other healthcare providers (such as GPs, Family Planning or counselling services) and concern about underlying health or social issues in relation to the young person’s presenting complaint. Technicians and assistants, in particular, reported that they did not deal with many young customers, and some indicated that those that they did encounter were frequently referred straight to the pharmacist or GP because of the nature of their presenting condition;

“I mean, with young people like depending on their age I would automatically refer to even the pharmacist or the doctor um just because they are a lot younger. They may not be open to telling me or a pharmacist the full story, you know. They might be more inclined to be telling the doctor or someone at family planning or something like that.” (Technician 15)
Participants reported that young people were less likely to seek healthcare (from all providers as well as pharmacies) compared to other age groups. This was attributed to low health literacy levels, perceptions that young people see themselves as essentially fit and healthy or ‘bullet proof’, or because they were reluctant to seek help for some other reason.

“They don’t tend to think of it as a oh I’ve got a problem – let’s go ask the pharmacist about what I should do. They just tend to go oh either just avoid the problem and all together yeah or go see the doctor. They don’t see as and I don’t think kids, young people realise about their how important their health is to them yet because they’re still young and they think, you know, look won’t happen to me because I’m only young, you know.” (Pharmacy assistant 9)

Although participants suggested that young people would know what pharmacies offered through attending with their parents as a child, most thought that young people had relatively low knowledge levels regarding pharmacy and other health services available to them.

“But we see time and time again that they come from the doctor with a script for paracetamol – you might as well just come to the pharmacy, a) it would be cheaper and b) it would be quicker. It would probably be a whole lot less painful than going to the doctor and waiting. Um yeah so that’s where I think they haven’t really understood the real value of pharmacy and what we can provide.” (Pharmacy owner 13)

Although some noted that many people of any age may not be aware of the services offered by pharmacies, they suggested that this would be even more likely amongst youth.

Most participants believed that a major barrier to young people accessing help from community pharmacies was that they are too shy or embarrassed to talk about their health issues. Some suggested this might be their first experience of certain medical conditions, and also attributed it to the sensitive nature of many issues associated with youth health (e.g. acne, ECP, stress);

“You can tell when some of them come in they’re a bit embarrassed about having to talk to you about things, like they kind of don’t want to but they know they have to. Erm, thinking particularly of things like the morning-after pill or thrush treatments, even acne treatments they’re kinda like cringe. They kind of get a bit embarrassed about things and you’ve kind of got to treat them a little bit more sensitively,” (Pharmacy owner 14)
Some also indicated that embarrassment may be more of an issue for youth in interactions involving pharmacy personnel and young people of opposite genders. Several suggested that younger girls would prefer to talk to somebody of the same gender especially about personal or intimate issues. Some also believed that young men might be deterred from accessing pharmacies because it is a predominantly female profession and environment. One participant commented that she did not tend to see young men presenting in the pharmacy unless they were “dragged in by their mothers” (Pharmacy owner 19).

There was discussion about young people researching medical conditions and products before coming into the pharmacy, with some hinting this was perhaps used by young people as a strategy of reducing embarrassment, by minimising the number of questions they are likely to be asked and to keep the interaction as brief as possible;

“…they’ve done their Google research and they’ve come armed with their answer…”
(Pharmacy owner 10)

7.5.2.3. Legal, ethical, confidentiality

Legal and ethical dilemmas, particularly regarding the involvement of parents and confidentiality, were reported as challenges for pharmacy personnel. Privacy and confidentiality were perceived to be very important factors affecting young people’s access of community pharmacy services, especially with regards to sexual health. Participants from pharmacies in rural areas felt that this was especially true in smaller communities where pharmacy personnel might know the family of the young person;

“Um I think that would, you know, that would be one of their main concerns and if anyone comes in that they know or if there’s a connection within the village so yeah.”
(Pharmacy assistant 18)

Parents were reported to accompany young people visiting the pharmacy, especially in the case of younger adolescents. Many participants described ethical dilemmas involving parents of young people and although most felt that the laws on confidentiality were clear, this could be more difficult in practice. For example, despite stating they saw absolutely no ambiguity with regards to disclosure of confidential information, one participant described the difficult situation when parents asked about their child’s medical history;

“We have people that try and push, like one customer in particular that I can think of, and like, her daughter isn't even young anymore really, her daughter is like 20, and she still asks me questions...
Chapter 7 – Qualitative Interviews with Pharmacy Personnel

Researcher: Oh about the daughter?

Yeah, and I’m like, mmm, OK, mmm, yeah, what do you expect me to tell you? Like I’m not, I can’t legally tell her anything, and I wouldn’t anyway, but she just keeps pushing, and I’m like, how do you deal with that?” (Pharmacy owner 14)

There was also concern about the potential for confidentiality breaches through the provision of receipts for prescription benefit claims, since in NZ such claims are handled collectively as family or household groups.

“You know, some parents know and some parents don’t know that um and if they’re all linked to a family card and then they get a printout then it’s, you know, it’s kind of um you know, given to us in confidence – it’s gone out and, you know, not our fault but I mean it’s just the way the system works” (Technician 11)

Although specific prescription items are not itemised on the receipts, one participant pointed out that even the record that an item had been dispensed for a young person could arouse parental suspicions and therefore “let the cat out of the bag” (Pharmacy owner 10).

Participant’s opinions on the age at which young people should be able to make autonomous decisions about their health varied depending on the circumstances and nature of the presenting issue. Several participants also felt that having children themselves might influence this view;

“As a mum if I see the young people most likely they come to buy ECP or whatever most of them I’m thinking they are like my children’s age tend to be um more concerned if the parents didn’t come with them.” (Technician 8)

This theme may also have been reflected in the tendency of some of the older participants to refer to young people as children, kids or teenagers whilst younger participants were more likely to use terms associated with young adulthood.

7.5.2.4. Cost

Expense was perceived as a major barrier for YP and most participants had experiences of young people being unable to afford treatment costs. Some suggested that young people were more likely to selectively pay for medications which provided temporary symptom relief as opposed to long term prevention or treatment.
…they tend to take the things that are symptom relief rather than long-term prevention things, so they end up with, it gets worse because you’re not really treating the cause.” (Pharmacy assistant 9)

Participants working in lower income areas reported that cost was an issue for all conditions for which young people might access pharmacies, whereas participants working in higher income areas reported that parents generally paid for young people’s medical care and, therefore, cost was only really a problem for issues young people wanted to keep private. Many participants specifically mentioned that they felt ECP was not affordable for youth;

“I think personally it’s too expensive for, you know, can’t afford especially with age group not working yet – 45 dollars is a lot.” (Technician 8)

Many talked about ways of trying to reduce costs for young people or working out what treatment option would be the best value for them. Strategies included referral to the GP (even for minor conditions) if the treatment would be cheaper on prescription, providing recommendations for cheaper options, or letting them pay in instalments. Several participants also reported waving fees or paying on behalf of young people where they felt there was urgent need for treatment.

“…if we can give it to them but it’s too expensive, so we send them up” (to the health centre) “to get it so it’s subsidised, mmm.” (Pharmacy assistant 4)

Some participants suggested that it may be less expensive for youth to obtain treatments for minor conditions from the pharmacy compared to paying for a GP consultation. However, due to cost issues, young people were thought more likely to leave an OTC consultation without a product, and participants expressed frustration as their recommendations or advice had not been listened to. Others described situations where young people had come into the pharmacy to ask advice, but had then sought cheaper treatment elsewhere;

“One of our pharmacies, which is next to a supermarket and what some people do is, which is really quite cheeky, they come in asking for advice and based on their recommendation they go okay I’ll go next door and buy it.” (Retail manager 16)

One participant reported that the most important limiter of pharmacy’s role in youth health was lack of funding, as they could see no way to sustainably reconcile the issue of ‘who will pay if the young person can’t’ (Pharmacy owner 10). However, another participant suggested that the recent changes to the way pharmacies are funded in NZ could help to address this issue, as resources may be redirected away from dispensing towards other services.
7.5.3. Supporting development of pharmacy services for young people

Despite the barriers described above, participants reported mostly positive experiences and attitudes towards youth. In general there was the sense that the pharmacy personnel cared about the wellbeing of the young people they saw, and this appeared to motivate them to suggest facilitative strategies they felt might help to address some of the problems they encountered in dealing with this age group.

7.5.3.1. Sense of responsibility

Participants appeared to have a strong sense of responsibility when dealing with young people. In particular, if they had children themselves, they frequently drew upon their experiences as a parent, and some talked about treating all young people as one of their own. This sense of responsibility was associated with a drive to put extra effort into consultations with youth to ensure they got the care they needed;

“I mean, it took a long time but I went right out of my way because I put myself in that position – it could have been my son or it could have been, you know, and so yeah I think it did take a long time but there was satisfaction for me” (Technician 11)

Some participants also described a sense of professional responsibility to provide services to improve the health of all age groups, even if this did not benefit the pharmacy as a business. One participant referred to this as “accountability” (Retail manager 16), and another described focusing on other age groups as “discrimination” (Pharmacist 6). Such comments could have been because they did not wish to come across negatively in the interview. Several participants noted a shift in pharmacy practice towards more a preventative concept of health (as opposed to treating disease), as well as the idea of youth as pharmacy’s future customer base in this context.

“I have this kind of feeling that if anybody needs this or that, you know, I mean, hey we should be there for them. I don’t have a problem with that at all, in fact, I mean, again they’re the clients of the future so I think that’s rather short sighted.” (Pharmacy owner 19)

7.5.3.2. Promotion of pharmacy services to youth

Advertising and promotion of pharmacy services were believed to be one of the best ways to encourage young people to use pharmacies.
“I don’t know how we would target people to erm, or make them more aware that a pharmacy is like a resource that you can use. I don’t know, maybe ads, I don’t know, maybe pamphlets at universities or even high schools,” (Pharmacist 2)

Providing young people with general information on what pharmacies and pharmacy staff do might help to ‘demystify’ the whole process and make pharmacies less scary, particularly with regards to confidentiality. One participant suggested the advertising slogan of “Pharmacy - we won’t tell your Mum, honest” (Pharmacy owner 14). Several participants suggested that pharmacists could perhaps give presentations in schools, and others thought that word-of-mouth might be more influential in youth than other age groups.

There was a view that it was essential to utilise new technologies such as social media to increase young people’s awareness and use of pharmacy services. However, some participants found this daunting or noted that it would be time consuming and potentially costly to maintain websites. Time would need to be allocated towards continually updating Facebook posts, Twitter streams or online blogs and some were unsure how feasible this was for small community pharmacy businesses.

In the wider context, it was felt that increased health education was also needed for young people in order to raise their awareness about issues such as sexual health, mental health and substance use, and to generally increase youth health literacy;

“For example, if you’ve got an eye infection, do you think of do you want to go to the pharmacy first, or do you think of you want to go to the doctor first. That sort of thing the young people will need to be able to tell which one to go to first and how bad it is when they need to go to the doctors, or, do they go to the doctors at all? And that sort of thing I don't think the school is teaching them enough; to tell them how to judge, yeah. How bad is your cold or your flu when you need to go and see your doctor?” (Technician 1)

It was suggested that this might help to increase young people’s use of pharmacies not only because youth would have a clearer understanding of when they needed to access healthcare, but also because it might help to reduce the social stigma surrounding help-seeking in relation to youth health issues such as depression or anxiety.

7.5.3.3. Training

Most participants suggested that they would like more training on youth health, focusing on how to communicate and engage more effectively with young people. There was discussion about adapting communication styles and trying to ensure that pharmacy personnel pitched
health information at the right level, but participants suggested they would like more information on how to best approach youth. Other areas they believed should be covered were sexual health and STIs, youth mental health and referral options.

“I think we need training I guess from start to finish like if you find there’s something wrong, I don’t know, if you can spot abuse or something what do you do? Who do you seek help from? Do you tell your boss, do you tell the doctors – who do you talk to?” (Pharmacist 7)

Nearly all indicated that training should be provided for all pharmacy staff and not just pharmacists, because technicians and pharmacy assistants might be the first or only staff members young people encountered in the pharmacy;

“Sometimes the shop staff are the people that they first come to, you know, they’ll come to the front counter where it’s all shop staff and they can come to the second counter which is all shop staff. If they get blown away by those people then they could be gone, they could have a serious problem or want to talk to someone a little bit further or they might go thinking well there’s no hope – where can I go, you know, like yeah.” (Technician 11)

Some participants also expressed interest in understanding what young people themselves thought about community pharmacies and how services could be improved to better meet the needs of this age group. Several indicated that this had been a main motivation for them to volunteer for the present study and were keen to be updated on future research.

7.6. Discussion

The present study has investigated the perspectives of pharmacy personnel on the provision of services to youth. The experiences and ideas put forward by the participants provide information which may be used in the development of future services and initiatives to increase youth healthcare access through pharmacies, or to develop training for pharmacy personnel to improve service delivery to this age group. Although it is only possible to provide a snapshot of professional perspectives in NZ, the results of this study may be relevant in other countries with similar models of pharmacy practice. Key themes in relation to the findings of the quantitative research described earlier and potential implications for service development in the field of youth health will now be discussed.
7.6.1. Role of pharmacy in youth health areas

The results of the Youth'07 analyses [392] and the survey of availability of youth-relevant pharmacy services [419] suggested that there may be opportunities for community pharmacies to help increase youth healthcare access. Pharmacy personnel interviewed in this study reported seeing young people frequently, (especially outside of school, college and work hours). The flexibility, convenience and extended opening hours described in the survey paper exploring youth-friendliness of community pharmacies in NZ [401] may be of benefit to young people with busy lives. This may be particularly true for minor or acute conditions, for which participants reported encountering young people most often. However, when asked specifically about the development of services for youth in sexual health, mental health and health promotion, participants of this study appeared unsure about what role community pharmacies could play to help improve outcomes for youth in these areas. Pharmacy personnel discussed the social aspects of youth health issues frequently, and there was a sense that they were perceived to be beyond the scope of community pharmacy practice. Similar themes have been identified in research investigating the role of pharmacy in mental health [421] and substance use [38, 422] in which pharmacists have cited lack of training or confidence as barriers to service provision. Doubts about the effectiveness of such initiatives to change individuals' habits, and reluctance to cause offence have been also been described previously [423, 424]. The reluctance of pharmacy personnel to proactively engage in activities to promote healthy lifestyles in young people therefore concurs with previous literature on their involvement with health promotion in the general population [425, 426]. These findings suggest that lack of confidence amongst pharmacy personnel may be a key limiter of service development in preventative youth health fields.

7.6.2. Barriers to the provision of services to young people

One of the objectives of this study was to provide possible explanations as to why pharmacy personnel may not consider some services appropriate for young people [419], and to elucidate other potential challenges to the development of pharmacy services for the youth population.

The findings of a qualitative study investigating young people’s views on using pharmacies in Salvador [31] indicated that youth anticipate disapproving or judgemental attitudes from pharmacy personnel regarding their access of services for more sensitive issues such as sexual health. However, the results of this study suggest that pharmacy personnel may be reluctant to offer some services to youth because they are concerned that young people require more support and guidance than they are able to provide in a community pharmacy.
setting. This could also be a possible reason why pharmacy support staff were less likely than pharmacists to consider services as appropriate, since their threshold for referral is lower due to differences in training level and confidence [213].

Legal and ethical dilemmas appear to be central to pharmacy personnel’s reservations about the appropriateness of treatments or services for young people. As in research exploring the challenges faced by other primary healthcare professionals, these concerns appear to be primarily associated with parental involvement [191], which may be challenging to manage in practice despite general agreement that the legal aspects of confidentiality are clear [200]. Previous research describing pharmacy confidentiality breaches involving young people has suggested that personal moral concerns resulted in intentional disclosure of information to parents and other healthcare professionals involved in the care of adolescents [206]. Therefore, the provision of guidelines for pharmacy personnel regarding the legalities of developing new services in youth health areas seems pertinent. In addition, this study has highlighted other legal barriers to the provision of OTC medications and products to youth due to the age ranges and indications they are licenced for in NZ. This issue may be specific to pharmacy practice, as it does not affect prescribers to the same extent and does not appear to have been described in the literature previously.

Lack of time has been identified as a barrier by other healthcare professionals such as GPs involved in the provision of care to youth [427, 428], but did not emerge as a major theme for pharmacy personnel in this study. Some participants did suggest that consultations with young people took longer, but related this to communication difficulties and the complex nature of youth health issues, and did not tend to perceive this as an issue. The only instances where it was discussed as a possible barrier was in relation to lack of funding, where young people were reported to access advice and information about health and medications from pharmacy personnel, only to purchase products elsewhere. However, cost was generally recognised sympathetically as a barrier to young people. Most participants reported situations where young people had been unable to afford treatment, and although they described many strategies for reducing costs for younger customers, funding was identified as a major barrier to their ability to help improve youth health. These findings mirror reports from GPs and other providers of primary care in relation to youth [428] as well as research investigating the reasons for young people to forego healthcare in NZ [12]. Strategies to sustainably provide free or affordable healthcare to young people through pharmacies do appear to have the potential to improve youth health [27, 28], and should be further investigated.
7.6.3. Strategies for future development of pharmacy services for youth

Our study results indicate that one key way to increase young people’s use of pharmacy services might be to raise awareness amongst this age group regarding advice and treatments available to young people. Not knowing when or how to seek help has been identified as an issue affecting youth healthcare access [26, 398], and hoping that the problem would go away or get better over time was the most common reason cited by Youth 2012 students who were unable to access healthcare when needed in the previous year [12]. There is also evidence that lack of awareness amongst young people is an issue even for relatively well promoted pharmacy services such as ECP [158]. Participants in this study were concerned that young people may self-diagnose using unreliable sources of information such as the internet. Research indicates that youth frequently struggle to differentiate between reputable and non-reputable health websites [160] and that this population may be more susceptible to purchasing medications from illegitimate internet pharmacies [165]. Suggestions from participants to utilise new technologies and social media to promote health literacy and raise awareness about pharmacy services in young people appear to hold some potential, and this is an area currently being explored by youth health researchers in other sectors [429-431].

Training was suggested as a strategy to overcome some of the barriers identified and was seen as a necessary requirement to support the development of any future pharmacy services for young people. Pharmacy technicians in NZ undertake a specialised training programme, but there is currently no formal training provided for pharmacy assistants in NZ. The importance of their interactions with all customers (including young people) has been compared to research investigating the role of GP receptionists in determining patient access to healthcare [432], and indeed one participant did refer to their support staff as ‘gate keepers’. The present research has highlighted the potential for pharmacy support staff to influence youth healthcare access, and their desire to improve their knowledge and skill base for dealing with younger customers. We suggest that the development of training resources or programmes should proceed with their needs in mind and should be available to all pharmacy personnel who come into contact with young people.

7.6.4. Strengths and limitations

It is not possible for qualitative research such as this to represent the perspectives of all pharmacy personnel in NZ, and the results presented here can only summarise the experiences and practices of the participants interviewed. However, depth interviews have provided a unique and insightful snapshot of the challenges and motivating factors affecting the provision of pharmacy services to young people. Some participants seemed very
enthusiastic and were keen to provide positive and useful data. Similarly there was evidence of recruitment bias towards proactive or ‘leading edge’ pharmacy personnel, despite the use of a purposive sampling frame.

7.7. Conclusions

Ethical dilemmas and legal grey areas, particularly with regards to parental involvement, appear to be key barriers to the development of pharmacy services for youth from the perspectives of pharmacy personnel. The social aspects of youth health issues may cause them to be perceived to be at the edge of the pharmacy scope of practice and explain why pharmacy personnel may not feel community pharmacies are the appropriate setting for provision of services to this age group. Increasing young people’s awareness of pharmacy services available was identified as an important strategy for increasing their utilisation of pharmacies. Training on youth health was suggested to improve service delivery and identified as essential for the future development of pharmacy services for youth. The findings of this research suggest that although pharmacy personnel care about the well-being of young people and want to help, they will need support to optimise the potential for pharmacies to increase youth healthcare access.

7.8. Chapter summary

This chapter has presented the perspectives of pharmacy personnel with regards to the provision of service to youth. The next chapter explores the views of young people on the same topics.
Chapter 8. Qualitative Interviews with Young People

8.1. Chapter background

This chapter presents qualitative data which explores the development of community pharmacy service for youth from the perspectives of young people in NZ. Again, to be consistent with previous chapters of this thesis, the findings have been prepared as a manuscript written by the candidate as the lead author. It is intended that this manuscript will be submitted for publication in a pharmacy practice or population health research journal in the near future.

What do young people in New Zealand think about community pharmacy services?

8.2. Introduction

Access to primary healthcare for young people in New Zealand (NZ) appears to be decreasing [12], and action is needed to address this and prevent the detrimental effects of unmet health needs amongst the youth population [10]. Community pharmacies have been suggested as a possible source of healthcare for young people which might hold fewer barriers to access compared to other providers of primary care [28, 392]. For example, the public visibility, physical accessibility, extended opening hours and no requirement to make an appointment may be advantageous to youth, who have described these characteristics as desirable in their definitions of ideal healthcare facilities [167, 215]. Many youth-relevant health services such as the emergency contraceptive pill (ECP) and condoms, smoking cessation and weight management consultation services are already offered by community pharmacies in NZ [419], and there is potential for further development in youth health areas. Chlamydia screening kits have been offered by community pharmacies in the UK [34] and Australia [433], pharmacy interventions to improve mental health [434] and alcohol consumption [435] are being investigated, and provision of free condoms to young people through the pharmacy condom-card scheme has recently been piloted in NZ [176]. All such developments may provide opportunities to improve the health of young people if they can be delivered in a way which meets the unique health needs of this population. However, research indicates that pharmacy personnel may not always feel services are appropriate for young people, particularly those under 16 years of age [419].
Young people have cited concerns about privacy and confidentiality, cost and low health literacy as barriers to primary healthcare [25, 26, 149], which may be equally problematic for young people accessing care through community pharmacies. The findings of a survey of NZ pharmacies conducted by the authors of the present research indicated that the physical youth-friendliness of pharmacy environments could be improved [401]. Although most pharmacies had a private consultation area, few communicate its availability to young people. Similarly, less than a third of pharmacies displayed youth health information material or explained young peoples’ rights to confidential care, and only 10% reported having youth-specific publicity material such as a website available to let young people know what services were offered. Investigation of these quantitative results through qualitative interviews revealed some of the challenges and safety concerns from the perspectives of pharmacists and support staff. These included concerns regarding legal grey areas and ethical dilemmas through the provision of services without the supervision of a parent or carer, doubts as to the capabilities of young people to look after themselves, and problems communicating with youth who they perceived as frequently presenting as shy or secretive.

If pharmacy services are to be developed successfully in key youth health areas, and if the accessibility of pharmacies could be utilised to help increase youth healthcare access, it is essential to understand young people’s views on the barriers and facilitators to using pharmacy services. However, there is little research available regarding the perspectives of this group towards pharmacy. One focus group study conducted as part of a charity initiative to increases youth access to sexual healthcare through pharmacies in South America [31] found that the approach of pharmacy personnel was viewed as critical, particularly a non-judgemental, discreet approach and providing reassurance regarding confidentiality. Perceptions on the provision of pharmacy services in youth health areas other than sexual health have not yet been explored, and information specific to NZ is needed. The present study aimed to add to the evidence, and this paper focuses on the potential opportunities and barriers to the development of community pharmacy services for young people.

8.3. Objectives

1. To gain an understanding of the views of young people age 16-25 on the role of the profession in youth health areas, and explore possible opportunities for future service development.

2. To describe the barriers to young people’s access of health services through pharmacies, and identify how community pharmacies could be more youth-friendly.
3. To involve young people in the development of the interview guide questions, recruitment and data collection processes, and in providing a youth perspective on the potential implications of the results for youth health.

8.4. Method

8.4.1. Study design

The interview guide was developed in collaboration with a Youth Advisory Group (YAG). Some of the YAG members also acted as facilitators, conducting the interviews with support from the lead researcher (EH). This participatory methodology [355] was underpinned by a Youth Development theoretical perspective [47] which aimed to empower the young people involved by utilising their strengths and providing them with the opportunity to have an integral, decision-making role in the research [356]. The YAG is affiliated with the NZ charity Youthline [436], and consisted of eight young people with whom the researcher had developed a working relationship through their collaboration on previous projects. Meetings were facilitated by two experienced youth workers. Three meetings were held for this study.

8.4.2. YAG Meeting 1

The first meeting was held to develop the interview guide questions. Key findings from the quantitative studies described above [392, 401, 419] which were interesting, surprising, or which the YAG perceived might affect young people’s use of pharmacies were highlighted for investigation in more detail using qualitative techniques. The development of the interview guide questions from the key quantitative findings of the thesis is demonstrated in Table 20. Questions collected information regarding participants’ perceptions and experiences of community pharmacies, common reasons for accessing pharmacies, barriers which might affect their use of pharmacy services, ways to improve community pharmacies for young people, and views on the role of pharmacies in providing sexual health, mental health and health promotion services to youth. The YAG also provided advice on recruitment and data collection protocols that would enable young people to feel at ease and participate effectively in this study.
Table 20 - Development of interview guide questions for the youth interviews using an explanatory mixed-methods approach

<table>
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<tr>
<th>Quantitative Finding</th>
<th>Interpretation</th>
<th>Qualitative Investigation</th>
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<tr>
<td>Majority of Youth’07 students unable to access healthcare reported reasons which were unlikely to be barriers to accessing pharmacies</td>
<td>Provision of services through community pharmacies may be able to help address barriers to youth healthcare access</td>
<td>Do you use community pharmacies? Are there any advantages or positives about using pharmacies? Are there any things you think might put young people off using pharmacies?</td>
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<td>Over half Youth’07 students experiencing difficulty accessing healthcare reported health issues which community pharmacies may be able to help with</td>
<td>Provision of services through community pharmacies may be able to help address unmet youth health needs</td>
<td>What do you use community pharmacies for? What pharmacy services have you heard about? What health issues do you think pharmacies could help young people with? - Prompts included sexual health, mental health and health promotion</td>
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<td>Nearly all surveyed pharmacies in NZ offer services which may be relevant to young people</td>
<td>The physical youth-friendliness of pharmacies could be improved</td>
<td>What are your impressions of pharmacies? How could the pharmacy environment be more youth-friendly?</td>
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<td>Survey results indicated that many pharmacies in NZ do not meet criteria for the youth-friendliness of the physical pharmacy environment</td>
<td>Pharmacy personnel may view and treat young people differently to other age groups</td>
<td>How was your last experience of using a pharmacy? How did the staff treat you? What’s the best way for pharmacy staff to approach young people?</td>
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8.4.3. Sampling and recruitment

Table 21 shows the purposive sampling frame for this study. Age, gender, ethnicity, location and deprivation level have all been identified as demographic characteristics which impact upon healthcare access of NZ youth [143] and were therefore all potential sampling criteria for this study. However, it was not feasible to conduct interviews with young people representative of all these criteria. It was decided that the study should investigate the views of young people aged 16 and over, since it has been suggested that the health needs of younger adolescents may be better met through school health services or other providers [437], and because the health needs of young adults appear to be of greater immediate concern to public health [49]. Gender differences between healthcare access and preferences for youth are well described in the literature [150]. Therefore this was included as a sampling criteria. Ethnicity appears to have more profound implications for health inequalities amongst youth than location or deprivation level in NZ [2], so this was prioritised as a sampling criteria. Four broad ethnicity grouping of Maori or Maori descent, NZ European, Asian (including young people of Indian, Middle eastern, Chinese or South east Asian origin), and Pacific (including young people identifying with Fijian, Samoan, Nuean, Tongan or Cook Island culture) were proposed to represent the main ethnic groups of NZ society [2].

<table>
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<th>Ethnicity</th>
<th>16-19</th>
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<td>NZ European</td>
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8.4.4. YAG Meeting 2

All YAG members received training in qualitative interview technique from the lead researcher, and pilot interviews were conducted. The rationale for utilising young people as interview facilitators in this study was to shift the power balance between the researcher and the participants and enable them to contribute their opinions more confidently [341]. Principles of good interview technique (as outlined by Ritchie and Lewis [382]) were summarised in a ‘tips and tricks’ worksheet, followed by demonstrations from the researcher and youth workers. Group members were then observed interviewing each other and received feedback from the
Chapter 8 – Qualitative Interviews with Young People

researcher and the pilot interviewee. The group then reconvened to discuss, and the interview guide was adapted to improve flow and understanding or add prompts as appropriate. Two members volunteered to be facilitators for the data collection stage; one male (NZ Samoan, age 17), and one female (Māori/European, age 19).

The third YAG meeting is described in the data analysis section below.

8.4.5. Recruitment

Youth-friendly participant information sheets and consent forms were developed in consultation with the YAG. Participants could choose to be interviewed alone or as a friendship pair, depending on how they felt most comfortable. Recruitment was coordinated by the youth workers, and participants were recruited using a number of methods. This included personal contacts through the YAG members, adverts placed on the Youthline website and Facebook page, and posters displayed in gyms, cinemas, shopping malls and college and university campuses. All participants provided written consent and received a $30 Westfield gift voucher as a thank you for taking part.

8.4.6. Data collection

Interviews were held at youth-orientated venues (such as meeting rooms booked at the Youthline centres or university campuses) for participant comfort. Transport costs were reimbursed through the provision of taxi or petrol vouchers, and food and soft drinks were also supplied. In interviews facilitated by a YAG member, as facilitator they introduced and led the interview, with the lead researcher present to operate the recording device and provide support in the form of clarification or prompting if necessary. Participants were matched to a facilitator of the same gender where possible. Facilitators received remuneration for their time and were reimbursed for transport costs. It was intended that all interviews would be facilitated by a YAG member. However, this was dependent upon the availability of the facilitators to attend the interview time and location, and was not possible in all cases. The remainder of the interviews were conducted by the lead researcher (EH).

8.4.7. Data analysis

The interview recordings were transcribed verbatim, either by the lead researcher or by an experienced, contracted transcriber. All transcriptions were checked for accuracy by the lead researcher and prepared for analysis in the Nvivo7 qualitative analysis software. A preliminary coding frame was developed in consultation with the YAG members in the third YAG meeting as described below.
8.4.8. YAG Meeting 3

The strategy for involving the YAG members in the analysis process utilised key principles of the ReACT Data Analysis Method developed by Foster-Fisherman et al [438], adapted to allow participation in a two hour meeting. The meeting began with a game involving sorting a mixture of different sweets into piles depending upon their characteristics (for example, colour, flavour or shape). This analogy was then used to help explain the process of qualitative analysis, whereby the YAG members worked on sorting their raw data into piles (or categories). They were asked to give each pile a name, write a short description which summarised it, and highlight the text in each quote which made them decide where it belonged. In order to make the task more manageable, the researcher prepared a selection of quotes from the raw data which were representative of the breadth of views for the YAG to work on. These were split into three sections for the YAG members to discuss in small groups. After working on sorting the data and assigning descriptive names to the categories, the group reconvened and presented their findings to each other and the lead researcher. This stimulated discussion to identify themes which recurred throughout the data, constituting the beginnings of a preliminary coding frame which guided subsequent analysis by the lead researcher. Data were analysed thematically using a general inductive approach [390]. This allowed both deductive analyses of areas investigated in the interview guide, as well as inductive elucidation of new or emergent themes which had not been previously identified.

8.4.9. Ethical approval

Ethics approval was obtained from the University of Auckland Human Ethics Committee for this study (approval number 8494).

8.5. Results

Twenty three semi-structured, qualitative interviews were conducted between February and March 2013; three as friendship pairs, and the remainder as individual interviews. The young people participating reflected a range of ethnicities, ages and genders (Table 22). Interviews lasted between 20 and 45 minutes. Eleven interviews were led by YAG members acting as facilitators with support from the lead researcher. The other interviews were conducted by the lead researcher.
Table 22 – Participant demographics

<table>
<thead>
<tr>
<th>Interview</th>
<th>Interview type</th>
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<th>Gender</th>
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<td>NZ Fijian</td>
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8.5.1. Results from YAG meeting 3

The YAG’s analysis of quotes from the questions on general impressions and experiences of pharmacies identified several preliminary themes. The first theme was ‘view of pharmacy’, which related to how young people perceive the role of pharmacies. This tended to relate exclusively to focus on medicine supply, and one YAG member commented that participants were almost "speechless" when asked about any other possible roles. Another theme, ‘not user friendly’ described the confusion some young people had experienced when using pharmacies and difficulties in finding what they were looking for due to layout, lack of signage or products being kept behind the counter. Several quotes were grouped into the theme ‘customer service’, with provision of additional advice and information being associated with
good customer service. Pharmacists were also seen as ‘approachable’ and trustworthy sources of health information, and the young people interviewed valued the ability to access this resource easily.

The YAG separated quotes relating to questions on problems and advantages of using pharmacies into ‘pros and cons of pharmacies’, and laid them out as a table to illustrate the relationships they identified between problems and complimentary advantages which might represent solutions. These themes, including ‘bad vs good customer service’, ‘lack of awareness of pharmacy services vs accessibility’, ‘expensive vs cheap’, and ‘privacy vs anonymity’ are expanded upon below and were the basis for the development of some of the key concepts described in the discussion of this chapter.

Lastly, the YAG analysed some responses to the question ‘how could pharmacies be more youth-friendly?’ One theme identified was ‘Society/Media’ and related to increasing young people’s awareness about the pharmacy profession through the internet, posters, flyers and TV. The ‘Look/Layout’ theme grouped suggested changes to the pharmacy environment, such as improved signage or fewer cosmetics. Another theme, ‘young people’, grouped quotes where participants expressed a desire to see evidence from the pharmacy that an effort was being made to understand, engage and relate to young people and their lives. The theme ‘Friendly & Service’ focused on participant’s descriptions of staff characteristics which would make young people more likely to ask for help, and the ability of pharmacy personnel to get a young person to ‘open up’.

When the YAG members reconvened and presented their results back to each other, it was evident that some similar themes had been identified between groups and these were discussed. Key themes the YAG members felt were repeated throughout were:

- Approachability (including the view of pharmacists as an ‘accessible expert’)
- Customer service (including provision of additional advice and information)
- People skills (importance of being able to read young people)
- Expense/cost (sometimes identified as a barrier but sometimes as an advantage)
- Appearance and presentation of the store
- Importance of not being judgemental towards younger customers
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These themes were used as a preliminary coding framework to guide the interpretation of the data and the subsequent analysis conducted by the researcher, the results of which are described below.

8.5.2. Youth perceptions of pharmacy

8.5.2.1. Positive and negative associations

The young people interviewed held positive and negative associations about pharmacies depending on what they visited them for. For some these were positive associations related to wellness or keeping healthy;

“What’s the first thing that pops into your head when you think about pharmacies?

Um like just a place with lots of things to like help you because there’s like sports tape there um there’s also like some health supplements and stuff like that.

Yeah, yeah.

So I guess there’s a pretty positive feeling towards pharmacies.”

(Interview 17)

There was a sense of trust that treatment obtained from a pharmacy would be effective, and pharmacies were therefore associated with recovery from sickness or injury.

“I kind of feel like if I get a prescription and they got the drugs I kind of feel I can trust that they’ll work and they’ll do something about it and I’ll feel better within a couple of days so I find that in most cases, a lot of cases they’ll work so I’ll trust.” (Interview 11)

However, some participants only visited pharmacies when they were really sick, and therefore held negative feelings towards pharmacies due to their association with illness. For this reason several stated that they wouldn’t go to a pharmacy unless absolutely necessary, and would avoid them if possible.

“I would rather not have to go…

How come?

Oh just because like I don’t like getting sick!” (Interview 1)

There were concerns about being thought of as weak or defective in some way by others, resulting in a certain degree of social stigma surrounding the use of pharmacies.
Chapter 8—Qualitative Interviews with Young People

“I dunno, I just find pharmacies embarrassing! (laughs) like, everyone just looks at you weird or something when you’re coming out, like wondering what’s wrong with you or something, yeah.” (Interview 3)

Male participants described peer pressure amongst young men to avoid seeking help for health issues in general;

“I think it is sort of a culture thing like if it’s a mate you won’t really go in, just have a beer, tough it out sort of thing.” (Interview 21)

This theme was also described by females who were reluctant to use pharmacies because this reveals that they are unhealthy, or ‘unsafe’ (interview 13) in some way, particularly with regards to sexual health issues.

As a result of associating pharmacies with being sick, some of the young people interviewed described pharmacies as having a clinical, medical, and ‘stiff’ atmosphere. They perceived the pharmacy environment as clean and professional, but serious and intimidating. For example, several participants felt daunted about using pharmacies because it means something is seriously wrong with them.

“Mm I don’t know um probably even because me when I see people preparing pills I get scared sometimes. I look at them because they’re dressed up like doctors and surgeons and stuff.” (Interview 23)

However, they generally seemed to consider this professional atmosphere reassuring and didn’t feel it should be changed.

8.5.2.2. Health literacy regarding pharmacies

A strong theme throughout the data was that the young people interviewed were not aware what pharmacy services are available, what pharmacists and pharmacy staff do or how they could help. Many participants took the opportunity to ask questions about pharmacies during the interview.

In general there was low awareness of any pharmacy services or functions other than a medication supply role;

“Do you know what pharmacies do?

Give out medicine.

Yeah.”
So like, like the doctors give out that prescription thing and then the patient has to give it to the pharmacy and then they get the medicine for you.

Yeah.

That’s all I know.” (Interview 10)

Participants were also unsure about what the pharmacist actually did, what the pharmacy support staff did, or what the difference in training level was, although the majority were aware that the pharmacist held a position of responsibility.

“What do you think their job is?

Pack pills, make, put pills into bottles, different like ratios or something like that?” (Interview 15)

Some of the young people interviewed were confused about why some products are kept separately behind the counter where they are ‘not allowed’ (Interview 16) to look at them, or why they were often asked so many questions when they purchased things in pharmacies. When it was explained that this would likely be to exclude any safety concerns and ensure they received the optimal treatment, they viewed this more positively and felt that it should be better explained.

“I always wondered why they ask so many questions cos like that’s another reason why I don’t buy stuff from there aye, I just wanna buy it without like 21 questions you know, like just take the money!” (Interview 9)

Lack of communication from pharmacy personnel with regards to what they are doing and why appeared to generate unease where young people were left wondering what staff were doing in the back, what they were talking about, if there was a problem, how long it would take and how much it would cost. This perceived air of secrecy also resulted in distrust due to the power imbalance it created.

There was the sense that the lack of health literacy and information about pharmacies is disempowering for youth, causing them to feel intimidated and insecure about using pharmacies. Participants indicated that better communication and information was required to address this;

“If we knew more about like all that’s involved I think that would help us like feel maybe a little bit more comfortable if we weren’t comfortable with it before, because it’s more transparent.” (Interview 17)
Indeed, an overwhelming consensus on how pharmacies could be more youth-friendly was to increase young people’s knowledge of pharmacies to ‘de-mystify’ pharmacy as a profession to make it less intimidating.

Nearly all the young people interviewed felt that the best way to engage youth and increase their awareness of pharmacies was through the internet.

“Yeah, like a website would be handy as well so then you can come prepared.” (Interview 9)

Flyers and posters were not recommended as the best way to promote pharmacy services to youth, but were considered useful in the context of making the pharmacy environment feel more youth-friendly. It was suggested that displaying posters and leaflets on youth health issues would make pharmacies more appealing to youth simply by demonstrating to young people that their needs were being considered, and therefore giving the impression that this age group was welcomed. Again, there was also the idea that providing more information would help to increase confidence and make it ‘OK’ to ask questions about sensitive issues;

“If you’re not that good about telling someone at least you can read the pamphlet first and then you don’t sound stupid, yeah. You’ll be able to like go to them confidently, you know, and ask.” (Interview 3)

Another common suggestion was for young people to be taught about pharmacies in schools, since they reported having received information about doctors and dentists, but not pharmacies.

8.5.2.3. Retail image

The young people interviewed appeared to view pharmacies very much as a retail environment. For example, some of the terms used to refer to pharmacy personnel included shopkeeper, shop clerk, counter assistant, cashier and sales person. Many of the participants tended not to stick to just one pharmacy, instead reporting that they used different pharmacies for different purposes.

“Do you tend to always go to the same one or do you go to different ones?

Kind of just depends what it’s for, yeah no usually I go to different ones” (Interview 19)

Participants frequently began discussing advantages of pharmacies when asked about drawbacks or vice versa. This process of weighing up the potential ‘Pros and Cons’ of using
pharmacies, and shopping around for the best option is perhaps reflective of the consumerist role they assume when accessing pharmacies.

Some participants differentiated between the medical and retail components of pharmacies, seeing the pharmacists as handling the medical side whilst support staff looked after the retail side. Others were confused as to why pharmacies sold cosmetic products;

“My first opinion was you know, why are they here?” (Interview 13)

Whether the retail image of pharmacies was perceived as a positive or negative attribute differed between male and female participants in many cases.

The array of cosmetics often available in pharmacies was frequently described as off putting by guys, who found it made it more difficult to find what they were looking for and felt awkward in what they saw as a predominantly female environment;

“Like they always ask me if I want any help while I’m waiting…like what am I gonna want help with, makeup? Baby stuff? (Laughter)” (Interview 16)

However, this side of pharmacies appeared to help some of the girls feel more comfortable. The retail environment felt more familiar, and provided a ‘decoy’ reason for being in the pharmacy. Some also associated it with treating themselves.

Several participants appeared to differentiate between larger multiple or chain pharmacies (which they seemed to associate with commercialised, retail orientated image) and smaller ‘local’ pharmacies which they were more likely to associate with provision of health advice.

“I think like if it’s very franchised sort of pharmacy in a way I feel like they mark up the price and they’re somewhat slightly profit driven instead of for the health sort of thing. And I would go for one that’s sort of toned down although they’re still franchised but they’re toned down and probably got a family name like ‘such and such pharmacy’ and things like that so you feel more homely feel towards them and not as much of a profit driven thing and ripped off kind of feel, yeah” (Interview 21).

8.5.2.4. Cost

Perceptions of pharmacies as being profit driven were a recurrent theme, and there was a sense of suspicion around feeling pressured to make a purchase.

“What do you mean by ‘over-do it’?
Participants frequently compared pharmacy prices to supermarkets and found them much more expensive. Indeed, for several of the young people interviewed the word ‘expensive’ was the first thing they thought of when they thought about pharmacies. This made them avoid pharmacies for financial reasons, but it also created distrust due to the ethical connotations of profiting from the ill health of others. Some participants also described a sense of powerlessness resulting from lack of choice, because most medications cannot be obtained any other way.

“I try to avoid cos I know they’re expensive. But, if you need the stuff, you need it, so you tend to do it anyway especially when it’s a matter of health.” (Interview 12)

Although increasing prescription costs had motivated one participant to volunteer for the research, the majority view was that medicines were affordable if they were on prescription since they were subsided. Even so, this was often balanced against the cost of the GP consultation. Participants valued the free advice they could access from the pharmacy since this could potentially save them money compared to a GP visit. Several described experiences where pharmacy personnel had helped them out by allowing them to pay in instalments, recommending more cost effective options, or suggesting that treatment may be cheaper on prescription, and were greatly appreciative of this.

“The main advantages for pharmacies is that you can actually walk in, you don’t have to go to the doctor, wait in line, pay the money and blahblah, just walk in and just ask ‘what do you think? Should I go to the doctor or just wait? Or like, could I have some over the counter medication that would help me out?’” (Interview 14)

8.5.2.5. User friendliness

In general participants placed importance upon the ‘user friendliness’ of pharmacies in terms of the visual impact and practicality of the layout. There were mixed responses amongst participants with regards to their experiences of this. Some reported positive perceptions of pharmacies as ‘clean and neat’ (Interview 1), whilst others described difficulties finding what they were looking for in pharmacies due to a messy layout, lack of signage or products being kept behind the counter instead of being on display. Many also suggested improving the layout with less clutter and better signage as a way of making pharmacies more youth-friendly.

“Any ideas on how to make pharmacies more youth-friendly?
Chapter 8 – Qualitative Interviews with Young People

User friendly aye, is probably a biggy. I don’t know, probably just one experience from this pharmacy...because I spent like a good 15 minutes like walking around trying to find something and yeah but I’d say more user friendly yeah.” (Interview 23)

8.5.2.6. Privacy

When discussing user-friendliness many participants also felt that the conventional open layout of pharmacies was not private enough to discuss sensitive issues. They felt this constituted a major barrier to young people accessing pharmacies because they were concerned about being overheard by other customers. They were anxious about having to talk with pharmacy personnel at the counter, because this was also where medications were dispensed and was usually next to the till so other customers were more likely to overhear.

“Like youth problems will probably be like pregnancies and STDs and mental health issues and maybe help like weight issues. I think it’s all personal, personal things so I think they should take the person aside um rather than just talking over the counter yeah.” (Interview 4)

However, some participants described situations where the open, retail aspect of pharmacies was useful because they could use it as ‘cover’ when they needed to get treatment or advice for something embarrassing. Several also indicated that they used different pharmacies for different purposes, going to a local pharmacy for regular medication (e.g. for long term conditions where they preferred to talk to someone they knew), but utilised the anonymity provided by visiting ‘random’ pharmacies regarding issues for which they preferred to remain anonymous.

“No one needs to know why you’re in there.” (Interview 12)

Only one participant was aware of private consultation areas in pharmacies, but would not have known about this unless the pharmacy staff member had offered. When asked whether they thought a private consultation room would help to address privacy issues, opinions were divided. Although some said that they would feel more comfortable if they were separate from the public space of the shop floor, others suggested that moving the discussion from the shop to the room would be more likely to draw attention from other customers wondering ‘what are they going in there for?’ Several imagined that being in a small consultation room might be more awkward and embarrassing;

“It would be really weird and awkward and insecure. Like why, why, what are you, there’s something that you can’t finish at the counter and then you have to get into a
little room, lock your selves up in there and talk about it, it would be really weird like you’re confessing or something! (Laughs)” (interview 15)

8.5.3. Young people’s impressions of pharmacy personnel

8.5.3.1. Judgement, discretion and confidentiality

Provision of discreet and confidential service by pharmacy personnel was of the utmost importance to the young people interviewed. Participants described how the emotional aspects of privacy such as embarrassment and shame might influence young people’s use of pharmacies;

“I mean if it’s like a rash associated with sort of like sexual stuff, then they might feel a bit of shame associated with that, like they’d rather just keep that to themselves sort of thing. Because I dunno, that could be like quite embarrassing or like, humiliating or something like that.” (Interview 10)

This also illustrates what the experience of seeking help for a sensitive issue might feel like for youth, and the level of trust needed in the pharmacy staff. Participants indicated that young people worry about being judged by pharmacy personnel about their reason for visiting the pharmacy. Uncertainty with regards to how a pharmacy staff member might react to their health issue or situation was a source of anxiety and a barrier to using pharmacies. Young people described negative experiences involving pharmacy personnel who had come across as judgemental;

“I talked to this like older lady and she, I felt like she thought I was a real skank.”
(Interview 19)

In general participants reported that interactions with pharmacy personnel were usually positive. Some had been relieved by the reassurances and discretion provided by pharmacy staff members, which were greatly appreciated.

“she was like full of life and she made it less awkward for me because she, like she cracked a joke and it was like oh don’t worry I’ll take care of it and she made it really discreet so, you know, like I liked that.” (Interview 6)

This kind of affirming approach from pharmacy personnel was suggested as one of the key aspects of youth-friendly pharmacy practice;

“If there was one main message” (for pharmacy personnel), “what would you want to tell them?"
...just treat me like a normal person no matter what I come in with, even if it’s a weird sickness or something.  (Interview 7)

Many participants said they would prefer to go to a pharmacy where they were not known rather than build a relationship with a particular pharmacy because they didn’t like the idea of someone knowing all their medical history. This was not necessarily because they were concerned about the pharmacy staff telling anyone, instead it appeared to again be related to issues of power imbalance;

“It’s just a matter of this one person knowing everything about me, but they are a stranger to me at the same time.” (Interview 14)

However, one participant did discuss a recent bad experience involving a breach of confidentiality involving their regular pharmacy. Information about their use of oral contraceptives had been accidentally disclosed to their parents when they had obtained a receipt from the pharmacy for a welfare claim (which must list all items dispensed for family members of the same household). The issue had caused major upset between the participant and their family, and had been their main motivation for volunteering for the study.

8.5.3.2. Customer service

A small number of participants reported experiences of poor customer service from pharmacies. Some participants felt that young people didn't receive the same level of customer service as older customers, although this was a minority view.

“I think they would take more care if you were elderly, I think I noticed that yeah.”  
(Interview 7)

Lack of sensitivity or discretion was identified by several participants, particularly in the case of skin conditions such as acne for which they already felt self-conscious. This could be demeaning and, ultimately, detrimental to rapport;

“Last time when the pharmacist told me to wash my face it made me feel, like it was embarrassing because there were other people around.” (Interview 16)

One of the most frequently mentioned issues relating to customer service was that participants felt that pharmacy personnel were sometimes overly attentive and ‘pounced’ (Interview 18) on them when they went in. This gave the impression that they were not genuine and made the young people feel flustered.
“they sort of feel like people are watching when they go in, it’s a little bit like when
you go in clothes shop or people are kind of like oh can I help you, you know, they’re
a bit too bit over the top” (interview 18)

“I hate it when they try to make fake conversation.” (Interview 6)

When asked about the best way to approach young people, participants described their ideal
customer service scenario. This generally involved being greeted casually when they entered
the pharmacy, then being left to look around alone for a short time before being approached
by a staff member on the shop floor to ask if they needed any help. They explained that giving
them more time would allow them to think about possible questions they might want to ask;

“they sort of say are you okay and kind of it’s the way they pose the question that
they’re saying is also like kind of implying that you’re going to say yes so I kind of just
say yes and don’t ask any questions.” (Interview 11)

Although the majority of participants reported being generally happy with the customer service
offered by pharmacies, there was a sense that they appeared to have fairly low expectations
of what the profession could or should do for them, or were simply not inclined to complain.
For example, there were several instances described by participants which the researcher (a
pharmacist) would have defined as poor service, but were not identified as such by the young
people interviewed.

One participant (who reported being very satisfied with the service at their pharmacy)
described an occasion where they had been prescribed antibiotics for a chest infection, but
had not finished the course. The infection recurred and had interfered with sporting activities.
Although the participant did not specifically suggest that they had not received enough
information with their prescription, when asked how pharmacies could be more youth-friendly
they suggested it would be better if pharmacy personnel made more time to give advice about
the medications.

“last time I went in it was quiet so they were a bit more like, chatty or whatever, like,
they had time for me, I felt like they had more time for me, so yeah, it was better,
yeah.” (Interview 8)

Although not expected, provision of relevant, understandable advice and information was
associated with good customer service by the young people interviewed. Participants
appreciated staff that seemed knowledgeable and confident, and the pharmacist in particular
was seen as a trustworthy source of information. The ability to access this advice for free and
without having to make an appointment was valued.
"I think the positive things about pharmacies is that they give people health advice...like you can ask questions and they will give you advice and they have fact sheets about health stuff." (Interview 1)

Although participants reported that they would like to be able to research products and services beforehand if possible to help them feel more confident about asking for help, the young people interviewed trusted the professional opinions and recommendations of pharmacists. Most said they would be more likely to trust the advice of a pharmacist compared to information they found on the internet.

"Um a lot of the time I would probably research it just out of curiosity, you know, what the general public think the results are, what some people think the effects are, but at the same time I would tend to believe people who are working in the pharmacy. Yeah between what I read on Wikipedia or Google I definitely believe people in the pharmacy." (Interview 13)

In many cases participants seemed surprised to receive additional advice and information from pharmacy personnel, and saw this as going above and beyond their expectations. They suggested that enhancing this aspect of customer service would help to improve the perceptions of young people towards pharmacies and make them more youth-friendly.

"Like tell the people who are like buying drugs like just a little bit more about it, just like that little bit more...I think that would really enhance a lot of like the sort of like impression of pharmacies towards young people, yeah." (Interview 21)

8.5.3.3. Preferences regarding age and gender of staff

The importance of pharmacy personnel being able to relate and empathise with young people was a consistent theme throughout the data, and in general this appeared to be of greater significance to most of the young people interviewed than talking to a staff member of a specific age or gender.

"I don't mind who I talk to as long as they help me." (Interview 1)

The efforts made by staff to understand young people’s circumstances, and provide advice and information in an accessible and appropriate manner for them were central to their definitions of youth-friendliness on the context of the community pharmacy setting.

"Don’t be mean to them. Like give them advice, but, don’t judge them" (interview 19)
Chapter 8 – Qualitative Interviews with Young People

“All information’s good information…it would be helpful to get it from someone who kind of knows what you’re going through.” (Interview 9)

The young people interviewed perceived that they were likely to receive better quality advice and information from a more experienced staff member, and it was for this reason that the majority of participants reported a preference to talking to older pharmacy personnel.

“I kinda trust the advice of people who are older than me. Like if a girl my age was like ‘I recommend this medication’, then I’d be like, OK, can I talk to someone who’s a bit older who’s got a bit more experience kind of thing, I’d kinda trust what they say more.” (Interview 4)

Although some participants suggested that younger staff members might be able to relate to them better, there were mixed responses as to whether this would make it easier to talk to them compared to an older staff member. Some felt that younger staff would be less judgemental regarding more taboo issues such as those relating to sexual health or substance use.

“It’s kind of like, oh you’re like my mum’s age – you’re probably thinking oh really disappointed, you know.” (Interview 3)

However, other participants felt that talking to a pharmacy staff member of a similar age to themselves might be more awkward, because they would relate to them as a peer and might therefore feel more embarrassed.

“It just be much worse to talk to someone your own age about that! Yeah totally! Yeah you’d wanna go to someone kinda older with a bit more mature outlook, yeah, definitely.” (Interview 12)

In general, when asked both male and female participants preferred to talk to pharmacy personnel of the same gender if possible, particularly regarding health issues of an intimate nature.

“I dunno, there are just some things that I wouldn’t feel comfortable disclosing with a male pharmacist (laughs).” (Interview 4)

It was apparent that in many cases this was because they felt that a staff member of the same gender would be better able to relate or understand their situation, not just due to embarrassment. This sometimes presented a barrier to young male participants if male staff were not available;
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“I think just pharmacy in general like you think of more ladies working in that field and yeah and it’s sort of guys who wouldn’t really think about a muscular guy working in there sort of thing. Yeah so can’t really relate all the same yeah but personally I would get their advice, get out sort of thing.” (Interview 21)

8.5.4. Young people’s views on the role of pharmacy

8.5.4.1. Scope of pharmacy practice

Participants’ views regarding the role of community pharmacies in providing healthcare to young people were mostly limited to a medication supply role. When prompted for their opinions on the potential to develop pharmacy services in additional areas, many participants did not feel this was appropriate and reported that they would prefer to go to a GP. Sometimes this was due to the lack of privacy in the pharmacy environment, but in general their main concerns related to doubts as to whether pharmacy personnel were adequately trained or able to deal with anything more involved.

“People think that doctors know a lot more about medical related stuff and that pharmacists are just there to give out the medicines and that’s it yeah.” (Interview 16)

Some also hinted that they could not fully trust the medical advice of pharmacy personnel because the transfer of money for OTC or prescription medications meant that their opinion might not be impartial;

“How I see it just from my point of view is I see pharmacists as people who just sell medicine. That’s why I’d go to a doctor.” (Interview 10)

However, opinions as to whether service development in youth health areas by pharmacies would be appropriate or not also appeared to be underpinned by perceptions as to the seriousness of the condition. For health issues which were perceived as less serious, the young people interviewed did suggest some ways that the convenience of pharmacies may be able to help improve youth healthcare access, especially if they felt that this could reach and benefit young people who might not otherwise seek help.

Several of the participants with long term conditions were enthusiastic about pharmacist prescribing for regular medications if it avoided what they considered as an unnecessary GP consultation. This was for reasons of convenience and cost.

“It’s infuriating as well because like I go to see them and I know what I’ve got and that’s it, essentially haven’t told me any way to cure other than that so it’s like why do
Similarly, some participants were in favour of increasing access to antibiotics for minor uncomplicated conditions through the pharmacist only supply route. For example, one participant had recently had to see an emergency doctor during the weekend for a urinary tract infection. As this had been a very uncomfortable, stressful and expensive experience, they felt that the availability of trimethoprim OTC would be useful for young people in similar situations.

8.5.4.2. Sexual health

Awareness about the availability of products related to sexual health such as condoms, ECP or pregnancy tests from pharmacies appeared to be relatively high amongst the young people interviewed.

“They like tell you about pharmacies for like safe sex aye?

Yeah, yeah, like, that’s the reason I think of them, ‘cos they tell you you can like get condoms and stuff at the pharmacy, so yeah.” (Interview 2)

Although most participants suggested that increasing access to sexual health services through pharmacies was a positive thing, there were mixed responses regarding how this might be received by young people in practice. The major perceived limitation was the lack of privacy and resulting in embarrassment.

“I think majority of the people would prefer going to a GP or a private clinic I guess….In terms of expertise I totally trust pharmacists and all that, I think that they have the qualification to do it, but at the same the area and the location just doesn’t sound appropriate to me.” (Interview 13)

However, a few participants indicated that pharmacies might be a more discreet option for young people who felt self-conscious or daunted about visiting a Family Planning Clinic;

“Like the clinics are great but, you know, it says on it ‘Sexual Health Clinic’ and that’s when you’re walking in and out of. Whereas I suppose if you’re going into a pharmacy you could be going in for anything so.” (Interview 4)

There was the general consensus that if new sexual health services such as chlamydia screening were to be offered by pharmacies they would likely be useful for young people, but it would need to be handled tactfully.
8.5.4.3. Mental health, alcohol and drugs

When asked if they thought whether there was any way that pharmacies could help to improve youth mental health, most participants did not feel there was much potential in this area. In general this was because their concept of mental health treatment tended to centre around counselling and psychological intervention as opposed to medication.

“…this is just a generalisation I have in my head I guess, but pharmacists is more like the physical stuff; just the medication, that kinda stuff. But in terms of like talking about mental health, I kinda think that should be left to… I was gonna say professional, they’re professionals as well, but like, professionals in the mental health area.” (Interview 5)

There was concern about the potential for medication misuse or addition in relation to the availability of OTC products for the alleviation of stress, anxiety or trouble sleeping. Some participants immediately associated the pharmacist’s role as identifying substance misuse issues through repeated requests from customers, and there was the sense that they did not feel the sale of any such products from pharmacies (herbal or otherwise) was appropriate.

“You get people addicted to that stuff as well, which isn’t ideal.” (Interview 18)

Despite the perceived sensitivity of the issue, most participants felt it would be appropriate, if not important for pharmacy staff to intervene and offer young people advice or information if they asked to buy mental health-related products. This was seen as an opportunity to refer young people who might not otherwise seek help.

“I can imagine that someone could go in wanting sleeping pills cos they can’t sleep cos they’re stressed say, for example, and them um, if the pharmacist was like, ‘are you OK?’ maybe they just need someone to ask them that so they can get the help they actually need, compared to just self, giving themselves medication.” (Interview 12)

Conversely, participants were generally in favour of pharmacies being more involved with providing services to reduce alcohol and drug use, since the physical effects of such drugs were seen to be more related to pharmacists’ area of expertise. Indeed, a couple of participants asked questions about safe levels of alcohol consumption during the interview. Some participants expected that pharmacists should know about the effects of illegal drugs on the body and thought they would be good source of advice for young people with regards to what to do if ‘things went weird’ (Interview 19).
Several participants also suggested a potential health promotion role for pharmacies to raise awareness about alcohol and drug use. Most participants did not think young people would be offended provided that a non-confrontational or passive approach such as displaying posters and leaflets was taken. It was felt that although specific, personal or individualised interventions might cause offence; generalised advice would be well received;

“Do you think young people might be offended?

Not if it was done in the right way just to like promote awareness, I don’t think they would be offended.” (Interview 9)

8.5.4.4. Smoking cessation and weight management

Similar views were elicited in response to questions relating to pharmacy involvement in other health promotion and lifestyle interventions such as smoking cessation and weight management. A couple of participants suggested that young people would be unlikely to listen to advice on healthy living, but this was not the majority view. Most participants suggested that young people were interested in keeping healthy and suggested that advice and information from pharmacy personnel would be viewed positively.

“Most young people are, they like to hear good things, and they like to know what’s beneficial for them” (interview 14)

Some felt that pharmacies should be involved in helping to address these things, because they are health concerns for the population.

“I think it’s so important to be healthy and there’s so many, yeah I just think um they should address like the major issues and I think those are two big ones. I mean those are really big things in New Zealand aren’t they, two major things that kill people – obesity and smoking.” (Interview 19)

However, many of the young people interviewed were sceptical about the high profile weight management programmes offered by pharmacies in NZ (‘they’re a con’ (Interview 9)). Such services tend to be based on supplements or meal replacement products, and were viewed as being too expensive. Furthermore, weight management approaches involving long term diet changes and exercise were seen to be more appropriate for young people.

“She kind of focused a lot on the idea of lose weight fast and she kind of didn’t promote any healthy eating or anything like that or going to gym.” (Interview 11)
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The impersonal nature of pharmacy was identified by participants as a potential barrier to provision of weight management or smoking cessation consultation services. These services were seen as requiring ongoing coaching and support, and participants believed that this would be difficult to achieve in a ‘cold, distant retail environment’ (interview 21). They felt that there would be little opportunity to build enough rapport to discuss sensitive issues, and that lack of continuity could be a problem if young people had to keep explaining their situation to different staff members.

“You do need to have that like constant, like you need to know they're always available, that you can talk to the same person rather than having to always explain your case to someone else, yeah.” (Interview 4)

8.5.4.5. Social marketing

Some participants talked about the public visibility of pharmacies in the context of health promotion, and felt that if pharmacies were involved in youth health areas such as sexual and mental health or drug and alcohol use, it would help raise awareness in the community and improve youth health in the wider context. For example, it was suggested that by displaying information on these issues, community pharmacies may help to challenge the social norms and stigma which have a detrimental effect on youth health.

“in the community it’s not really like talked about that much – it’s all kind of a bit like taboo, you know um so I think that would be really good I think pharmacies got behind that kind of thing.” (Interview 19)

Other participants suggested that providing preventative and health promotion services in these areas might also have a beneficial influence upon how young people viewed the pharmacy profession in general, because they linked this to a more holistic view of medical care.

“Oh I think they should help with all of those things because like if they’re selling medicines to help people get better they could offer like there’s those things they could help with that as well. It would make them more like rounded instead of just working on the medicine part.” (Interview 22)

“That’s sort of putting more onto your mind that the pharmacy’s not just a place to go to cure your diseases.” (Interview 18)
8.6. Discussion

This study has explored the views and experiences of youth aged 16-25 towards community pharmacies, an area in which few research papers have been previously published. Youth reported mostly positive experiences of using pharmacies and were generally satisfied with current service provision. Participants viewed pharmacists as a source of accessible and trustworthy health information, and provision of additional information and advice was associated with good customer service. Pharmacies were perceived as retail rather than healthcare environments, with participants visiting multiple pharmacies for different purposes. Views on the role of the pharmacy profession in youth health were mostly limited to medication supply. There was a view that community pharmacies could be an appropriate setting for health promotion activities provided these were generalised rather than personal. Key barriers to accessing pharmacy services identified were lack of privacy and low awareness amongst youth regarding what services pharmacies offer. Lack of information appeared to result in feelings of disempowerment, with young people perceiving pharmacies as confusing and intimidating. Participants suggested increasing young people’s health literacy regarding pharmacies as an important strategy to making them more approachable for youth.

These findings have implications for the development of community pharmacy services in youth health, which will now be discussed in relation to the three broad concepts of privacy, retail image and lack of information identified.

8.6.1. Privacy

Privacy and confidentiality have been identified as critical to young people’s access of health services provided in other areas of primary care [25, 26], and the open, public nature of pharmacies has been identified as a barrier to the development of sexual health services such as chlamydia screening [183]. Thus, it was not surprising that participants of this study indicated that lack of privacy deterred them from accessing healthcare from community pharmacies. However, whereas research describing barriers to young people’s access of general practice has identified the presence of parents at the consultation or fears about the disclosure of personal information to family members as their major concerns [408], the findings of this research indicate that young people may visit pharmacies where they are not known specifically to avoid this possibility. This may be more desirable but also more difficult for youth in rural areas where the number of pharmacies is limited. Embarrassment and fears of being judged regarding the nature of their presenting issue by pharmacy personnel or other customers who might overhear appeared to be their main concerns in the community pharmacy setting. Therefore, young people appear to balance the accessibility and potential
anonymity of community pharmacies against the lack of privacy provided by the retail environment.

Private consultation areas in pharmacies have been suggested as a potential way to overcome privacy issues in pharmacies. The survey results indicated that 89% of pharmacies in NZ had a private consultation area, but that only 10% let people know about it [401]. The YAG suggested that if young people knew about the availability of private consultation rooms they would be less concerned about privacy as a barrier to accessing pharmacies. The results of this study found mixed views on this. Whilst some young people thought private consultation rooms would help, others reported that they would still find it embarrassing, and that this may in fact make it worse by drawing unwanted attention from other customers or resulting in an awkward interaction with pharmacy personnel. One consistent theme, however, was the indication that a key determinant of whether the experience of using a pharmacy was embarrassing for young people or not was the approach taken by pharmacy personnel. Discretion and a non-judgemental attitude in sensitive issues were viewed as critical, themes which concur with the findings of another qualitative study investigating the views of young people towards the staff they may encounter in pharmacies [31].

These issues have implications for the development of pharmacy services in sensitive or ‘taboo’ youth health areas such as sexual and mental health [25], as it is evident from the findings of this research that young people are unlikely to view the community pharmacy environment as an appropriate setting for discussing issues which they associate with social stigma. Despite this however, ECP services provided by pharmacies appear to have been relatively well received by both pharmacists and women using them (including young women) [228]. This provides evidence that it is possible for such services to be delivered successfully through pharmacies. The message from the young people we spoke to was to maintain the anonymity element of pharmacies which they find advantageous by keeping interactions opportunistic, and health information and advice general rather than personal. This approach contrasts with the relationship-building approach advocated in training for other health professionals working with young people who return to them regularly [219, 439]. Thus pharmacy may occupy a different niche in the provision of healthcare to young people, necessitating a pharmacy-specific approach to service development and training.

8.6.2. Retail image of pharmacies

Community pharmacies were generally viewed as a retail environment by these young people, and were compared to supermarkets or clothes shops. Retail image has limited the development of new pharmacy services, particularly in public health [413].
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The perceptions young people held about pharmacies appeared to influence the way they used them, as they adopted a consumerist role in weighing up the pros and cons and shopping around for the best option. For example, this study found that young people’s preferred choice of pharmacy might be based upon cost, convenience, quality of health information provided or product range, depending on their present need. The use of multiple pharmacies by young people in this way may have implications for pharmacy interventions which use patient medical records, as with no central database these are reliant upon customers sticking to one regular pharmacy. For example, this may affect the ability of pharmacists to check drug interactions or contraindications, and make young people less eligible for medication review through the new long term conditions (LCT) service now provided by pharmacies in NZ. As the participants highlighted, there may also be implications for the development of more personalised and ongoing services such as smoking cessation or weight management consultations which require the establishment of good rapport and continuity of care. It is possible that young people do not value the benefits of building a relationship with a regular pharmacy because they have not experienced this.

Perhaps of greatest significance was the way in which the retail image of pharmacies affected participants’ perceptions of pharmacy personnel in terms of their reliability as a source of health advice. The role of pharmacists and supports staff was limited to medication suppliers or retailers. As a result, their professional expertise and capabilities were doubted, and possibilities in which their additional skills might be useful to young people were not recognised. In addition, suspicion surrounding feeling pressured to purchase products or being ripped off resulted in a general distrust of the pharmacy profession. This theme has been identified amongst adults using pharmacies [413], and also appears to be an issue for youth. The pharmacy personnel interviewed believed that the youth population would not be receptive to health promotion activities or lifestyle advice. However, the young people interviewed perceived this as more youth-friendly as this conceptualisation of healthcare fits better with the holistic view of health and wellbeing held by youth [398]. This finding supports suggestions that development of health promotion roles may help to address some of the negative perceptions associated with the current retail image community pharmacies [440].

8.6.3. Disempowerment through lack of information

One of the issues that appeared to sustain youth perceptions of pharmacies as retail rather than healthcare environments was lack of health literacy surrounding the profession. Youth do not appear to be well informed about what services pharmacies may offer apart from the traditional medication supply role, what pharmacy personnel do, or how they might be able to help them. There appears to be little additional research available on the perceptions of young
people regarding the training or role of pharmacy staff, although low awareness amongst youth regarding the range of services potentially available to them from pharmacies has been indicated. The findings of a study investigating the knowledge and attitudes of Australian university students towards ECP reported that only 38% of participants knew it could be obtained from pharmacies over the counter [158]. This concurs with research in adult populations which has reported low awareness of pharmacy services [166], however, as adult health literacy is generally better than young people’s [156], it is likely that pharmacy services may be even less well known amongst the youth population.

There is evidence to show that young people are increasingly using technology and particularly the internet to obtain information about health and health services [160, 431]. This suggests that one possible explanation for young people’s lack of health literacy about pharmacies could be that the online presence of the pharmacy profession is relatively low. Only 10% of the pharmacies we surveyed indicated that they had youth-specific publicity material available such as a website [401]. Correspondingly, increasing young people’s awareness of pharmacy services through websites and social media was suggested as one of the best ways to make pharmacies more youth-friendly by the young people we interviewed. Such considerations may clearly have important implications for uptake of new pharmacy services such as chlamydia screening, which are likely to have a high representation from the youth population [394].

Furthermore, it was apparent from the results of this study that the lack of information provided to young people about pharmacies is disempowering. Young people are daunted by not knowing what to expect, and because they receive little explanation or reassurance through a typical interaction, pharmacies are perceived as confusing and intimidating. Key questions for pharmacy highlighted by study participants were:

1. What do pharmacists do?
2. What do pharmacy support staff do?
3. What’s the difference between them?
4. What are their qualifications?
5. Why do they wear white uniforms?
6. Why are some medications kept behind the counter?
7. Why do they ask so many questions?
8. What are they doing ‘in the back’?
9. What records do they keep about me?
10. How long will it take?
11. How much will it cost?

Providing this information may help to ease some of the uncertainty and apprehension young people experience and increase their willingness to access healthcare through pharmacies. It may also help to improve rapport and interactions with pharmacy personnel and promote a safer environment in which to ask questions, enabling them to leave with better quality health and medicines information. Evidence to support this was also suggested by the association between the provision of additional health advice and information, and definitions and experiences of good customer service by the young people interviewed. However, it was perhaps somewhat poignant that participants were surprised to receive additional advice and information from pharmacy personnel, and saw this as going ‘above and beyond’ their expectations.

8.6.4. Strengths and limitations

The results of this research are based on the experiences and feedback of a small number of young people living in an urban area, and as with all qualitative studies, they may not be generalisable beyond these young people. However, these in depth interviews have provided a unique insight to the perceptions of youth towards pharmacies and a point of view previously unexplored. The recruitment of many participants through their personal affiliations with Youthline may have encouraged young people who may not normally have volunteered to participate, and view this is a strength of the research.

Although every effort was made to minimise the potential for power imbalances between the participants and the researcher through the use of youth facilitators, it is likely that some of the young people interviewed may have been reluctant to appear critical of pharmacies when they were aware that the researcher was a pharmacist. Participants were not pressured into disclosing information about health issues or situations which they did not feel comfortable talking about, and in some cases this limited the depth of discussion around sensitive topics such as sexual or mental health.

The use of multiple interviewers for this research is possible limitation, since it may have resulted in inconsistencies between interviews [382]. However, the presence of the researcher in all interviews to provide support and prompting where necessary was designed to reduce
this issue. Although it was intended that all the interviews were to be facilitated by a YAG member, due to practical limitations this was only possible for approximately half of those conducted. The YAG facilitators were initially quite nervous during the first couple of interviews they conducted, and required a bit of extra support and prompting from the researcher to ensure thorough content coverage and sufficient depth to the dialogue. Following feedback and reassurance they rapidly improved however, and this was not an issue for subsequent interviews they conducted. Indeed, their style of questioning and adaptation of the interview guide was adopted in the interviews conducted by the lead researcher to benefit rapport, and in pursuit of new and emerging themes identified in the early interviews. We believe that the potential compromises resulting from multiple interviewers were surpassed by the additional insights afforded through the use of youth facilitators, and that the involvement of the YAG strengthened the quality of this research.

8.7. Conclusion

This study has explored young people’s views on the role of the community pharmacy in youth health, and identified potential barriers and facilitators to the development of pharmacy services in youth health areas. Lack of privacy as a barrier appears to be linked to fears of being judged by pharmacy personnel as well as other customers. This may have implications for the development of services in areas associated with social stigma (such as sexual or mental health) which will require additional consideration by service developers as well as the availability of private consultation rooms. It is evident that the perceptions young people hold regarding the role of pharmacies in their healthcare limits their utilisation of pharmacy services, including advice and information. Conceptualisation of pharmacies as a retail environment by youth may have some advantages in terms of access, but must be balanced against the disadvantages and possible harm due to lack of continuity of care. For example, the way in which young people report using different pharmacies for different purposes has implications for the development of any pharmacy services which rely on patient medical records. Finally, there is evidence that a lack of health literacy regarding pharmacies amongst youth may cause them to feel disempowered and intimidated. This may offer a possible explanation as to why young people might come across as shy or secretive to pharmacy personnel, or why they may not present in pharmacies at all.
Chapter 9. Comparative Qualitative Analysis

9.1. Chapter background
This chapter presents the comparative analysis of qualitative themes identified in the preceding two chapters. The comparative analysis was conducted to explore possible meanings and implications for areas of convergence and divergence between youth and pharmacy perspectives through a Youth Development lens. To be consistent with previous chapters of this thesis, the findings have been prepared as a manuscript written by the candidate as the lead author. It is intended that this manuscript will be submitted for publication in a pharmacy practice or population health research journal in the near future.

*How do young people and pharmacy personnel view each other? A Youth Development perspective*

9.2. Introduction
Youth Development (YD) is a conceptual model which links the exposure of young people to positive developmental activities and milestones during adolescence and early adulthood to the establishment of resilient character traits upon which they can draw on in later life [61, 306, 441]. It is founded upon resiliency theory [61], which suggests that the way individuals cope with stressful or negative life events may often have a greater impact upon outcomes than the relative severity of the adversity they face [66]. Developmental research has identified resiliency factors such as high self-esteem, self-determination and connection to others which may help to protect young people from risk by enabling them to navigate negative circumstances constructively [307]. For example, young people with a higher sense of self-determination may be better able to resist pressures from peers to engage in risky behaviours [307], or those with good self-esteem may be more resilient towards mental health issues [305]. This has seen the successful application of YD theory in strategies to improve health outcomes for young people in areas such as sexual health [308, 309], substance use [98] and health promotion [61], as well as supporting youth to thrive in the presence of chronic health conditions [312]. As the process appears to be adaptive and is influenced by external as well as dispositional components, YD approaches aim to create an environment which optimises the potential for positive developmental experiences [47, 306, 441]. There may be various definitions as to what a YD programme consists of, but they consistently aim to build and support competence, and create opportunities to expose young people to experiences which promote empowerment and self-efficacy [306].
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YD approaches are advocated by the NZ Ministry of Health as essential to the improvement of youth health in this country [22]. The Youth Development Strategy Aoteroa (YDSA) [47] outlines six general principles of the YD approach;

1. Youth development is shaped by the ‘big picture’
2. Youth development is about young people being connected
3. Youth development is based on a consistent strengths-based approach
4. Youth development happens through quality relationships
5. Youth development is triggered when young people fully participate
6. Youth development needs good information

Whilst the YDSA does not provide specific guidelines on how YD should be applied in practice, these six principles outline the key concepts. The overall philosophy is to advocate for young people in NZ, and to promote society and policy makers to think about youth from a positive and constructive perspective [47].

This research explores the application of YD in the context of community pharmacy services for young people. Perceptions of pharmacy personnel towards the role of pharmacy in youth health will be compared and contrasted against those of young people. The YDSA principles are used as a conceptual framework to explore the possible mechanisms and implications of convergences and divergences between the perceptions of pharmacy personnel and youth. The process of comparing and contrasting insights as experienced from different perspectives is reflective of a critical realist epistemology [289]. Unlike many qualitative paradigms, critical realism upholds the existence of a single, concrete reality, but recognises that how this reality is experienced by individuals is subjective and influenced by their background and worldview [291]. This results in multiple perspectives on the same phenomenon. Data collected from multiple perspectives can be used to describe different facets of an area and, therefore, provide an understanding which is more representative of a complex reality [291]. Furthermore, divergent perspectives on the way reality is viewed can help to reveal or explain the possible social mechanisms and structures in which reality is contextualised, because this prompts us to ask why individuals experience the world differently [289, 292]. For example, Porter’s use of critical realism to compare perspectives on workplace relationships in a medical setting [442] revealed a tension between the underlying racist views of some staff members and their external professionalism which was not explicitly discussed by any of the participants. There appear to be few published studies which have employed critical realism in the youth research field. However, as in Porter’s work, critical realist approaches have been used to demonstrate social inequalities and advocate for the rights of marginalised groups
Chapter 9 – Comparative Qualitative Analysis

[290, 443]. This suggests that in light of the health disparities [11] and the negative social image [47] experienced by this age group in NZ, critical realism could provide an appropriate paradigm in which to research youth health.

9.3. Objectives

- To compare and contrast the perceptions of young people and pharmacy personnel regarding the role of community pharmacy in youth health.
- To analyse areas of convergence and divergence using a YD lens to provide possible explanations and implications for the findings.
- To involve young people in the research process in order to provide a youth perspective highlighting the relevance of the findings to the use of pharmacies and delivery of services to this age group.

9.4. Method

9.4.1. Study design

This research involved the secondary analysis of data from two qualitative studies which have been reported in the previous two chapters. These were qualitative interviews with pharmacy personnel and young people aged 16-25 years. Both the youth and pharmacy interview studies used a youth participatory methodology [355] which has guided this thesis throughout. A Youth Advisory Group (YAG) was consulted to guide the development of interview guides and interpretation of findings from both studies. The integral role of the YAG in the research aligns with the participatory and strengths-based principles of the YD approach [47] discussed above. The interview guides for these two studies explored similar topics from the perspectives of young people and pharmacy personnel. It was the YAG who initially highlighted the potential importance and implications of divergences in youth and pharmacy viewpoints during a meeting which was held to involve them in the design of an academic poster (shown in Figure 15 at the end of this chapter) to present findings of the two research studies. Summaries of the findings from the youth and pharmacy interviews were presented to the YAG by the lead researcher, followed by a brainstorming session to generate ideas for the poster. These ideas inspired and guided the subsequent analysis.

A methodology described by Denzin as ‘crystallisation’ [444] was utilised, in which qualitative data from different perspectives were analysed to describe areas of convergence and divergence. Areas of convergence were used in a confirmatory sense to present a more
accurate picture of the barriers to young people’s use of pharmacies, and to identify promising areas for future service development. Areas of divergence were analysed using a YD framework to develop a better understanding of the social dynamics between young people and the pharmacy profession and to provide an insight as to how services should be developed to better meet the needs of youth.

9.4.2. Pharmacy interviews

A detailed method for the pharmacy interviews study has been described in Chapter 7. A semi-structured interview guide explored key findings of quantitative research investigating the role of pharmacies in youth health, and participant experiences with young people. Perceived barriers and facilitators affecting personnel’s ability to help this age group, how they believed pharmacies could be more youth-friendly, and their views on the role of pharmacies in providing health services to youth in the future were explored. Interviews with six pharmacists, five technicians, five retail staff and four pharmacy owners were conducted by the lead researcher (EH). Electronic recordings were transcribed verbatim and data were thematically analysed in the Nvivo 7 programme using a general inductive approach [390]. Key results are summarised in Box 1.

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<th>Box 1 – Summary of pharmacy interview results</th>
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<td>1. Pharmacy personnel care about the health and wellbeing of young people but do not always view community pharmacies as the appropriate setting for provision of healthcare to this age group.</td>
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<td>2. Challenges identified in the delivery of services to youth included communication difficulties and ethical dilemmas concerning the involvement of parents or carers.</td>
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<tr>
<td>3. Participants’ views regarding pharmacy’s role in youth health were mostly linked to prescription dispensing and ECP.</td>
</tr>
<tr>
<td>4. Young people were considered less receptive to health promotion activities or lifestyle advice than other age groups.</td>
</tr>
<tr>
<td>5. Many barriers were perceived on behalf of young people, such as suspected low health literacy about available services, embarrassment and shyness, and cost.</td>
</tr>
<tr>
<td>6. Concerns regarding the competency of young people to take responsibility for their own health, and the nature of their presenting complaints meant that participants felt that this age group was more likely to require referral.</td>
</tr>
<tr>
<td>7. Training in youth communication skills, mental health and sexual health was recommended and viewed as a potential facilitator of future developments in this area. Participants thought it important this should be available for pharmacy support staff as well as pharmacists.</td>
</tr>
</tbody>
</table>
9.4.3. Youth interviews

Again, a detailed description of the methods used for the youth interviews study has been provided in Chapter 8. This followed a similar process to the pharmacy interview study to explore key findings of quantitative research and participants’ perceptions and experiences of community pharmacies. Areas investigated included perceived problems and advantages of using pharmacy services, how pharmacies could be more youth-friendly, and views on future development of pharmacy services for young people. Twenty-three interviews were conducted between February and March 2013 with young people aged 16-25 with a range of demographics and backgrounds. Eleven interviews were led by YAG members who had been trained as interview facilitators, with the researcher as an observer. The remainder were conducted by the lead researcher alone. Transcribed data were prepared for analysis using Nvivo7. An adapted version of the Youth ReACT Data Analysis Method [438] was used to involve the YAG in the qualitative analysis process. They developed a preliminary coding frame which was used to guide subsequent thematic analysis by the researcher using a general inductive approach [390]. Key results summarised in Box 2.

Box 2 – Summary of youth interview results

8. Youth mostly reported positive experiences of using pharmacies and were generally satisfied with current service provision.

9. Participants viewed pharmacists as a source of accessible and trustworthy health information, and provision of additional information and advice was associated with good customer service.

10. Pharmacies were perceived as retail rather than healthcare environments, with participants visiting multiple pharmacies for different purposes.

11. Views on the role of the pharmacy profession in youth health were mostly limited to medication supply.

12. There was a view that community pharmacies could be an appropriate setting for health promotion activities provided they were generalised rather than personal.

13. Key barriers to accessing pharmacy services identified were lack of privacy and low awareness amongst youth regarding what services pharmacies offer.

14. Lack of information appeared to result in feelings of disempowerment, with young people perceiving pharmacies as confusing and intimidating.

15. Participants suggested increasing young people’s health literacy regarding pharmacies as an important strategy to making them more approachable to youth.
9.4.4. Comparative data analysis

The comparative analysis process followed a three step sequence;

1. Identification of areas where similar themes where discussed by pharmacy personnel and young people.

2. Comparison of data to establish whether youth and pharmacy perspectives on similar themes were convergent or divergent. Areas of convergence were used to identify mutual perspectives on barriers to the use of pharmacy service by youth and highlight potential directions for future service development.

3. Divergent youth and pharmacy perspectives were analysed using the YDSA principles as a framework to elucidate possible explanations for differences observed and their implications.

This 3 step process is represented in Table 23, which will be used as a template to present the results in the next section.

Table 23 – Comparative analysis template

<table>
<thead>
<tr>
<th>1. Identification of area where similar themes discussed by pharmacy personnel and young people</th>
<th>2. Points of convergence and divergence of views in this area</th>
<th>3. Possible explanations and implications of divergences inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td></td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td></td>
</tr>
</tbody>
</table>

9.4.4.1. Identification of similar themes discussed by pharmacy and young people

The youth and pharmacy data sets were reviewed to identify common themes across the data. For example, the pharmacy theme ‘use of technology’ was relevant to the youth theme ‘social media’ and ‘websites’. Then each data set was interrogated to identify all data relevant to the theme undergoing comparison. Keyword searches were performed as part of this interrogation (for example, in the case of the technology theme referred to above, the keyword ‘Facebook’ was searched for).
9.4.4.2. **Comparison of data to describe convergence and divergence of perspectives**

Where similar topics had been discussed, data were then compared and contrasted to identify whether the perspectives of young people and pharmacy personnel appeared to converge or diverge. For example, the pharmacy theme ‘use of technology’ was discussed by pharmacy participants as a possible way to encourage young people to use pharmacies. As websites and social media were also discussed by young people in the context of making pharmacies more youth-friendly, the perspectives of pharmacy and youth on this topic appeared to converge. In contrast, whereas young people talked about the use of informal conversation by pharmacy staff to help them feel at ease, pharmacy personnel believed that young people preferred minimal interaction compared to other age groups. Therefore, their perspectives appeared to be divergent on this issue.

In some cases there was a convergence of views at one level, and divergence at another. For example, both pharmacy and youth interviewees felt that privacy was a barrier to young people’s use of pharmacies, so there was convergence of viewpoints at this level. However, there was a divergence of views with regards to the reasons and implications of this.

9.4.4.3. **Analysis of pharmacy and youth perspectives through a YD lens**

Insight into the dynamics of interactions between youth and pharmacy were revealed when divergent views of young people and pharmacy staff were analysed using the six principles of the YDSA as a theoretical framework. Each area of divergence was examined in the context of the principles, to explore the social dynamics influencing interactions between youth and pharmacy, and to explore possible mechanisms and meanings in practice. For example, principle 4 (YD happens through quality relationships) provided an insight into why pharmacy and youth perspectives on the value of private consultation rooms were divergent. Pharmacy personnel perceived that young people were concerned about being overheard by other customers and, therefore, believed that private consultation rooms would be beneficial. However, many young people reported that they would feel even more uncomfortable in a private consultation room, because it would be awkward to talk about sensitive issues with someone with whom they did not have a quality relationship in a confined space. YDSA principle 4 helps us to understand why young people’s perception of pharmacy personnel as ‘strangers’ is significant, and highlights the importance of professional relationships upon young people’s use of pharmacies. In most cases more than one YDSA principle could be relevant to each area of divergence, with different principles able to provide possible explanations for different aspects of youth and pharmacy perspectives.
9.5. Results

9.5.1. YAG Meeting Results

The YAG meeting was attended by nine young people of mixed backgrounds aged 16-25 years old. Two youth workers were also present to facilitate discussion of the summarised pharmacy and youth interview results and record the group members' feedback for development of the poster. As mentioned above, the YAG noted the many occasions upon which the perspectives of young people and pharmacy personnel appeared to be mismatched. They described these differences as 'misunderstandings', and developed cartoon scenarios for the poster depicting such situations. A selection of these cartoons are shown in Figures 11 to 14.

Figure 11 depicts possible misunderstandings which the YAG felt could occur during an ECP consultation with a young person, as a result of the parental instincts of the pharmacist. Although the group members thought it was positive that pharmacy participants reported an increased sense of responsibility and a drive to provide young people with additional support, they were concerned that this might come across as judgemental in practice.

Figure 12 represents misunderstandings which might occur in the delivery of lifestyle advice to young people during an OTC consultation for insomnia. Although the young people interviewed preferred the most quick and effective option, the YAG agreed with the views of pharmacy personnel who felt that lifestyle advice was often more appropriate than treatment in young people.

Figure 13 shows an example of communication difficulties with the pharmacist being unable to pitch medications information appropriately and engagingly, a problem reported by both pharmacy and youth interviewees. This cartoon also hints at the potential for power imbalance between pharmacy personnel and youth.

Lastly, Figure 14 depicts potential for misunderstandings when there is lack of awareness amongst young people about pharmacies, pharmacy staff and the dispensing process. The YAG felt that providing young people with more information could help to improve how they perceive the pharmacy profession.
Figure 11 - Misunderstandings in an ECP consultation relating to the parental instincts of the pharmacist

Figure 12 - Misunderstandings over lifestyle advice in an OTC consultation for insomnia
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Figure 13 - Communication problems and mismatched perceptions about the role of technology as a health information source for young people

Figure 14 - Misunderstandings about the dispensing process and what pharmacy personnel do
9.5.2. Comparative Analysis

The comparative analysis identified 17 similar themes across the pharmacy and youth data sets. In the majority of cases there was divergence between youth and pharmacy personnel perspectives. Incidences of convergence often appeared to be ‘accidental’ since, upon deeper exploration of the perspectives, the reasoning behind youth and pharmacy views was usually different. The results of the comparative analysis process are summarised in Tables 24-40.
### Chapter 9 — Comparative Qualitative Analysis

#### Table 24 - Lack of information about pharmacies for youth

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Lack of information about pharmacies for youth</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence of perceptions regarding lack of knowledge about pharmacy services as a barrier to YP’s use of pharmacies</td>
</tr>
<tr>
<td>PP perceive that low knowledge levels about pharmacy services may have implications for youth pharmacy access because YP may not know what is available. (Themes = Awareness of pharmacy services)</td>
<td>YP report low health literacy levels about pharmacies in general and this was associated with disempowerment. It was suggested that providing YP with more information about pharmacies would help them to feel more confident about using them. (Themes = Knowledge of pharmacy, Disempowerment, Knowledge is power)</td>
<td>Principle 6 YD needs good information</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td>YD is based on a consistent strengths-based approach</td>
</tr>
</tbody>
</table>

YP’s health literacy about pharmacies appears to be low. As well as resulting in low awareness of pharmacy services, this appears to affect YP’s utilisation of pharmacies by causing them to feel intimidated, disempowered and lacking the confidence to use pharmacies. Providing YP with more information about pharmacies could help to increase youth healthcare access through pharmacies not only by making them aware of the services available to them, but also by empowering them to utilise them.

*Example quote*

“If we knew more about like all that’s involved I think that would help us like feel maybe a little bit more comfortable if we weren’t comfortable with it before, because it’s more transparent.” (NZ Chinese male, 16)
Table 25 - Communication difficulties

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Communication difficulties</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence that communication difficulties between PP and YP are an issue</td>
</tr>
<tr>
<td>PP perceived that YP preferred to leave the pharmacy ASAP with minimal interaction due to embarrassment. Some felt that YP don’t listen to them. (Themes = Communication issues, Shy or embarrassed)</td>
<td>YP reported that they would prefer more information and advice and associate this with good customer service. Some felt too intimidated to ask questions about their medication or found information provided by PP difficult to understand (Themes = Lack of info provided, Intimidating staff, More info please, Knowledge is power)</td>
<td>YD needs good information</td>
</tr>
<tr>
<td>The difficulties experienced by PP when communicating with youth appear to be a manifestation of an imbalance of power between themselves and YP. Although YP reported wanting more information about their medicines, they did not feel confident enough to approach PP or ask questions. Since lack of knowledge about health, medicines and pharmacies was also a source of disempowerment for YP, this relationship may indicate a negative cycle. Providing YP with more information could help them feel confident enough to ask more questions. Approaches which aim to improve relationships between PP and YP by equalising the power dynamic could also help to address this issue.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td></td>
</tr>
<tr>
<td>“If their eyes are glassing over and you know they’re not really paying attention well there’s no point in trying to force it down their throats.” (younger male pharmacy owner) “if they are shy then they will try and you know get out of the shop as quickly as they can.” (older female pharmacy assistant)</td>
<td>“I think if they kind of gave you..they kind of said this is what’s going to happen and you kind of get a little bit more information so you kind of know what’s going on. Then if they kind of gave you a little bit of information then you’d be more inclined to ask questions.” (Māori female, 19)</td>
<td></td>
</tr>
</tbody>
</table>

194
<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Participation of YP in healthcare decisions</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence of opinion that YP may be disengaged in the community pharmacy setting</td>
</tr>
<tr>
<td>PP did not discuss the participation of YP in healthcare decisions, but did describe difficulties engaging YP and sometimes reported frustration with YP who came in asking for specific treatments. (Themes = communication issues, consumerist behaviour)</td>
<td>YP appear to feel involved and in control of decisions about OTC medications and viewed this as a positive about pharmacies. However, they appeared to feel disconnected or excluded from decisions about their prescription treatment. (Themes = Pharmacies as secretive, Disempowerment)</td>
<td>YD is triggered when young people fully participate</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td>YD is based on a consistent strengths-based approach</td>
</tr>
<tr>
<td>&quot;the pharmacy stuff that goes on behind the scenes that you need like some sort of knowledge about; the pharmacists are probably the only ones allowed to do it or oversee it.&quot; (Māori/NZ European male, 22)</td>
<td>&quot;They just kind of grab the paper and go get it for you. That's why I don't really understand anything ayе!&quot; (NZ Samoan female, 22)</td>
<td>Youth participation through the provision of pharmacy services to young people might be promoted by involving them as partners in decisions about their healthcare. The lack of pharmacy data regarding this concept may be revealing, in that it could provide some evidence to suggest that PP do not recognise the importance of involving YP in medication related processes. It is possible that this is reflective of their views on the competency of YP to participate in and control decisions about their treatment. YP appear to perceive a sense of secrecy with regards to PP being ‘in the back’, and perceptions that they were ‘not allowed’ to be part of this process appeared to make YP disengaged from, and somewhat distrustful of pharmacy as a profession. In order to engage YP, PP may need to enable them to be involved in decisions about their treatment, and to respect their competence and autonomy in making these decisions.</td>
</tr>
</tbody>
</table>
## Chapter 9 – Comparative Qualitative Analysis

### Table 27 - Privacy

<table>
<thead>
<tr>
<th>Area where similar themes were discussed:</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy</td>
<td>Summary of youth perspective</td>
<td>Convergence of views regarding privacy as a barrier to YP’s use of pharmacies</td>
</tr>
<tr>
<td>PP perceive lack of privacy as an important barrier to young people using pharmacies. They attribute this to confidentiality issues such as fear of being recognised or being embarrassed about talking about their health issues in front of other customers. They therefore believed that private consultation rooms would help to address this problem. (Themes = Privacy and confidentiality, Discretion)</td>
<td>Lack of privacy in the pharmacy environment was indicated as a major barrier to YP. Many participants reported visiting pharmacies where they were not known for sensitive issues and saw this as an advantage of accessing healthcare through pharmacies. Mixed responses regarding whether private consultation rooms would help- some said yes, while others thought it might be more awkward. Some described anxiety about pharmacy personnel knowing sensitive information about them in relation to privacy, which private consultation rooms would not help to address. (Themes = Shop not private enough, Anonymity, Strangers, Be discreet)</td>
<td>YD happens through quality relationships</td>
</tr>
<tr>
<td></td>
<td>Summary of pharmacy perspective</td>
<td>Divergence of views on whether private consultation rooms would help</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Example quote

<table>
<thead>
<tr>
<th>Example quote</th>
<th>Example quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>“that would be one of their main concerns and if anyone comes in that they know.” (younger female retail manager)</td>
<td>“I’m not really concerned about pharmacists telling other people what my issues are, I’m more concerned about them knowing it, rather than them like spreading it around…it’s just a matter of this one person knowing everything about me, but they are a stranger</td>
</tr>
</tbody>
</table>

| 196 |
would certainly make somebody generally a lot more comfortable in coming in I'm sure." (older female pharmacy owner)

“it would depend on the situation, like um most of the time I’d want to probably talk to the person that I knew but maybe if it was something I wanted to keep private then I would go to a pharmacist I didn’t know.”

(Māori/NZ European male, 16)
Table 28 - Judgement of YP’s risk taking behaviour

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Judgement of YP’s risk taking behaviour</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Divergence between YP’s perceptions and PP’s actual views on risk taking behaviour in youth</td>
</tr>
<tr>
<td>PP view risk taking behaviour during youth as a normal and natural part of development (Themes = Being nice, being supportive, Not judging)</td>
<td>Reported that an important barrier to youth accessing pharmacies is fear of being judged regarding their lifestyles. However, few reported experiences of this response from PP (Themes = Intimidating staff, Don’t judge)</td>
<td>YD is based on a consistent strengths-based approach YD needs good information</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td>PPs reported views on risk taking in youth as natural and their supportive attitude towards this are consistent with a strength-based approach. Providing YP with this information could help to increase youth healthcare access through pharmacies.</td>
</tr>
</tbody>
</table>

"I would never judge, you know, a young person coming in for anything that um that they might need." (older female pharmacy assistant)

"Facilitator - Do you think that there’s anything that would put young people off using pharmacies? Interviewee - Um, staff who aren’t very understanding. Or who are just like ‘ah, young people; getting into all this trouble’, (laughs) that would put me off completely.” (South African female, 23)
Table 29 - Age of pharmacy staff

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Age of pharmacy staff</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Divergence of perceptions regarding impact of age of PP</td>
</tr>
</tbody>
</table>
| Most PP anticipated that young people would prefer to talk to younger staff and some suggested this as a way of being more youth-friendly. However, younger staff felt they were sometimes perceived as less knowledgeable, and that it could be difficult to balance rapport and professionalism with YP (Themes = Younger staff) | Some participants felt younger staff might be more able to relate to YP and were perceived as being ‘on a level’. However, most YP reported a preference for older staff because they perceive them as more experienced and knowledgeable and find it less embarrassing. The ability of PP to empathise was identified as more important than age. (Themes = Older are better, Empathy) | **YD happens through quality relationships**  
**YD needs good information**  
Experience and knowledge appear to be greatly valued by YP. Although some suggested that younger staff may find it easier to relate to youth, the quality of the relationship and ability of PP to empathise appears to more important to YP than their age. Providing older PP with this information could help them to feel more confident in providing services to this age group. |
<p>| Example quote | Example quote | |
| “It’s a hard for me to say what they think of us because, you know, I’m now be considered a mature pharmacist at the end of my career rather than the beginning so um knowing what they actually their perception of us is always very difficult.” (older female pharmacy owner) | “I guess it’s better to speak to an older person because they like, have more experience and stuff so they can give you better advice maybe.” (NZ Tongan male, 21) | |
| “I guess in this community as well you know most people that come in and say ‘oh hi I went to school with you’:” (younger female pharmacy assistant) | “Well actually sometimes the young people might want to talk to someone who’s not their own age because talking to someone your own age might make it worse.” (South African female, 23) | |</p>
<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Conversation about non-health topics</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Divergence of perceptions on making conversation about non-health topics</td>
</tr>
<tr>
<td>PP believed that young people preferred not to engage in conversation regarding non-health topics if possible, and reported finding it difficult to talk to YP about anything other than their medicines (Themes = Communication issues, Shy or embarrassed)</td>
<td>Suggested that PP should start a conversation and ask about other things in their lives as a way of breaking the ice and improving rapport. Viewed as a key element of youth-friendliness (Themes = Informal conversation)</td>
<td>YD is shaped by the ‘big picture’</td>
</tr>
<tr>
<td>YD happens through quality relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reluctance of PP to discuss non-health topics appears to reflect their perceptions of YP as shy and uncommunicative. However, this does not align with a holistic ‘big picture’ approach to youth health. Furthermore, it may contribute towards YP viewing pharmacies as intimidating and associating them with illness, and may exacerbate communication problems since YP associate informal conversation with PPs’ approachability and ability to empathise. Encouraging PP to talk to YP about other topics outside their presenting issue could help to build better quality relationships by promoting rapport, and would facilitate the delivery of healthcare which is appropriate in the wider context of their daily lives.</td>
<td></td>
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</tr>
</tbody>
</table>

Example quote:

"If you don’t ask them open ended questions they’re going to say no or yes or um” (older female technician)

"Um kind of ask about something else like oh how’s your day been so far or have you watched the rugby game last night or something like that to kind of spark up another conversation. You kind of set a foundation and then try and work on that um but it would be helpful because otherwise people come up to you and say okay, and you’re just like yeah I’m fine thank you.” (Māori female, 19)
### Table 31 - Cost as a barrier

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Cost as a barrier</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence of views regarding cost as a barrier to youth healthcare access through pharmacies</td>
</tr>
</tbody>
</table>
| PP perceive cost as a barrier to YP’s use of pharmacies and many described strategies they use in trying to reduce costs for YP (Themes = Cost, Lack of funding, YP as consumers) | Indicate cost is a barrier to using pharmacies, particularly for OTC treatments which they feel are overpriced. (Themes = Cost, Rip off) | YD *is shaped by the 'big picture'*  
PP recognise cost as a barrier to YP and want to help. They appear concerned about the ability of YP to pay for their own medications and in some cases try to reduce cost for them or even pay on their behalf. There is evidence to suggest that YP will spend money on healthcare if it is affordable since the majority described subsidised prescription medications as ‘cheap’. Cost as a barrier to YPs’ access to medications and services through pharmacies has implications for youth health at a population level. This relates to the ‘big picture’ level of YD nationally. |
| Example quote                                              | Example quote                                            |                                                                 |
| “some young people um are very aware of costs” (older male pharmacist) | Facilitator- “what’s the first thing you think of when you think of pharmacies?”  
Interviewee- “Expensive” |                                                                 |
## Table 32 - Prioritisation of health and help seeking behaviour of YP

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Prioritisation of health and help seeking behaviour of YP</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>YD is shaped by the 'big picture'</td>
</tr>
<tr>
<td>Not seeking help for health issues was perceived to be a major barrier to youth healthcare access through pharmacies. PP often attributed this to low health literacy, but also believed that YP sometimes have the ‘wrong’ priorities as they put other aspects of their life ahead of their health. Perceptions that youth think of themselves as ‘bullet proof’ and may be reckless with their health (Themes = Health knowledge; They don’t look after themselves)</td>
<td>Mixed responses; some participants suggested youth may be less concerned about their health than other age groups. Others reported that YP would like more advice about how to keep healthy. YP appear to be proud of their good health or of ‘soldering on’ through illness (Themes = Avoidance, Healthy living)</td>
<td>YD is based on a consistent strengths-based approach</td>
</tr>
<tr>
<td>Points of convergence of views regarding help-seeking behaviour of YP</td>
<td>Divergence of perspectives regarding YP’s prioritisation of health</td>
<td>PP appear to blame YP for not seeking their services by suggesting that this is due to low health literacy levels, that YP do not value their long term health, or that health may not be a priority for YP. These perceptions do not recognise the strengths of YP in being responsible for their health, or their resilient attitudes with regards to wellbeing. YP appear to view prioritising ‘life’ over illness as a strong and positive approach to health. However, both PP and YP believed that YP may be less likely to seek healthcare compared to other age groups. This may, therefore, have implications at a population health level, as a barrier to youth healthcare access through pharmacies.</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td></td>
</tr>
<tr>
<td>“Um sometime yeah we see like an infection or something, you know, leg, very, very bad and then the parents bring in because they can’t leave until this stage – how many days and maybe they say a week like this.” (older female technician)</td>
<td>“I mean ‘cause like young people, they kinda like think “ah, it’s gonna be alright”… they try to see if you can wait for a while, maybe for like a week or two and see if any symptoms are gone or like getting better, or if not then they’ll find medical assistance.” (Chinese male, 19)</td>
<td></td>
</tr>
<tr>
<td>“It’s tough because they feel like they’re invincible. And if you get on to them early and</td>
<td>“young people who get sick it just goes away the sickness yeah. So you get better faster; take less time to heal.” (NZ Fijian male, 17)</td>
<td></td>
</tr>
</tbody>
</table>
you start seeing the warning signs early well they’ll be a whole lot fitter and healthier and happier for the rest of their life. But I think a lot of them sort of feel like they’re bullet proof.” (younger male pharmacy owner)
## Table 33 - Parents

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Parents</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Divergence of views regarding involvement of parents</td>
</tr>
<tr>
<td>Frequently talked about the involvement of parents and their own parental instincts; were concerned about young people accessing pharmacies without the support of parents (Themes = Parents, Responsibility or parental instinct)</td>
<td>Rarely mentioned parents except in the context of confidentiality issues or perceptions about being judged by older PP (Themes = Anonymity, younger are better)</td>
<td>YD is based on a consistent strengths-based approach</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td>YD is about young people being connected</td>
</tr>
<tr>
<td>“I think sometimes I take young people under my wing because, you know, I've got young children myself.” (older female technician)</td>
<td>“Facilitator - Like what does youth-friendly mean to you? Um, like you gotta have someone, like that's um, you gotta have someone there that can like talk to youth about like information that you don’t really wanna talk to an adult with.” (NZ Samoan female, 17)</td>
<td>The concerns of PP may be reflective of doubts they hold as to the competency of YP to be responsible for their own healthcare. Although this came from a caring perspective, it does not support the independence of YP and therefore is not consistent with a strength-based approach. However, there was also a sense that the nature of the health issues with which YP may present was also a factor for PP. They appeared concerned about YP dealing with sexual or mental health issues alone and were anxious about YP’s disconnection from family support networks. Connection to such support networks is also an important component of a YD approach.</td>
</tr>
<tr>
<td>“as a mum if I see the young people most likely they come to buy ECP or whatever most of them I'm thinking they are like my children's age tend to be um more concerned if the parents didn’t come with them.” (older female pharmacist)</td>
<td>“And it’s kind of like, oh you’re like my mum’s age – you’re probably thinking oh really disappointed, you know.” (NZ Samoan female, 22)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 34 - YP’s trust in pharmacy personnel as a health information source

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; YP’s trust in pharmacy personnel as a health information source</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Divergence of perspectives on role of PP in providing health information to YP</td>
</tr>
<tr>
<td>PP perceive that youth prefer to source health and medicines information from the internet or peers and are concerned that this may be unreliable. Some describe frustration in believing that YP do not value their professional knowledge. (Themes = Health literacy, Health information)</td>
<td>YP report trusting the advice and professional opinion of PP (esp. pharmacists) over information they access through the internet or friends. They value pharmacies as a source of accessible and reputable health information. (Themes = Trust in pharmacy, Convenient and obvious)</td>
<td>YD is based on a consistent strengths-based approach</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td>YD needs good information</td>
</tr>
<tr>
<td>“Researcher - Do they tend to have a lot of questions or? Interviewee - Not really no. Researcher - Why do you think that is? Interviewee - I just put it down to sort of internet research I think. I think they already know what they want before they come in; self-diagnosis.” (Younger female technician)</td>
<td>“I trust that they’ve done years of study and they have experience in areas that I don’t have any experience in and so therefore because they know and have a large knowledge base it makes it easier for me to ask them because I’d trust that they’d have the answer kind of thing.” (Māori female, 19)</td>
<td>PP appear to underestimate the health literacy of YP. Their doubts regarding the capacity of YP to critically appraise information sources in order to make informed decisions does not support a strength-based perspective of youth. It seems likely that providing PP with better information about how YP actually view the pharmacy profession could help to improve interactions between these groups and promote the utilisation of pharmacies as health information sources by YP.</td>
</tr>
</tbody>
</table>
Table 35 - Connecting to youth through social media

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Connecting to youth through social media</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence of views on utilising the internet and social media and providing information through schools to increase YP’s awareness of pharmacies</td>
</tr>
<tr>
<td>Recognise social media as a potential tool for connecting to the youth population but are not sure how this could work in practice (Themes = Use of technology, Health education)</td>
<td>Suggest raising youth awareness through social media and the internet as critical to making pharmacy more youth-friendly (Themes = Websites, Social media, Schools)</td>
<td><strong>YD is about young people being connected</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>YD needs good information</strong></td>
</tr>
<tr>
<td><strong>Example quote</strong></td>
<td><strong>Example quote</strong></td>
<td><strong>The concept of increasing YP’s awareness of pharmacy services via means which are integrated into their daily lives was described as critical. Youth are often high users of technology and therefore this appears to be essential in connecting pharmacies to this age group. The use of youth-orientated information sources could also help to promote perceptions of pharmacies as being youth-friendly, because it would demonstrate that an effort had been made to provide information in a youth-appropriate format.</strong></td>
</tr>
<tr>
<td>“I can’t think of anything worse than having to constantly update social media… unless you’re gonna constantly update it there’s no point having it. So it does really require young staff members to instigate that.” (Younger female pharmacy owner)</td>
<td>“just leaflets in the pharmacy or like signs in the pharmacy is not enough, because like, we don’t go there all the time kind of thing. But social media, everyone’s always on it.” (NZ European female, 20)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 36 - Consumerist behaviour

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Consumerist behaviour</th>
<th>Summary of pharmacy perspective</th>
<th>Summary of youth perspective</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP report some frustration with regards to YP ‘shopping around’ for OTC products, for example if they buy them from the supermarket instead of the pharmacy. This was related to concerns about the appropriateness of products and the lack of professional advice available on purchase. They also worried about YP who did not appear to take their advice or left the pharmacy with no treatment. (Themes = YP as consumers)</td>
<td>Being provided with options and information by PP was associated with descriptions of good customer service. However, recommendations of PP regarding particular treatments were viewed negatively, as this was associated with feeling pressured to purchase a specific product. Most reported utilising different pharmacies and other outlets such as supermarkets depending on their needs and cost. (Themes = Pros and Cons of pharmacies, Retail image)</td>
<td>Convergence of perceptions regarding consumerist behaviour of YP when using pharmacies</td>
<td>YD is based on a consistent strengths-based approach</td>
<td></td>
</tr>
<tr>
<td><strong>Example quote</strong></td>
<td><strong>Example quote</strong></td>
<td>Divergence of perspectives on whether this is a positive or a negative</td>
<td>YD happens through quality relationships</td>
<td></td>
</tr>
</tbody>
</table>
| “For me um I don’t know whether some of them I find that sometimes they don’t take things seriously that it’s just really blasé – it’s just a health condition, not understanding impact. So yeah it’s hard seeing someone so young doing such adult things and I just want to be like a mum and say, ‘Hey look, this is really serious – you need to understand what’s going to happen’.” (older female pharmacist) | “I think I would do a bit of research online and look up reviews of say like product A, product B, which is better and why they would do that and so have sort of research a bit and go to pharmacy and tell them I’m looking into, my joints are hurting and want to get some joint things and then they say, oh okay get this and I say okay. Then probably they’d step in and say oh this brand is not that good but not that well regulated, blah, blah, blah and I suggest product C and you say oh okay and sort of decide from there. And so do a bit
of research and sort of ask them as well." (NZ Chinese male, 23)

"just like let people look at products for a bit longer without being like pestered yeah." (NZ European male, 19)
### Table 37 - Health promotion

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Health promotion</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary of pharmacy perspective</strong></td>
<td><strong>Summary of youth perspective</strong></td>
<td><strong>Divergence of views on role of pharmacy in youth health promotion</strong></td>
</tr>
<tr>
<td>PP are reluctant to offer preventative or health promotion services to young people because they feel youth are less receptive or will be offended (Themes = They don't look after themselves, Health Promotion)</td>
<td>YP think pharmacies should be more involved in promoting healthy lifestyles, suggesting this as a way they could be more youth-friendly (Themes = Wellness, Healthy living)</td>
<td><strong>YD is shaped by the ‘big picture’</strong></td>
</tr>
<tr>
<td><strong>Example quote</strong></td>
<td><strong>Example quote</strong></td>
<td><strong>YD is based on a consistent strengths-based approach</strong></td>
</tr>
<tr>
<td>“I guess most of the younger people don’t really seem to worry about that till later on in their life till it’s sort of too late.” (younger female technician)</td>
<td>“They probably, probably I think they wouldn’t be too offended but a little surprised that maybe that they asked the question. I guess maybe, maybe um being not really like forceful with it and stuff and people will get used to the idea that you can go to the pharmacy for these type of things and then young people might grow into the idea. (NZ Chinese male, 16)”</td>
<td>The reluctance of PP to provide health promotion services to youth appears to be related to perceptions of YP as having low health literacy levels and not prioritising their health. This is not compatible with a strength-based YD approach, does not support holistic care, and represents missed opportunities for preventative interventions. It appears that increased involvement of pharmacies in these areas could have positive implications for YP’s impressions of pharmacy as a profession in terms of associations and extended role.</td>
</tr>
<tr>
<td>“They’re young and they’ll be like, you know, heart attacks – whatever.” (younger female pharmacy assistant)</td>
<td>“Yeah that’s how I see youth-friendly and like they probably should do like, you know, now that I know about those services like um do services that’s kind of related to youth.” (NZ Samoan female, 19)</td>
<td></td>
</tr>
<tr>
<td>“I mean they get angry when we don’t sell cigarettes here, so you can imagine how they are going to react…” (younger male pharmacist)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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## Table 38 - Health or social issues?

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Health or social issues?</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Some convergence of views regarding appropriateness of delivering sexual health, mental health or substance use services in the community pharmacy setting</td>
</tr>
<tr>
<td>The majority of PP appeared to view youth health issues as social in nature, often referring responsibility to parents, schools and peers when asked how pharmacy could help. (Themes = Social not health issues)</td>
<td>There were mixed responses regarding the role of pharmacies in some youth health areas due to privacy issues and perceptions of PP competence. However, there was also evidence to indicate that YP view pharmacies as part of the community, and as such saw potential for their involvement to help reduce social stigma associated with some youth health issues (Themes = Social change through pharmacy)</td>
<td>YD is shaped by the “big picture”</td>
</tr>
<tr>
<td><strong>Example quote</strong></td>
<td><strong>Example quote</strong></td>
<td>Pharmacies may have a limited role in some youth health areas, but should recognise that their prominence in the community could have a role to play in increasing youth healthcare access which extends beyond service delivery.</td>
</tr>
</tbody>
</table>

_Do not quote anything with additional text or symbols._

- "There has to be um a particular health focus outcome for it, even talking about health and not social issues. Social issues you can do that in your own time. It doesn’t need to involve pharmacists." (older male pharmacist)
- "No, those sorts of things you’ve got the background from the families, and the school, and the workmates, and their peer-groups normally affect them most." (older female technician)
- "I think pharmacies could help with these things, because a pharmacy’s in the community and everybody can see it, so it will be for a lot of people a first point to go to." (Middle Eastern female, 22)
- "In the community it’s not really like talked about that much – it’s all kind of a bit like taboo, you know um so I think that would be really good I think pharmacies got behind that kind of thing." (NZ European female, 18)
## Chapter 9 – Comparative Qualitative Analysis

### Table 39 - Competence of pharmacy personnel in youth health areas

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Competence of pharmacy personnel in youth health areas</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence of perspectives regarding competence of PP in youth health areas</td>
</tr>
<tr>
<td>Do not always feel confident dealing with YP because they perceive the health issues of this age group to be complex and more likely to require referral (Themes = Pandora's box, Referral &amp; Referral support)</td>
<td>Perceive the scope of practice of PP to be limited to medication supply roles (Themes = let the Dr handle it)</td>
<td>Divergence of perspectives underpinning the reasons for this</td>
</tr>
<tr>
<td>Example quote</td>
<td>Example quote</td>
<td>YD is shaped by the “big picture”</td>
</tr>
<tr>
<td>“with young people like depending on their age I would automatically refer to even the pharmacist or the doctor um just because they are a lot younger. They may not be open to telling me or a pharmacist the full story, you know. They might be more inclined to be telling the doctor or someone at family planning or something like that.” (younger female technician)</td>
<td>“people would go to the doctors if they had a problem because, you know, people think that doctors know a lot more about medical related stuff and that pharmacists are just there to give out the medicines and that's it yeah.” (NZ European male, 18)</td>
<td>YD needs good information</td>
</tr>
</tbody>
</table>

The differences in rationale between youth and pharmacy participants are revealing. PP attribute the limitation to perceived complexity of YP health issues, whilst YP doubt PP competency. In order to realise PP potential to increase youth healthcare access, the profession needs to recognise the role of pharmacy in youth health within the context of primary healthcare. To move forward, PP require better information on youth health and referral pathways for this age group. YP require information on the developing scope of practice of pharmacy. Both parties agree that PP would require training, support and referral resources if pharmacy services in youth health areas were to be developed.
### Chapter 9 – Comparative Qualitative Analysis

#### Table 40 - Mutual need for information

<table>
<thead>
<tr>
<th>Area where similar themes were discussed; Mutual need for information</th>
<th>Points of convergence and divergence of views in this area</th>
<th>Possible explanations and implications inferred using YD lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of pharmacy perspective</td>
<td>Summary of youth perspective</td>
<td>Convergence of views regarding the needs for transfer of information between pharmacy and youth</td>
</tr>
</tbody>
</table>
| PP report that they would like more information about youth and how they can help improve the health of this population (Themes = Training) | YP would like more information about pharmacies and suggest this as a way of making them more youth-friendly (Themes = Promotion) | YD needs good information 
YP is shaped by the ‘big picture’ |
| Example quote | Example quote | PP were interested in how they can improve service delivery for YP and encourage this age group to utilise pharmacies for needed healthcare. YP would like more information on how pharmacies might be able to help them improve their health. Dissemination of this information to both youth and pharmacy could improve youth healthcare access through pharmacies. Meeting the mutual information needs of PP and YP about one another could have potential at a population health level. This concept also aligns with the principle ‘Youth Development needs good information’. |

---

**Example quote**

“As a pharmacy group we need more training for youth health issues because their needs are changing all the time.” (young female retail manager)

“interviewee - Like they won’t even let you look at the stuff behind the counter or anything so I don’t think they would let you in the back. 
Facilitator - I know, what’s with that aye?”

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9.6. Discussion

This study has explored how young people and pharmacy personnel view each other, using a YD lens to suggest explanations for divergence in perspectives, and associated implications for pharmacy practice. The findings may be used to improve current pharmacy service delivery to this age group, and potentially to inform and facilitate future service developments in this area.

Bernard et al also reported significant differences in perspectives between young people and service providers on the barriers impeding access to primary care services for youth, [148]. In particular, Bernard et al’s study investigated differences in the perceived barriers to young people’s use of healthcare, indicating that service providers may be misunderstanding the main reasons why young people might not seek help when needed. For example, whereas service providers believed that the major barriers to youth healthcare access related to health literacy, cost and attending appointments, young people appeared to be more concerned about privacy and confidentiality and the quality of the relationship with the healthcare provider. The authors suggest that the implications of misunderstanding such issues may be that youth health needs are less likely to be met in practice. However, they do not postulate as to the possible reasons for these discrepancies in views.

9.6.1. Power

Power imbalance between youth and pharmacy personnel appeared to contribute to barriers to youth accessing pharmacies and challenges experienced by pharmacy personnel in service delivery to this age group. Shifts in power distribution have been suggested as central to empowerment processes in YD [43], and the findings of this study suggest that this seems to have particular relevance to pharmacies becoming more youth-friendly.

The findings indicate that power imbalances appeared to cause a lack of confidence amongst young people when accessing pharmacies. This was experienced as ‘communication difficulties’ by pharmacy personnel, who frequently perceived young people as challenging to engage, minimally responsive, and difficult to pitch health information to. Similar themes have been described in literature exploring the challenges experienced by other healthcare professionals dealing with young people [369, 428, 445]. Conversing with youth in ways which helps to minimise power imbalances with healthcare professionals (such as initiating conversation about non-health topics [117, 439, 446]) and promoting the involvement of young people as equal partners in their medical treatment [219, 439, 446] have been suggested as methods to improve communication with this age group.
A strong theme throughout the youth interviews was fear of being judged by pharmacy personnel and was identified as a reason why they would not use pharmacies. This has also been indicated as an important barrier for youth in other healthcare settings [24, 26], particularly with regards to seeking help for issues which they perceive as socially ‘taboo’ such as sexual [199] or mental health [447] problems. The ability of pharmacy personnel to convey that they were not judgemental, and to communicate with young people in a discreet and empathetic manner was central to definitions of youth-friendliness described by the young people participating in this research. Although there is limited literature available on the views of youth towards pharmacies, the young people interviewed in one other study exploring their perspectives on pharmacies in South America emphasised the importance of staff attitudes [31]. This research focused on barriers to accessing sexual health services in a religious social climate, suggesting that issues of power and judgement were also at play.

A key cause of disempowerment for young people using pharmacies appeared to be a lack of information available. Low health literacy levels of youth regarding the pharmacy profession resulted in youth perceiving pharmacies as confusing and intimidating, because they did not know what to expect. This sense of insecurity and vulnerability was maintained by pharmacy personnel who did not explain procedures and processes, and did not involve young people in medication related decisions. Correspondingly, young people associated being informed with definitions of good customer service. There is some evidence to show that awareness of community pharmacy services may be low amongst youth populations [158], although this has not been previously linked to reduced use of pharmacies due to disempowerment. However, patient-centred care which focuses on provision of individualised care in a respectful and empowering manner has been identified as an important component of consumer definitions of good pharmacy service amongst adults [448].

9.6.2. Competency and autonomy

The notion of healthcare which is delivered respectfully connects with another key recurring concept of this study; that of the competency and autonomy of youth. Healthcare professionals who acknowledge the competency of young people to make their own decisions and respect their autonomy have been indicated as an important element of youth-friendly healthcare [123, 149, 216]. However, the findings of this study suggested that the perceptions of pharmacy personnel sometimes did not align with the strength-based principles of YD. Although often expressed in a caring manner as concern for the long term wellbeing of young people or their connection to parental support, the views of the pharmacy staff consulted did not always reflect a perception of YP as competent, nor were they always conducive to the development of competency and autonomy in youth. The ability of young people to source reliable health
information, prioritise their health and seek help appropriately, and make decisions about their own healthcare was questioned and frequently underestimated.

The propensity of adults to underestimate the importance that young people attribute to their health, and degree of responsibility that young people exhibit, has been demonstrated in previous healthcare research [449]. General practitioners have cited ethical dilemmas with regards to the involvement of parents as challenges in healthcare management of this age group [201, 416], indicating that they feel a dual responsibility towards parents as well as young people. Furthermore, there is evidence to suggest that adult healthcare providers may make decisions on behalf of young people where the young person’s wishes conflict with their own professional opinions [203]. There have been calls for healthcare personnel to better support emerging capacity for self-management in young people to improve youth healthcare access and outcomes [130]. Such sentiments are clearly relevant to the findings of this research.

9.6.3. Expectations

One of the ways young people reported exercising their autonomy was through their consumerist approach to using pharmacies. Whereas pharmacy personnel viewed the community pharmacy setting as a healthcare environment in which they were the responsible professionals, young people appear to perceive pharmacies very much more as a retail environment in which they are in control. This concept has important implications for pharmacy practice, as the expectations of providers and service users with regards to the role of pharmacies in youth health were clearly mismatched.

Youth participants reported using multiple pharmacies for different purposes; for example visiting their ‘regular’ pharmacy for long term conditions, pharmacies where they were not known for anonymous access to healthcare for embarrassing or sensitive issues, or competitively priced pharmacies for retail products and OTC medicines. Similar behaviour has been reported in adult populations [448, 450], but it is not known whether older customers may be more likely to exhibit loyalty to one pharmacy compared to youth. This degree of flexibility is uncommon in other healthcare settings, and was viewed as an advantage of pharmacies by young people. However, many of the pharmacy personnel interviewed for this research perceived consumerist behaviour as problematic. Infrequent or sporadic use of pharmacies, and lack of consistent use of one pharmacy by young people may make the establishment of rapport and trust more difficult, and does not support the development of quality relationships necessary for a YD approach.
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Perceptions of pharmacies as retail environments also had implications for how young people viewed the scope of practice of pharmacy personnel, and their expectations of pharmacy’s role in youth health. As has been described in other literature exploring consumer views of pharmacy practice in adults [166], the perceived role of pharmacists and support staff was mostly limited to medication supply. There was ‘accidental concordance’ between pharmacy and youth participants in our study with regards to the competency of pharmacy personnel to provide additional services in youth health areas such as sexual and mental health, since both parties felt that the potential for development in these areas was limited, but for different reasons. Whilst pharmacy personnel were concerned about referral links and follow-up care, young people were reluctant to discuss these issues with pharmacy personnel (whom they considered strangers), and they doubted their capacity to offer useful support or information. This issue may be a potential limitation to the development of services such as chlamydia screening through pharmacies, in addition to a lack of privacy in the pharmacy environment which has already been identified as a barrier [223]. Indeed, youth perceptions and expectations regarding pharmacy’s scope of practice may be a potential limitation to many new clinical [166] and public health roles [413].

However, the young people interviewed did see potential to develop the health promotion role of pharmacies in youth health areas (including sexual and mental health), provided that services were well promoted and delivered in a passive, non-confrontational manner. This contradicted the expectations of pharmacy personnel, but corroborates with the findings of research in older age groups [413, 440]. These results may support the development of opportunistic health promotion initiatives delivered through pharmacies, such as the youth C-Card scheme [229], and interventions to reduce harm associated with alcohol, smoking and substance use in youth.

The findings of this study suggest that there may be a delicate balance between maintaining the accessibility and flexibility of pharmacies which youth find advantageous, whilst trying to promote continuity of care and links to referral resources. The importance of ensuring adequate structures are in place to enable pharmacy personnel to provide quality care as well as increasing access to available services has been highlighted by adult pharmacy users [450]. Although the way young people view and report using pharmacies may present challenges for pharmacy practice in the development of new roles and services, youth are the future customer base and therefore more research is required to understand how pharmacies can best meet the needs of this generation.
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9.6.4. Strengths and limitations

A strength of this research is that it has involved young people at multiple stages including development of the research, data collection and results interpretation. Their ideas inspired the comparative approach taken and their input throughout this study has helped to ensure that a youth perspective is represented in the findings.

A limitation is that the findings reported in this research are based on the results of qualitative interviews conducted with a limited number of participants and may not, therefore, be representative of the views of young people and pharmacy personnel in general. However, data were collected from a diverse range of young people of different ages, genders and ethnicities, and with pharmacy support staff as well as pharmacists, offering a broad range of insights into this area.

Definitions of YD are elusive and evolving. The principles of the YDSA have been used to guide the interpretation of these results, but their application in the community pharmacy setting is open to interpretation. We suggest that the YD framework has provided a useful tool for exploring interactions between pharmacy personnel and youth, and a starting point for a new area of research.

9.7. Conclusion

This study has revealed many differences regarding the views of young people and pharmacy personnel towards one another. The YD framework used to compare and contrast their perspectives has provided some possible explanations for these differences, and highlighted implications for pharmacy practice and future service development in youth health areas. Issues relating to power imbalances between youth and pharmacy personnel may contribute towards barriers to youth healthcare access through pharmacies and challenges in services delivery for pharmacy personnel. Although emanating from a caring perspective, the doubts pharmacy personnel hold regarding the competency of youth to be responsible for their own health are not empowering for youth, and do not support the development of self-efficacy in young people through a strength-based approach. Finally, mismatched expectations of youth and pharmacy staff regarding the role of community pharmacies in youth health could potentially limit the development of new pharmacy services targeting youth health fields. The findings of this research offer some information as to how the pharmacy profession can help to meet the health needs of the next generation.
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9.8. Chapter summary

The academic poster developed by the YAG to present the findings of the two qualitative studies that inspired this comparative analysis chapter is shown in Figure 15. This poster was presented at the International Association of Adolescent Health's 10th World Congress in 2013, and was subsequently given to the YAG.
Chapter 9 – Comparative Qualitative Analysis

What do Pharmacy staff in New Zealand think about providing services to Young People?

Emma Horstfield, Janie Sheridan, Fiona Kelly and the CMDHB Youth Advisory Group

INTRO!
- Pharmacies are accessible & are developing new services in youth health areas (e.g. Chlamydia screening)
- This study explored views of community pharmacy personnel on providing services to 12-25 year olds
- Youth participatory approach was used in the research design and informed the interpretation of results.

DIFFICULTIES COMMUNICATING & ROLE OF TECHNOLOGY

Who pays if the young person can’t?

- Why does it take so long to count some tablets?
- Hello, Dr. I’m calling to see if you might change the prescription to a similar drug that’s less expensive for the patient...

METHOD
- Interview guide developed with Youth Advisory Group (YAG)
- 19 semi-structured, qualitative interviews with pharmacists, technicians, assistants & owners
- Transcribed and thematically analysed
- Results discussed with YAG; their feedback represented as the youth perspective in following scenarios

RESULTS!

PAYMENTS & COSTS

- Why does it take so long to count some tablets?
- Hello, Dr. I’m calling to see if you might change the prescription to a similar drug that’s less expensive for the patient...

PARENTAL EMOTIONAL RESPONSE (ESPECIALLY FOR SEXUAL HEALTH SERVICES)

CONCERN FOR GENERAL WELLBEING OF YOUNG PEOPLE AND THEIR FUTURE HEALTH

- I hope she’s OK, she has only to my daughter’s name.
- What is she on about? I’m going to miss my bus, I’ll just have to Google it.

SO WHATS?

- Pharmacy staff care about the well-being of young people and want to help but will need support to optimise potential for increasing youth healthcare access through pharmacies
- Pharmacy personnel identified communication skills, sexual health (especially STIs) and mental health as areas for further training and felt all staff members would benefit
- YAG highlighted a need for better information about what pharmacists do, what services and advice are available, costs and confidentiality rights
- Raising youth awareness through schools, websites and social media suggested by both

YOUTHLINE

Acknowledgements
Thank you to the participants, YOUTHLINE and Counties Manukau District Health Board Youth Advisory Group

Figure 15 - Academic poster presenting comparative analysis findings designed by YAG
Chapter 10. Action Plan

10.1. Introduction

This chapter presents the results of the final YAG meeting. Following the consolidation of results from all studies conducted as part of this research, a final meeting was held with the YAG to develop a set of recommendations as to how community pharmacies could be made more youth-friendly. These recommendations were to be based upon the combined findings of all four studies conducted as part of this thesis; representing a mixed-methods approach through the triangulation of quantitative and qualitative results [271, 321]. The YAG preferred to call the recommendations an ‘Action plan’, since they more associated this expression with connotations of change and progress. Therefore, this terminology has been used.

The development of the action plan collaboratively with the YAG was an important component of the youth participation methodology used for this thesis. Not only did it help to demonstrate to the young people how their feedback and guidance throughout the research had contributed to the evolution of the project as a whole, it also allowed them to have an influence upon how the findings would be used to help improve pharmacy service delivery to youth. This ensured that the researcher remained accountable to the participants and maintained the agenda of reform for the research; both important elements of a participatory approach [272, 337, 355]. The second aim of the final meeting was to collect feedback on the YAG’s experience of participatory research.

10.2. Objectives

- To develop an action plan with the YAG to guide the improvement of pharmacy service delivery to youth in response to the findings of studies conducted for this thesis.

- To evaluate the YAG perspectives on the youth participation approach taken throughout the thesis.

10.3. Method

10.3.1. Social event

As the action plan meeting was the final meeting to be held with the YAG, it was also an opportunity to thank the YAG members and reflect upon their involvement in the research process. A social event was organised after the meeting as a thank you for their sustained support of the project. This was in alignment with the YD framework of the thesis as it supported reflection upon the positive experiences the YAG members had gained through their involvement with the research, the skills they had developed, and affirmation of the friendships they had cultivated in the group [306].
Chapter 10 – Action Plan

The YAG was provided with an indicative budget prior to the event and asked to decide upon an activity they would like to spend this on. They chose to go ten-pin bowling. Food and soft drinks were provided at the Youthline venue, as well as transport to and from the activity. YAG members were presented with Certificates of Appreciation to thank them on behalf of the University of Auckland.

10.3.2. Action plan development

A PowerPoint presentation was prepared by the researcher (EH) which summarised the results of the Youth’07 analyses [392], the pharmacy survey [401, 451], pharmacy interviews (Chapter 7), and youth interviews (Chapter 8). This was presented to the YAG to at the start of the two hour meeting to recap on the key findings and stimulate discussion. Copies of the slides were printed onto large sheets of paper, which YAG members were asked to annotate with notes, discussion points and ideas in order to collect their feedback. Following this brainstorming exercise, the YAG were asked to review the results from a youth perspective and develop an action plan which would be responsive to areas which had been identified as in need of improvement or holding potential to improve youth healthcare access through pharmacies. The meeting was held at the YAG’s regular Youthline venue [409] and discussion was facilitated by two trained youth workers.

10.3.3. Feedback on the youth participation experience

Reviewing the project through the presentation facilitated reflection upon their involvement in the research process, the influence they had had upon the development of the studies, and the feedback they had provided to guide the interpretation of the results. In line with good practice guidelines for participatory research [348], a feedback sheet was prepared to collect participant views on the experience from their perspective. The format was based on a game frequently used as an ice breaker activity at the start of YAG meetings in which YAG members highlighted good and bad points from their week so far. Questions asked YAG members to briefly state ‘what rocked’, and ‘what sucked’ about their involvement in the research, and ‘what would you do differently next time?’ These feedback sheets were distributed to YAG members, who were asked to complete them anonymously at a later date and return to the youth workers in order that they could give their honest opinion without the presence of the researcher.

10.3.4. Ethics approval

Ethics approval for this research was obtained from the University of Auckland Human Participants Ethics Committee (project reference number 8494).
10.4. Results

10.4.1. Feedback on key findings of the thesis

Eleven YAG members attended this meeting, including three previous members who had worked on the project at earlier stages but had since left the group. The summarised feedback collected for each PowerPoint slide is shown diagrammatically in Figures 16-26 below.

![Figure 16 – YAG feedback on literature review findings](image)

- YAG keen to work on other projects looking at these topics, perhaps with other healthcare professionals (e.g. doctors)
- Develop youth friendly versions of these services
  - The ones the young people interviewed felt would be appropriate (see later)
  - Could survey more young people to investigate which ones they would use
Figure 16 – YAG feedback on publications arising from Youth’07 study

YAG interested that the research has been featured in pharmacy and medical media sources
- Getting the word out

Figure 17 – YAG feedback on key findings of Youth’07 study

Need to let young people know what pharmacies can help with
- Promote other services over the counter
- Advertising: Youth Friendly!
- Facebook
- Promote in schools (Incubator project)
- Have school nurse promote pharmacies
- Posters (in places where youth go)
- Flyers: have people on the doors handing out flyers for pharmacies
- Website for each pharmacy linked to a directory page with all pharmacies listed as a whole (connected to Pharmacy Council webpage?). All pharmacies to be on the one.
- Have a confession Q&A blog/chat link
- Have a Youth Date once a month with different health themes to raise awareness and attract more youth
GUIDELINES ON HOW TO MAKE PHARMACIES MORE YOUTH FRIENDLY

- White coat uniforms make young people feel uncomfortable
- Have a job title and name badge so young people know what they do
- **Signage**
  - Direction to what you’re wanting
  - Private room
  - Confidentiality
- Have just one person walking around or on the counter: less intimidating
- Promote services to young people (see previous)
- Having a confession box (private room but pharmacist can’t see you)
- Have young customers fill out a suggestion form or feedback form
- Being honest/real
- Health info for young people
  - Youth Date health events
  - Having technology: ipad information centre in pharmacy

Figure 18 – YAG feedback on pharmacy survey opening hours results

Figure 19 – YAG feedback on pharmacy survey physical youth-friendliness findings
Chapter 10 – Action Plan

Promote pharmacy services to young people (see previous)

Info about services (what’s involved, cost) should be listed on pharmacy website

Develop youth friendly versions of these services
- The ones the young people interviewed felt would be appropriate (see later)
- Could survey more young people to investigate which ones they would use

Figure 20 - YAG feedback on pharmacy survey service availability findings

YAG not really sure what could be done about these results
- Maybe if there were youth friendly versions of the services developed?
- Maybe training would help?
- Maybe if there were guidelines for them to follow when dealing with young people?
- Some of the service might not be appropriate for 12 year olds
- REFERRALS- have a sheet of referral places that you could possibly give young people when they come to you about something that the pharmacy can’t help with (*this idea was suggested because they have this protocol for Youthline counsellors when they get a call they can’t deal with)

Figure 21 – YAG feedback on pharmacy survey findings for personnel views on service appropriateness for youth
Chapter 10 – Action Plan

Some YP find prescriptions too expensive. Lobby the government to reduce fees.
- Make it cheaper
  - student discount
  - Pharmacy cards (like flybuys) to gain points

**Pharmacy Interview Themes**

- Potential for health promotion
- Concerns that health literacy and lack of awareness of pharmacy services are barriers
- Role of technology
- Confidentiality: Privacy, legal grey area, issues for rural youth
- Funding: Who will pay if young people can’t?
- Sense of responsibility: Parental role
- Communication issues: being able to relate and engage, and explain or pitch info appropriately

**Figure 22 – YAG feedback on key findings of pharmacy interviews**

Areas interviewees thought have potential were
- Alcohol health promotion (and possibly drugs)
- Sexual health if done discreetly (contraception, STIs)
- Stress, anxiety and sleep (but not depression)
- Weight management too sensitive
- Smoking: young smokers want to smoke but pharmacies should still promote healthy living

Health info for YP from pharmacies
- On website/Facebook page
- Confession Q&A blog
- Non-judgemental advice from pharmacists
- ipad info centre in pharmacy
- Talks from pharmacists in schools
- Posters & flyers in pharmacies
- Youth Date health events

**Youth Interview Themes**

- Sort out confidentiality issues with WINZ
- Advertise private consultation room
- Sign about confidentiality
- Confession Q&A blog on webpage

**Figure 23 – YAG feedback on key findings of youth interviews**
Figure 24 – YAG feedback on key findings of comparative analysis

TRAINING FOR STAFF

- **Basic communication skills**
  - How to be youth friendly
  - Build rapport
  - Unshockable response

- **Role Plays**
  - Young people to practice on & gain feedback

- **BE EMPATHETIC**: empathise with the young people

- **BE HONEST/REAL**

- **BE PATIENT**: don’t approach too fast, give YP space

- **People skills**

- **HEADSS** (start a conversation to put the young person at ease)

- **REFERRALS** (see previously)

- **GUIDELINES** on how to make the pharmacy more youth friendly (see previously)
  - *Added by Emma (from survey results)*
    - Sexual health esp STIs
    - Youth mental health
### 10.4.2. Action Plan

The YAG consolidated the ideas and discussions summarised in Figures 16-26 into seven key action points. These were;

1. Promote youth health to pharmacies
2. Training for pharmacy staff
3. Development of referral resources for pharmacies
4. Youth health information in pharmacies
5. Guidelines for pharmacies on how to be more youth-friendly
6. Development of youth-friendly pharmacy services
7. Promote pharmacy services to young people

### 10.4.3. Feedback on youth participation experience

Unfortunately, no results were obtained regarding participant experiences of the research process, as YAG members did not return any feedback sheets. Contacting the group members by phone to collect this data was considered. However, this was not believed to be appropriate, since direct contact outside of meetings between the researcher and young people had been avoided throughout the research as agreed at the outset in the code of conduct. The researcher was not in possession of personal contact details such as mobile phone numbers, as coordination of the group meetings was managed by the Youthline youth workers. Furthermore, it was considered unlikely that the YAG would communicate their honest opinions regarding their experience to the researcher in person. A short internet survey was also considered as an alternative, but was ruled out because several of the group members did not have convenient internet access.

### 10.5. Discussion

The first action point was to raise awareness amongst the pharmacy profession about young people’s unmet health needs and what role pharmacy could play in helping to address these. The importance and relevance of youth health to pharmacy must be highlighted and recognised in order to encourage investment in this age group and development of services with youth in mind. This step must occur first before other steps may be realised. One avenue by which this may be achieved might be through academic pharmacy practice publications such as peer reviewed journal articles and conference presentations, but other options should
also be utilised. For example, youth health should also be promoted as an important area for pharmacy through professional bodies, pharmacy media publications and training events in order to reach practising pharmacy personnel audiences.

Training programmes on youth health developed specifically for the community pharmacy setting should be provided to improve pharmacy service delivery to this age group, and a youth health component should also be included in pharmacy undergraduate courses. The YAG indicated that training should focus on communication skills, ideally involving role plays with young people in order for pharmacy personnel to receive feedback. Similar approaches used in general practice and have been shown to improve communication between healthcare professionals and youth [446, 452]. However, training should be developed specifically for the community pharmacy setting, because different challenges have been identified for pharmacy personnel as barriers in the provision of services to youth. For example, age-related licensing issues affecting supply of OTC products to young people do not affect prescribers to the same degree. Similarly, although the YAG suggested that training should include an outline of the HEADSS assessment [117], it is likely that this would need to be adapted and shortened for application in community pharmacies where time may be more limited and it may be inappropriate to ask questions of a general or personal nature. However, an outline of the HEADSS approach might be provided to emphasise the importance of viewing young people holistically and starting conversations with general topics to help put young people at ease. Training should also be provided on youth health issues in which participants of the pharmacy survey indicated a lack of confidence in their knowledge and would like more training on. Specifically, these were sexually transmitted infections and youth mental health. Pharmacy support staff are an integral component of the running of community pharmacies in NZ [213], and this research has demonstrated that it is essential for training interventions to also address their learning needs as well as those of pharmacists if delivery of services to youth through pharmacies is to be improved.

Pharmacies should have information readily available regarding referral options for young people presenting with needs beyond the scope of pharmacy personnel. Referral resource guidelines should be developed and distributed to pharmacies. This should provide details of reliable online health information sources to direct young people to as well as national helplines and services available. Pharmacies should also add information regarding local services and healthcare facilities in their area. In the context of youth health, this should include counselling services, Family Planning, and Youth Health centres and well as general practice surgeries, dentists and hospitals.
Health information resources provided to young people through pharmacies should be youth-specific, in that they should be designed specifically to target the youth population. Youth-specific health information could be provided through pharmacies in a number of ways. Displaying posters and leaflets on youth health issues, for example through the development of youth-specific versions of Self-care cards, is just one option. Youth health promotion events could be held in pharmacies on designated days in order to specifically target this age group. The use of technology to provide health information to young people through pharmacies should be explored. Touch-screen information resources in pharmacies are likely to be more popular with youth than posters and leaflet forms. Health information could be provided to youth through pharmacy websites. Pharmacy personnel can also act as health information resources for young people through the provision of non-judgemental advice and information by trained staff members.

The accessibility of community pharmacies means that youth may be more likely to present in an ad hoc manner when seeking healthcare advice. Therefore, the development of referral resources and youth-specific health information for pharmacies are important components of the action plan in a community pharmacy context, because these materials must be readily available to make the most of these opportunities. This approach contrasts somewhat with findings of studies in other areas of primary care which frequently focus upon the development of rapport and building relationships between youth and healthcare providers over a number of visits [50, 445]. Similar recommendations have, however, been made by researchers investigating the potential of community pharmacies as ‘healthcare hubs’ [453] (where pharmacy personnel are trained and available to provide advice and information to consumers regarding medication management, minor health issues and referrals to other healthcare providers), and also in relation to the promotion of healthy lifestyles through pharmacies [454]. Although such research has concerned the general population and is relevant to all age groups, these concepts may be even more pertinent to the youth population who encounter greater barriers to accessing health information and advice from other primary providers [149].

Guidelines should be developed and distributed to pharmacies detailing strategies for improving the youth-friendliness of the physical pharmacy environment. Again, the development of youth-friendly guidelines specific the community pharmacy setting is needed. This research utilised the ‘You’re Welcome Criteria’ [367] as a starting point, since this tool had been developed and validated [455] for assessing youth-friendliness in the primary healthcare setting. The findings of this thesis indicate that some barriers to young people’s use of pharmacies may be similar to healthcare access barriers experienced by this age group in other areas of primary care (such as embarrassment talking about sensitive health issues). However, other barriers for youth have been highlighted in this thesis which are perhaps more
specific to community pharmacy. Themes identified in Chapter 8 could be used as a basis for the development of youth-friendly pharmacy guidelines. Suggestions from young people included: improved signage; greater consideration towards what impressions uniforms and job title badges may give to young people; approaching young people on the shop floor and locating private consultation rooms away from the counter; notices to make young people aware that private consultations are available; notices to make young people aware of their confidentiality rights; the use of text or email prescription reminders and online repeat ordering; and student discount or points cards. These are not recommendations which have been described in previous primary care research, perhaps because they may be less applicable in settings other than pharmacies, which appear to be perceived by youth as more public, retail environments.

Youth-friendly versions of existing pharmacy services should be developed and provision of new youth-relevant services should be explored. These should focus on areas identified as holding potential by the young people interviewed in Chapter 8, including sexual health, health promotion, and alcohol and drug use. However, more young people should be surveyed to explore whether these results are generalisable. Possible services to investigate further may include; free ECP programmes; the C-Card scheme; chlamydia screening; health promotion activities or preventative interventions for alcohol and drug use; mental health promotion interventions for stress, anxiety and sleep; LTC services and medications use reviews for young people with long term health conditions; and pharmacist prescribing pathways which could increase young people’s access to needed medications.

Promotion of pharmacies to youth should be the final step in the improvement of service delivery to this age group, as it is important that young people access quality healthcare through pharmacies. Pharmacy personnel must be adequately prepared to meet the specific needs of youth through the provision of training, and referral resources must be available to support young people presenting with needs beyond the scope of pharmacy practice. Youth-specific health information must be available, young people must find the pharmacy environment acceptable and comfortable, and services must be delivered in an appropriate format. If young people are encouraged to access pharmacies before these improvements have been made, it is unlikely that the potential to increase youth healthcare access and improve the health of this population will be realised. Indeed, should young people experience negative interactions with pharmacies as a result of poor preparation, it could be detrimental. Although leaflets and posters promoting the availability of pharmacy services are an option, it was suggested that other methods are likely to be more successful for reaching youth. These included the promotion of services through the internet, radio, and TV in a way which has been developed to appeal to the youth population. Pharmacists should visit schools to explain what
they do, what services pharmacies can offer, what is involved, and how to access them. School nurses could also help to promote pharmacy services. The young people consulted for this thesis felt that all pharmacies should have a website which provides information about the pharmacy (such as opening times), and details of available services including what to expect and cost. In addition, the YAG suggested that pharmacy websites should be linked to a central directory page listing all pharmacies in NZ to enable young people to find a pharmacy offering the required service in their area. Pharmacies should consider using social media to promote services, for example using question and answer forums and competitions. Holding regular youth health promotion events on specific topics such as alcohol or sexual health could also help to generate and sustain youth interest.

10.6. Conclusion

In response to key findings of this thesis, this chapter has presented an action plan developed by young people outlining seven key recommendations to improve the quality of pharmacy services for the 12-24 age group. It is beyond the scope of this thesis to propose detailed guidelines as to how these recommendations might be developed and delivered in the future. Each action plan point will need careful consideration and development and is likely to constitute a doctoral research project in itself. However, some general comments have been made regarding the application of the action plan in routine pharmacy practice in NZ to guide future research in this area. The following chapters comprise the discussion and conclusions of the thesis as a whole, in which these concepts will be explored further.
Chapter 11. Discussion

The purpose of this chapter is to discuss the key findings of this thesis as a whole, their implications for practice, to consider possible limitations of the research and to propose directions for future research. First, the youth participatory approach will be evaluated.

11.1. Evaluation of the youth participation approach

This thesis sought to explore the role of community pharmacy in youth health. On the basis of a critical realist epistemology, a mixed-methods approach was utilised and qualitative techniques were used to explain and expand upon quantitative findings. Young people themselves have had meaningful input into the research process through the participatory methodology, which has aligned the thesis with the YD theory underpinning it.

Without feedback from the YAG regarding their experience, it is not possible to definitively evaluate the success of the youth participatory approach used in the research. It was therefore unfortunate that they failed to return feedback sheets after the final meeting, as this would have closed an important loop in the participatory research process. Possible reasons for this could have been that they simply lost the feedback sheets distributed at the end of the meeting or forgot to fill them in. This may have been more likely given the timing of this event at the end of the YAG year. In addition, this was the very last meeting for two of the YAG members who left the group at this point. Alternatively, the YAG members may have preferred not to have completed the feedback sheets. Although an internet-based questionnaire was considered, a pen and paper exercise was chosen because it was more appropriate for several YAG members who did not have internet access at home. It is also possible that the young people did not complete the exercise because they were reluctant to give negative feedback about their experience.

Despite the lack of feedback there was some evidence to show that involvement in the project had been a positive experience for the YAG members. For example, their entirely voluntary involvement for just over three years suggests that they supported the research and saw positive outcomes from their involvement. The two academic posters developed with the YAG as part of the project were presented to Youthline after the conferences they were created for. These have been displayed prominently by the YAG in the foyer of the Youthline Manukau building, suggesting that the group are proud of their involvement in this research. The lead researcher (EH) was also presented with a Youthline Manukau YAG 2013 T-shirt as a thank you and reminder of the relationship formed with the organisation. Furthermore, there is some
Chapter 11 – Discussion

evidence to indicate signs of empowerment of the YAG through their involvement with the group and this project. For example, the YAG were inspired to undertake their own mystery shopper experiment to see what information they could obtain about STIs. Therefore, although the studies conducted for this thesis were (out of necessity) researcher lead, it appears to have helped initiate youth lead research in this area. Similarly, a secondary outcome of the last meeting was that the YAG proposed to lobby the government to lower prescription fees for young people using their connections with the youth parliament. Finally, one of the original group members who was involved with the project from the beginning became a group facilitator and is now subsequently training to become a youth worker.

However, it has been challenging at times to allow the YAG to have genuine control over research decisions conducted as part of a PhD thesis, since as part of the qualification the student is required to plan an appropriate research strategy and takes responsibility for the project. Participants will hopefully gain positive experiences and skills from being involved, but do not obtain a qualification at the end of it like the researcher, which may raise ethical questions with regards to power balance and equity [350]. Upon reflection of the experience I also suggest that postgraduate students who may be used to taking ownership of their own work and study plan may also find it personally challenging to release some control to others involved in the process. This concept has been hinted at in other literature [344], but does not appear to have been described in detail.

With regards to the evaluation of the thesis outcomes, the project appears to have only partially met the Reason and Bradbury quality criteria for participatory research (Table 43). Two of the quality criteria were addressed at the outset of the project by the research design. It has been possible to achieve quality as plurality of knowing through the qualitative exploration of this subject area with pharmacy and youth participants representing a broad range of perspectives and backgrounds. Comparative analysis of this data also helped to reveal further insight through exploration of the meanings and implications of the plurality of perspectives. Quality as engaging in significant work which is likely to make a difference was achieved through the identification of the youth population as an important area for pharmacy practice research. Findings of the studies have provided evidence that community pharmacy may be able to increase youth healthcare access and improve youth health in NZ, as well as some information on how this could be realised.

Quality through relational praxis was achieved through successful engagement and shared decision making with the YAG throughout the project. It is unlikely that this would have been possible without the involvement of a pre-existing YAG which was coordinated and facilitated by experienced youth workers, particularly in addressing some challenges of youth
participation research such as the development of trust and rapport and the ongoing recruitment of new members which have been cited by other researchers taking this approach [456]. Their involvement as facilitators for the youth interview study was particularly important to the theoretical positioning of this research for two reasons; 1) to reduce the power imbalance in the interviews between researcher and participants in this study, and 2) to provide the YAG members with an opportunity to develop new skills. Although this methodology made the interviews more difficult to coordinate due to the time and commitment limitations of the young people involved and presented some consistency issues as a result of multiple interviewers, it ensured that the views of young people who might not have otherwise participated in such research were captured and appears to have enhanced the richness of the data obtained.

It has not been possible to demonstrate quality in the form of reflexive/practical outcomes as part of this thesis. Time constraints as a result of the iterative process taking longer than expected and delays associated with coordinating YAG meetings to coincide with critical points in the research have played a part. The research plan has had to remain relatively flexible to allow the YAG’s feedback to be incorporated in a meaningful way. For example, whilst absolutely essential to the outcomes of this thesis as a whole, the decision to survey pharmacy support staff as well as pharmacists created additional workload, costs and research ethics considerations which impacted upon the timescale. The need to remain flexible with regards to the research plan is cited as a challenge by other researchers taking youth participation approaches [344, 456]. In addition, I suggest that the rigidity of academic research protocols and processes relating to ethics and funding applications present some incompatibilities with the flexibility required to work with young people.

Some developments in the field have occurred as a direct result of this project which may also be considered the beginnings of change and action;

- Through collaborations with the University of Auckland Adolescent Health Group, community pharmacies were included as part of the student healthcare data collected in the Youth 2012 survey [12].

- Following a conference presentation, the lead researcher also worked with Hawkes Bay District Health Board to initiate a youth-friendly pharmacy pilot project in the region, which involved focus groups with young people and collaboration between local school students and community pharmacies. The lead researcher delivered a training session for pharmacy personnel about youth health as part of this project, and the PhD
main supervisor (JS) coordinated the evaluation of a C-Card pilot conducted in conjunction.

- A Pharmaceutical Society of NZ training evening for pharmacy personnel in Auckland was developed later in the PhD presenting some of the results of the thesis.

- The journal articles published in this thesis were featured in professional magazines Pharmacy Today (NZ) and Pharmacy News (Australia).

Lastly, it is difficult to evaluate at this stage whether this research has met the final quality criteria set forth by Bradbury and Reason, which is enquiry towards enduring consequence. Although an essential component of authentic participatory research, change in participatory or community action projects is often slow to occur [457, 458]. This project did not realise the goal of initiating a pilot project or intervention as had been planned. This was in part a consequence of time constraints, but also because as the project evolved, it became apparent that no single isolated intervention or pilot would be sufficient to genuinely improve youth healthcare access through pharmacies. Instead, the focus was redirected towards the development of the action plan described in the previous chapter, with the intention of providing a more comprehensive set of recommendations from which future research may move forward in an informed and considered manner. The development of youth-friendly pharmacy services with a health promotion or preventative focus may enable improvement in long term health outcomes for the youth population. Recommendations to provide young people with better health information and referral links through community pharmacies could also help to meet this aim. The recommendations to advocate for youth health as important area for pharmacy practice, and to promote pharmacy services to young people through interventions such as pharmacists visiting schools are suggested as strategies to enable sustained positive change in this area.

Evaluation of the research outcomes against the original research plan and Reason and Bradbury quality criteria is shown in Table 41.
Chapter 11 - Discussion

Table 41 – Evaluation of youth participatory approach against the Reason and Bradbury quality criteria

<table>
<thead>
<tr>
<th>Quality criteria</th>
<th>Original research design element reflecting this criteria (developed in Chapter 3)</th>
<th>Evaluation in context of actual research outcomes</th>
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</thead>
<tbody>
<tr>
<td>Quality as relational praxis</td>
<td>A Youth Advisory Group (YAG) who will guide the project throughout&lt;br&gt;An important aim of this project is to maximise the involvement of young people throughout the research process by consulting a ‘panel’ of young people to guide the evolution and outcomes of the project. They will have input into decision making at critical points throughout the project, including planning and evaluation stages. They will also be highly involved in the development and piloting of the intervention.</td>
<td>The YAG was successfully engaged throughout the project from start to finish, and had input into decision making processes at critical study development and interpretation stages which was incorporated into the research. Although no intervention was piloted (see below), they were highly involved in the development of the action plan and recommendations arising from this thesis.</td>
</tr>
<tr>
<td>Quality as a reflexive/practical outcome</td>
<td>Development and piloting of an intervention (dependant on the time available)&lt;br&gt;Provided there is adequate time available, the exploratory studies will inform the development and piloting of an intervention (such as a training programme for pharmacists/pharmacy staff) designed to address the needs identified by the previous studies.</td>
<td>It was not possible to develop and pilot an intervention as part of this thesis as was initially planned.</td>
</tr>
<tr>
<td>Quality as plurality of knowing</td>
<td>Interviews with young people&lt;br&gt;Qualitative interviews eliciting the experiences, attitudes and opinions of young people towards community pharmacies will be conducted in friendship pairs or focus</td>
<td>Qualitative interviews with young people of different ages, genders and ethnicities were conducted.</td>
</tr>
</tbody>
</table>
groups. Topics discussed will include the barriers to using pharmacy services, and how they think these problems could be overcome. Potential opportunities for the future will also be explored.

**Interviews with pharmacists and pharmacy staff**
Qualitative interviews will be conducted with pharmacists and pharmacy staff to explore their experiences, attitudes and opinions towards young people. Topics discussed will include the problems experienced when working with young people, and how these problems could be overcome. Potential opportunities for the future will also be explored.

Qualitative interviews with pharmacy owners, technicians, assistants and pharmacists were conducted. The findings of the youth and pharmacy interviews were compared using a Youth Development lens to explore underlying mechanisms and implications of different perspectives.

<table>
<thead>
<tr>
<th>Quality as engaging in ‘significant’ work</th>
<th>Analysis of Youth2007 survey data</th>
</tr>
</thead>
<tbody>
<tr>
<td>That is likely to make a difference</td>
<td>The University of Auckland’s Youth’07 study produced an extensive range of information relating to the health of NZ youth. This data will be used to identify potential youth health needs where intervention by community pharmacy could be of benefit in terms of improving healthcare access for young people.</td>
</tr>
<tr>
<td></td>
<td>Findings of the literature review suggested potential for community pharmacy to increase young people’s access to healthcare services and improve the health of the youth population. Results of the Youth’07 analysis provided quantitative evidence to support this in a NZ context. Results of the pharmacy survey indicated that pharmacies in NZ could help to meet youth health needs (part 2), but highlighted potential barriers with regards to pharmacy personnel’s views (part 2), and the need to improve the physical youth-friendliness of pharmacy environments (part 1).</td>
</tr>
</tbody>
</table>
Findings of the qualitative interview studies and comparative analysis have provided detailed information about the perspectives of young people and pharmacy personnel regarding the development of services in this area and how to improve relations between the pharmacy profession and the youth population. This information can be used to help realise the potential identified in the quantitative studies.

<table>
<thead>
<tr>
<th>Enquiry towards enduring consequence</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the work likely to lead to real/lasting changes (transformational potential)</td>
<td>Most health interventions have the greatest effect if made early in life, and the experiences of young people at this time can set trends for their health behaviour later in life. Investigating how pharmacy services are viewed and used by the next generation provides an opportunity to optimise service delivery and show how they might be best developed to promote long term health.</td>
</tr>
</tbody>
</table>
Chapter 11 - Discussion

Key findings of this thesis

This thesis was designed to explore the hypothesis that community pharmacies may be able to improve the health of young people in NZ. The research objectives were:

1) To explore the potential for community pharmacy to increase youth healthcare access in NZ

2) To characterise the barriers to young people’s use of community pharmacies and the delivery of services to this age group in NZ

3) To identify how community pharmacy services for young people in NZ could be improved

4) To involve young people in the research process through the use of a youth participation methodology

The key finding of this thesis in relation to these research objectives are discussed below.

11.1.1. Community pharmacies may be able to increase youth healthcare access

There appears to be potential for pharmacies to increase healthcare access and improve the health of young people in NZ. Evidence for this came firstly from the findings of the Youth’07 analysis, which showed that a significant proportion of NZ secondary school students have unmet health needs and experience barriers to healthcare access which community pharmacies may be able to help with. Results from pharmacy survey paper 1 suggested that the majority of pharmacies in NZ are accessibly located and many have extended opening hours which could be of benefit to young people. Descriptive results from pharmacy survey paper 2 confirmed that nearly all pharmacies in NZ offer services in youth health priority areas including sexual health, substance use and weight management. This was supported by the findings of the youth interviews, which suggested that the convenience of pharmacies could be an advantage for young people, and that they would consider using certain pharmacy services if they were promoted and delivered in a manner which better meets the specific needs of youth. Findings of the pharmacy interviews indicated that pharmacy personnel care about the health of young people and are interested in how to improve service delivery for this age group.

This finding echoes those of studies in many areas of pharmacy practice research, which have posited potential roles for community pharmacy in relation to accessibility and untapped skills.
Chapter 11 - Discussion

What this thesis adds is to perhaps highlight youth as a key target population which spans many innovative and developing community pharmacy initiatives, including health promotion, screening and prevention, sexual health, mental health, medicines management and substance use. Consideration of their needs and views will be essential for the development of these services as future directions for pharmacy practice.

The findings of this thesis support suggestions put forward by the authors of the small number of youth-friendly pharmacy papers identified in the literature review [27-30] that pharmacy may be able to improve youth health. Gardner et al [30] suggested potential for pharmacists to improve youth health outcomes for young people with long term conditions, and the Save the Children [28] and CELSAM [27] youth-friendly pharmacy pilots suggested potential for pharmacies to improve youth access to sexual health services. The conclusions of this thesis provide supporting evidence for both of these directions, but, in addition, provide evidence to pursue pharmacy health promotion initiatives for many other health issues affecting youth populations. It has also provided evidence to suggest that services may need to be adapted for youth populations. For example, this may involve increasing the emphasis upon privacy and confidentiality to improve the delivery of sexual health services in the community pharmacy setting, and improving pharmacy personnel’s youth communication skills and referral resources in order to optimise opportunities for positive interventions in treatment-related interactions.

The implications are that these findings indicate provision of youth health services through community pharmacies may be a possible direction to pursue in the interests of public health improvement. Young people appear to find pharmacies accessible and convenient, and perceive pharmacy personnel as approachable, reliable sources of health information. These advantages may be utilised through interventions which promote the effectiveness of pharmacotherapeutic treatments for acute and long term health conditions, or perhaps refer young people for further support. In this way, pharmacies may be able to improve the short term health of youth, and perhaps also long term health outcomes for youth with long term conditions (e.g. interventions which improve long term disease management).

Furthermore, this research identified potential for pharmacy-based health promotion activities which promote healthy lifestyles and wellbeing in young people. Such interventions have the potential to improve long term health outcomes for youth, and so could have a positive effect upon public health in NZ. Gray has mentioned this concept in a discussion of the UK government’s ‘Healthy Lives, Brighter Futures’ youth health document in the context of community pharmacy (Gray 2009). The findings of this thesis support progression in this area and suggest that the greatest area of potential with regards to pharmacy’s role in youth health
may lie in health promotion interventions which could improve the health of future generations. This concept should be communicated to both pharmacy and youth health audiences.

No firm conclusions can be drawn from the thesis findings with regards to whether pharmacies could have a role in youth mental health or substance use. Unmet mental health needs were excluded from the Youth'07 analysis because the YAG did not believe young people would access pharmacies for help with mental health issues. Data on the availability of mental health services was not collected in the pharmacy survey since these roles are just beginning to emerge at a research level and are not currently offered by pharmacies in NZ. However, results of the pharmacy and youth interview indicated potential for mental health promotion activities and referral interventions for youth in the community pharmacy setting. Similarly, in the case of substance misuse, the qualitative findings indicated that the most promising direction to pursue in this field might be health promotion, since both pharmacy personnel and youth suggested pharmacists visiting schools to talk about the effects of drugs and alcohol and harm reduction strategies could be a potential role for the profession in this field.

Mixed conclusions were also found regarding the potential for pharmacies to improve obesity and overweight issues in youth. Quantitative findings suggested potential in terms of the availability of weight management services, but pharmacy personnel did not always feel they were appropriate for young people. Qualitative exploration revealed that this is likely because in NZ such services are predominantly product based and both pharmacy personnel and youth believed that increasing suitability of pharmacy weight management programmes would be contingent upon shifting the focus towards long term diet and lifestyle modifications.

11.1.2. Barriers to young people’s use of pharmacies and service delivery to youth

There are various barriers impeding young people’s access to pharmacy health services, which the results of the two pharmacy survey studies, pharmacy interviews, youth interviews and YAG feedback have helped to elucidate. Barriers to the use of community pharmacies by young people identified by this research may be summarised in Figure 27, which demonstrates how these issues may reduce young people’s use of pharmacies, through attrition of the significant proportion of young people experiencing unmet health needs which pharmacy could help with (identified in the Youth'07 analysis), and explain why pharmacy personnel may not see so many in practice.

Prior to this research, there was very little published literature available internationally regarding young people’s perceptions of community pharmacies, or the perspectives of pharmacy personnel on providing services to youth. The results of the second pharmacy
survey paper concurred with the findings of existing literature which suggested that pharmacy personnel may treat youth differently in the context of ECP supply in the community setting [206, 208], and indicated that this may also apply to many other pharmacy services. The authors of these previous studies highlight the potential implications of these findings in terms of reducing young people’s access to ECP, but do not explore the possible reasons why pharmacy personnel may view youth differently to other age groups. This research has offered some possible explanations through the exploration of challenges facing service provision to youth, from the perspectives of pharmacy technicians and assistants, as well as pharmacists. It is evident that pharmacy personnel in NZ care greatly about the health and wellbeing of youth. Their concerns about young people’s competency to access long term follow up care and support for presenting health issues appears to be a possible explanation as to why they may not always feel community pharmacy services are appropriate. Training for all pharmacy personnel, clarification of the legal and ethical aspects of youth health in the pharmacy setting, provision of referral resources and the development of youth-specific health information material may help to alleviate these concerns and optimise opportunities to improve youth health outcomes in young people who visit pharmacies.

As has been discussed in previous chapters, some of the barriers to provision of services to youth identified in this thesis are similar to those described by healthcare professionals in other areas of primary care. GPs [191, 200] and youth health workers [201] also report ethical challenges relating to the reconciliation of their own values and perspectives (particularly if they are parents [203]) with provision of confidential support to youth for sexual health and substance use issues. What the findings of this thesis have also highlighted, however, is that these barriers may manifest differently in the community pharmacy setting. For example, in relation to legal and ethical dilemmas, pharmacy personnel expressed concern regarding age restrictions in the supply of smoking cessation, ECP and many other OTC products. They were also concerned about young people not accessing follow up care in cases in need of referral. These issues do not affect prescribers to the same degree. Similarly, difficulties communicating with youth have been cited as a barriers by other healthcare providers [181, 459], but may be heightened in the community pharmacy setting where youth are reluctant to approach staff they do not know, in a public retail environment. Just as previous literature has recommended training to address barriers to the provision of services to youth experienced by service providers [460] and to facilitate the development of roles in other areas of pharmacy practice [269, 423], training may also help to provide some clarity regarding legal issues and improve pharmacy personnel’s’ knowledge, skill and confidence in dealing with youth. However, training interventions will need to be developed which take into account the specific issues for pharmacy personnel identified by this research.
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The youth interview findings suggested that young people appear to perceive pharmacies as intimidating, confusing and embarrassing. These barriers are concordant with themes identified in prior pharmacy-based research including the focus group study conducted with South American youth [31], which, through the identification of desirable staff characteristics such as trustworthiness and patience, suggested that the approach of pharmacy personnel influences young people’s use of pharmacies. The three young people consulted in Gray’s article also indicated embarrassment to be an important barrier to their use of pharmacies [29]. The findings of this thesis have developed upon these themes by providing possible explanations as to why young people may feel intimidated and embarrassed, and how these barriers affect their use of pharmacies. A key concept identified by the comparative analysis was that young people appear to experience lack of information about pharmacies as disempowering, and this may result in detrimental power imbalances in their interactions with pharmacy personnel. This age group appears to have low health literacy with respect to community pharmacies and is unlikely to be aware of any pharmacy services other than prescription dispensing. The pharmacy interviews and comparative analysis suggested that the pharmacy profession may not be aware that this is how they are perceived by the youth population.

The barriers to young people’s use of pharmacies identified by this thesis also concur to some extent with those described as barriers to young peoples’ use of other of primary healthcare facilities. Lack of awareness of services available [26, 156, 398], lack of finances [25, 173], and reluctance to access health services due to embarrassment or confidentiality concerns [26, 137, 398] have all been highlighted as key barriers to young people’s use of healthcare services in other areas of primary care. Again, however, the findings of this thesis indicate that these barriers may be experienced differently by youth accessing services in the community pharmacy setting. For example, although health literacy has been identified as an issue for youth healthcare access across all healthcare sectors, the present research suggests that the health literacy of NZ youth regarding community pharmacies appears to be particularly poor. Whereas young people in NZ may have at least a basic understanding of services offered by school nurses, general practices and family planning clinics as a result of educational interventions through schools or general common knowledge, this does not appear to be the case for pharmacy. Like communication difficulties identified as a barrier by pharmacy personnel, embarrassment and privacy as barriers for young people are likely to be heightened in the community pharmacy setting due the public nature of the environment and lack of familiarity between youth and pharmacy staff. Moreover, it appears that ‘practical’ barriers to youth healthcare access, such as accessibility and appointments identified in primary care research, pose little impediment to young people’s use of pharmacies; however,
Chapter 11 - Discussion

this ease of access must be balanced against greater 'personal' barriers experienced by youth, because it may cause increased concerns about privacy, confidentiality and embarrassment.

It should be noted that whilst many of these barriers may not be exclusive to young people, their effects are likely to be more pronounced or exaggerated in this age group. For example, barriers such as cost, lack of awareness regarding the availability of pharmacy services or privacy in retail pharmacy environments may also be experienced by adult pharmacy users. However, since young people are likely to have less disposable income, lower health literacy levels and heightened privacy and confidentiality concerns, we suggest that these barriers are likely to have a greater impact upon youth use of pharmacy services compared to adults.
Chapter 11 - Discussion

Youth’07, Youth Interviews, Pharmacy Interviews

Number of YP with unmet health needs pharmacies could help with

Youth Interviews

Number who know pharmacies offer these service

Pharmacy survey paper 1, Youth Interviews

Number who find the pharmacy and staff youth-friendly enough to approach

Pharmacy survey paper 2

Number who access a pharmacy which offers the service they need

Pharmacy survey paper 2, Pharmacy Interviews

Number who access a pharmacy where the staff feel the service is appropriate for YP

Youth Interviews, Pharmacy Interviews

Number who can afford the service

YP who don’t recognise they need to access healthcare or aren’t ready to

YP who don’t know pharmacies offer these services

YP who don’t find the pharmacy or staff youth-friendly enough to approach

YP who access a pharmacy which doesn’t offer the service they need

YP who are turned away or referred on by pharmacy staff

YP who can’t afford pharmacy service fee

Figure 25 – Diagram representing barriers to young people’s use of community pharmacies in NZ

Youth Interviews, Pharmacy Interviews

Youth Interviews

Pharmacy survey paper 1, Youth Interviews

Pharmacy survey paper 2

Pharmacy survey paper 2, Pharmacy Interviews

Youth Interviews, Pharmacy Interviews

Figure 25 – Diagram representing barriers to young people’s use of community pharmacies in NZ
These findings have implications for youth health. This thesis has identified a real need to address these barriers, as they are impeding youth healthcare access through pharmacies. The profession has a responsibility to improve service delivery to young people. Poor consideration of youth health needs by pharmacies may be contributing towards unmet health needs amongst young people and disparities with other age groups. For example, even for young people who have overcome the barriers of seeking help for health issues and have obtained a prescription, pharmacy related barriers may still prevent them from accessing treatment if they are too scared to get their prescription dispensed or cannot afford it. Missed opportunities for improving youth health through OTC treatments of minor conditions or health promotion services provided by pharmacies are also implicated. Such findings echo calls in other healthcare domains that improvements in youth-friendliness are needed in order to address international public health concerns pertaining to youth [10].

These findings may also have implications for the pharmacy profession. The results of the youth interviews indicate that young people appear to have low health literacy about pharmacies, lack of awareness about the services they may provide, and low expectations with regards to the ability of pharmacy personnel to help them. Youth represent a significant proportion of the NZ population, and they are also the future customer base. It may therefore be important to improve youth perceptions of pharmacies in order to survive and progress as a profession.

11.1.3. Strategies to improve community pharmacy services for young people in NZ

Despite the divergences in some areas, there were many areas of convergence between youth and pharmacy perspectives with regards to where to go from here.

Strategies to improve pharmacies for young people have been proposed in the form of the action plan developed by the YAG following their evaluation of the findings of all the studies conducted, and this represents a key conceptual output of this thesis. The first strategy, increasing awareness of youth health needs amongst the pharmacy profession, has been suggested by Gray [29] and piloted by youth-friendly pharmacy projects in developing countries [27, 28]. This step is a necessary precursor to enable progression in this field. The publications arising from this thesis have been deliberately targeted towards specific journals and audiences, with the aim of increasing the profile of youth health in the pharmacy practice arena, and also promoting awareness of youth-relevant pharmacy services in youth and public health disciplines. This is reflective of the youth advocacy theory underpinning the thesis.
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Two further strategies, namely training for pharmacy personnel and promotion of pharmacy services to young people, have been suggested previously by charity organisations aiming to increase young people’s use of pharmacies for sexual health services in developing countries. Both the Save the Children [28] and CMS-CELSAM [27] youth-friendly pharmacy projects reported utilising these strategies, and the PATH youth-friendly pharmacy toolkit [237] contains training and advertising resources. As well as confirming the importance of these strategies in a NZ context, this thesis has provided evidence to guide how these strategies might be implemented in practice. This includes i) evidence that training for pharmacy personnel should concentrate upon communications skills as well as youth health topics, ii) that training should be provided for pharmacy support staff as well as pharmacists, iii) that training and other initiatives to improve the youth-friendliness of pharmacies should precede promotion of pharmacy services to young people, iv) that promotion of pharmacy services in NZ might be most effective through schools, websites and perhaps social media.

The other strategies proposed were development of youth referral resources for pharmacy personnel, development of health information for young people to provide through pharmacies, guidelines to improve the youth-friendliness of pharmacy environments, and development of youth-friendly pharmacy services. Some of these strategies have been proposed previously in other healthcare settings, for example; guidelines to enable service providers to improve the youth-friendliness of their facilities such as the WHO youth-friendly healthcare guidelines [23] and the You’re Welcome criteria [367] were already available.

Although the findings of this thesis suggest that the development and implementation of strategies (including training and youth-friendliness guidelines) which are specific to the community pharmacy setting may be necessary, tools developed to improve the delivery of health services to young people in other areas of primary health may be used as a starting point to address barriers to young people’s use of community pharmacies. For example, a number of the principles of the youth-friendly healthcare guidelines are applicable in the pharmacy setting, such as recognition of the specific needs of this age group, respect for youth, clear communication and a holistic approach [23]. Similarly, training interventions developed for youth nurses and GPs could be adapted to meet the educational needs of pharmacy personnel identified by this thesis. The young people consulted for this research advised that training should focus upon communication skills and involve role plays with youth to enable pharmacy personnel to receive constructive feedback about their communication style and pitching of health and medicines information. Role play based training interventions involving young actors have been delivered to GPs in Australia [460], and more recently in Israel [452]. Both studies were able to demonstrate sustainable improvements in practitioner attitudes, knowledge and confidence in dealing with youth. Studies to evaluate the
Chapter 11 - Discussion

effectiveness of such interventions upon young people’s experiences of healthcare delivery would be of benefit, but such research sets a good foundation for pharmacy practice developments in this field.

11.1.4. Youth participation as a new paradigm for pharmacy practice research

Perhaps because there had been very little literature exploring the role of community pharmacy in youth health, there appeared to be no other published pharmacy practice research which had used YD or youth participation approaches prior to the commencement of this PhD. Therefore, the theoretical framework and methodology utilised represent the final contribution to the literature made by this thesis.

The Save the Children youth-friendly pharmacies study terms their methodology ‘Youth-Defined Quality’, and the definition of this provided does bear some similarities with youth participation approaches in that it “engages young people and health providers in a process of exploring and sharing perceptions of quality health services, and it emphasizes mutual responsibility for problem identification and problem solving”[28]. Few details on the process are provided however, and it is therefore difficult to ascertain how this methodology compares to that taken in the present research. Evaluation of the participatory approach suggested that this methodology improved the quality of the research findings and had a meaningful influence upon the conclusions drawn. The YAG’s involvement resulted in the studies being conducted in ways which differed from studies undertaken simply from an adult perspective, and this, combined with their guidance regarding the interpretation and implications of the results, has provided a unique insight into this field. Although the evaluation was limited by the lack of feedback received from the YAG on their experience of the research, the young people involved also appeared to benefit from their role in this project. These findings suggest that youth participation may, therefore, be an appropriate and valuable methodology for future research in this area, provided that consideration is paid to the challenges and limitations surrounding this approach which have been identified in the previous chapter.

Similarly, we suggest that YD theory appears to be an appropriate paradigm to adopt for the development of pharmacy services for youth. The YD framework used to comparatively analyse the qualitative youth and pharmacy interview results provided some possible explanations of the mechanisms and social dynamics underlying divergences of perspectives, and helped to elucidate possible strategies to improve interactions between youth and the pharmacy profession. For example, YD theory was key to understanding the importance of improving young people’s health literacy about pharmacies in order to empower them in this environment. The analysis also highlighted possible tensions between competing YD
principles in the community pharmacy setting such as autonomy (exercised through consumerism) and the development of quality professional relationships, but young people advise that the quality of even the briefest anonymous interactions can be crucial. Approachability and trustworthiness of pharmacy personnel are greatly valued, and appear to be enhanced by demonstrations of empathy and respect for young people, which are often key elements of YD approaches. A strengths-based, rather than deficit-based focus favours development of pharmacy health promotion activities which promote the health and wellbeing of youth as a population, as opposed to interventions which simply target ‘at risk’ youth. As we have discussed, youth interview findings indicated that young people also viewed such health promotion roles as the most appropriate areas for developing pharmacy’s role in youth health. As a theoretical framework for the thesis as a whole YD theory has helped to promote the ethical robustness of this research, by effectively guiding methodological decisions to ensure that young people have been included, listened to, and advocated for.

11.2. Strengths and limitations of the thesis

11.2.1. Critique of the mixed-methods approach

This thesis employed a sequential, explanatory, mixed-methods approach in which the qualitative studies were designed to explain the findings of initial quantitative studies. As well as providing possible explanations, the qualitative research also expanded the quantitative findings, uncovering new facets of the research area. This was partly an effect of utilising a semi-structured interview format which allowed participants scope to discuss their own theories and agendas, and enhanced the richness of the information gathered as a whole.

Another option would have been to have conducted the qualitative studies first (following an exploratory mixed-method approach), since such data would have been useful in informing the quantitative studies. For example, the pharmacy interviews suggested youth communication skills was a key area in which pharmacy personnel may require training, and, with hindsight, quantitative data on this should have been collected in the pharmacy survey. This may be an area for future research. However, it was necessary to first establish whether there was potential (at a population health level) for pharmacies to increase healthcare access and so provide statistical evidence that further research was warranted in this area. Therefore, the methodology used is justified.
11.2.2. Transferability

Although the findings may have relevance to countries with similar youth health issues and community pharmacy models, the findings of this research are essentially NZ specific and may not be transferable to other contexts. Furthermore, the involvement of the YAG has been an important and defining influence in the conduct and outputs of the research. As noted in earlier chapters, it is not possible for the YAG members to be representative of the NZ youth population as a whole, and certainly not to be representative of youth populations overseas.

The findings are also community pharmacy-specific, with a recurrent theme throughout the thesis being a need for measures and guidelines which are specific to the community pharmacy setting. However, in the absence of these pharmacy-specific measure and guidelines, the studies have extensively utilised youth health research from other sectors in their development, which may limit the reliability of the findings. For example, the You’re Welcome Criteria [367] have not been validated in the community pharmacy context.

11.2.3. Inconsistency of age ranges

A final and important limitation of this thesis has been the inconsistency of youth age ranges between studies. The Youth’07 survey data were collected from 12-18 year olds [2]. The YAG were aged 16-24. The pharmacy survey collected data on the provision of pharmacy services to 12-24 year olds, as did the pharmacy interview study. Youth interviews explored the perspectives of young people aged 16-24.

Ideally, the age ranges would have been consistent between the all the studies. The Youth’07 health and wellbeing surveyed young people in secondary schools only, and so young people age 19 and over were not included in this sample. As these data were pre-existing this could not be changed. Similarly, the YAG was a pre-existing group recruiting young people aged 16 and over only which could not be changed. The benefits of working with a pre-existing group outweighed the potential advantages of recruiting young people specifically for this project (which would not have been feasible). The age range of 12-25 was selected for the pharmacy survey and interviews to reflect definitions of ‘youth’ in this country [11, 47], and to collect data on a broad age range which encompassed ranges used in both the Youth’07 survey and the YAG. The age range of 16-24 was selected for the youth interviews to be consistent with the YAG, since these interviews were facilitated by YAG members and it was, therefore, more appropriate for participants to be interviewed by a facilitator of a similar age. This also minimised ethical issues concerning the need for parental consent for research participants under the age of 16, which may have impeded recruitment. Previous youth health research has already highlighted this issue [461], and as recruitment and coordination of the interviews...
was largely dependent upon the YAG and Youthline youth workers in this case, we believe it is unlikely that this study would have been successful if parental consent had been required.

One implication of this limitation relates to evidence that the health needs of 12-18 year olds may be different to 16-24 year olds (e.g. possible increased sexual healthcare needs [51]). The Youth’07 analysis indicated potential youth health areas where pharmacies may be able to increase healthcare access amongst 12-18 year olds. These findings were explored through qualitative interviews with young people aged 16-24, and the results should be interpreted with this in mind. As has been discussed in Chapter 9, this limitation may also affect the interpretation of the results of the comparative analysis of youth and pharmacy views, particularly with regards to divergences of views on the competency of youth.

11.3. Directions for future research

This thesis has explored a relatively novel research field. The findings indicate several possible directions for future research in this area.

11.3.1. Quantitative research into young people’s use of pharmacies

Baseline quantitative data on young people’s use of pharmacies is required. Such data are required as a baseline against which to measure the impact of any future service development. Similarly, methods of demonstrating whether improved health outcomes for youth are achievable should be carefully considered from the outset.

11.3.2. A focus on young adults

This research has considered a broad age range of young people aged 12-24. The findings suggest that future population health research in this field might be best directed towards young adults aged 16-24, since pharmacy personnel indicate that this age group may be more suitable recipients of pharmacy services (in their current form), and are less likely to be affected by legal and ethical restrictions relating to licencing and access to services without parents or carers. There is also international evidence to suggest that young adults may have higher levels of unmet health needs compared to younger youth [49]. In NZ, although progress is being made to improve adolescent health through school-based initiatives [437], such research will not benefit the health of young adults who have left school. Furthermore, healthcare is not subsidised after the age of 16 [64]. Therefore, focusing on the young adult population could help to direct research towards those young people with the highest need, and who are most likely to be able to benefit from services in the community pharmacy setting.
11.3.3. How do different groups of young people view community pharmacy?

New Zealand is a culturally diverse nation, and specific research into the perceptions of Māori, Pacific, Middle Eastern and Asian young people towards pharmacies is needed. Māori and Pacific young people are more likely to experience barriers to healthcare access and poor health outcomes \[151, 152\], and any pharmacy practice research in youth health should aim to reduce these health disparities by ensuring that these groups of young people are well represented.

Furthermore, whilst this research has explored the role of community pharmacy in youth health in a NZ context, the potential for pharmacies to increase youth healthcare access internationally remains largely unexplored. The findings suggest research in other countries may be warranted, particularly in those with similar youth health profiles and models of pharmacy practice.

11.3.4. Action plan points

Some possible directions for future research have been outlined in the action plan in Chapter 10. For example, there appears to be scope for: the development and piloting of training materials for pharmacy personnel and measurement of their impact; the evaluation of youth-specific health information material to display and distribute through pharmacies; research into how existing pharmacy services might be delivered in a more youth-friendly manner; development and piloting of new pharmacy services such as chlamydia screening which are relevant to the youth population (with a focus on youth health needs); and finally, research into how pharmacy can promote its services to youth, perhaps through studies investigating the feasibility of pharmacists giving talks in schools, or increasing youth awareness through websites and social media.

11.3.5. The image of pharmacy as a profession

Lastly, the findings of this thesis have provided evidence to suggest that the youth population may hold negative perceptions about pharmacy as a profession, and appear to have low expectations about the training of pharmacy support staff and levels of service. Research into the professional image of community pharmacy appears to be needed. Youth represent the next generation of pharmacy customers, and it is important to explore where they would like to see the future of pharmacy practice research going.
Chapter 12. Thesis Conclusions

The research conducted as part of this thesis has resulted in four key findings; 1) there appears to be potential for community pharmacies to help address unmet health needs and increase healthcare access amongst young people in NZ, 2) characterisations of the barriers to young people’s use of community pharmacies in NZ and the challenges faced by pharmacy personnel in the delivery of service to this age group, 3) the identification of strategies to improve the youth-friendliness of community pharmacies and interactions between the youth population and the pharmacy profession, 4) youth development and youth participation approaches as new paradigms for pharmacy practice research. The outcomes of the youth participation approach from the perspectives of youth could not be evaluated because the young people involved in this research did not return feedback on their experiences. The implications of these conceptual outputs suggest that further research exploring the potential for pharmacies to increase youth healthcare access is warranted, and possible directions for future development have been proposed. These could include the development of training, health information and promotional materials as identified in the action plan, although the first step should perhaps be quantitative research which collects baseline data on young people’s use of pharmacies so that possible improvements can be measured. There is evidence to indicate that future pharmacy research should focus on the health of young adults rather than adolescents, and the views of different groups of young people (especially Maori and Pacific youth in NZ) towards pharmacies should be explored. Despite some key limitations, such as the differences in youth age ranges between studies and the utilisation of several emerging methodologies, this thesis has identified potential and established possible starting points for new areas of pharmacy practice and youth health research.
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### Appendix 1

**Demographics characteristics of the Youth’07 sample**

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*Surveyed students could not indicate if they were in Year 14 or Year 15 (i.e. repeating Year 12 or 13)*