Older Consumers' Readiness for e-Health in New Zealand

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Abstract. The increase in numbers of older people in the population and their incidence of long term conditions means their readiness for e-health is imperative. This cross sectional survey set in primary health care in New Zealand sought to understand how older people are accessing health information. A convenience sample (n=263) found one third had been on-line and this was more likely to be those with poorer health. Free telephone services and receiving health information in person were preferred, with little use of email or text messaging found. Information found on-line was considered useful to understand their health conditions, treatment options and for decision-making.

Keywords. Elderly, seniors, ICT, internet use, older people, information literacy

1. Introduction

In New Zealand (NZ), similar to global patterns, the number and the proportion of older people is growing due to the increase in life expectancy and falling fertility rate[1]. However, older people are more likely to have long term conditions and multiple morbidities[2]. To successfully prevent and manage these long term conditions they need reliable health information[3]. Accessibility to trustworthy health information sits at the core of prevention, early detection and prompt treatment of long term conditions[4]. Promoting self-management and shared decision making for long term care among older consumers is recommended by the World Health Organisation (WHO)[5]. To be able to encourage self-management and to better understand NZ older consumer's use of information and communication technology (ICT) and health information seeking behaviour a survey was undertaken with those $\geq$65 years in primary health care (PHC) settings.

2. Older consumers and their information and communication technology use

In the era of e-health there is increasing use of ICT by consumers. Where previously consumers mainly sought health information from health care professionals and traditional media sources such as magazines and television, there is now a wide range of health information available on the internet, through social media, and applications

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(apps) for mobile phones[6]. ICT can promote physical and mental health, and social well-being in older people contributing to an increased sense of control[6,7]. Older people adopt technology later compared to their younger counterparts, however, acceptance of ICT has risen considerably among older people in recent years[8]. In 2014 59% of older Americans went on-line and 77% owned mobile phones[9]. Nevertheless, they lag behind younger people in their use of ICT as 86% of those over 18 years go on-line. Similarly, in NZ 61% of older people use the internet[10]. However, despite the rising trend in internet usage among older people, there is still a digital divide between different demographic groups and older people, notably those younger, more educated and having a higher socioeconomic status facing fewer barriers to using ICT[11]. In NZ there is increasing use of ICT and the Government is committed to increasing the effective and sustainable use of ICT to maximize the accessibility, affordability and equity of health care delivery[12,13]. Knowing that access to health information is important for healthy ageing, and that ICT use is increasing, it is important to understand how older consumers are using ICT for health information.

3. Methods

This cross sectional study used a survey, with an anonymous self-administered questionnaire distributed to patients within primary healthcare settings over one week in a large urban area of NZ in late 2010. Ethics approval was obtained (NTY/09/110/EXP). Over 1800 questionnaires were received, resulting in a final sample of 1783 once partially completed questionnaires were excluded (at least 75% of questions needed to be answered for inclusion). This paper reports on those $\geq$65 years, giving a sample of 263 participants, which is 14.75% of the total study population. Data from the surveys were entered into Statistical Package for Social Sciences (SPSS Inc.) for statistical analysis.

4. Results

The majority of participants were NZ European, with 6% being Maori, who are the indigenous people of NZ. Nearly 40% had NZ secondary school qualifications. Table 1 summarises the demographic characteristics of participants. Of the total, 87% reported being in either ‘excellent’, ‘very good’ or ‘good’ health, with only 1% reporting ‘poor’ health (Table 2). However, 85% of participants reported having at least one long term condition, with many having more than one (Table 3).

Around one third (36%) of participants had used a computer to find health related information in the last 12 months. This was usually to find information for themselves (74%), for someone else (32%), or for general interest (30%). No one had participated in an on-line support group. In terms of the participant’s information seeking behavior and their gender, ethnicity, education or health status, there was no statistically significant difference noted. The use of on-line health information was more than double (67%) among those with ‘poor’ compared to those with ‘good’ (31%) self-reported health status; although not significant due to the small numbers of those with ‘poor’ health.

Those participants who used the internet perceived that on-line health information was ‘useful’ (49%) or ‘very useful’ (25%). In terms of trustworthiness 79% of participants reported that they trusted on-line health information ‘somewhat’, ‘quite a lot’ or ‘very much’. In addition the majority of participants ‘agreed’ that the health information they found was useful for finding out more about their health conditions, different treatment options and to make health related decisions.

Table 1. Demographic characteristics of participants (N=263)

Characteristics	n (%)
Gender	
Male	128 (50%)
Female	128 (50%)
Ethnicity	
NZ European	225 (87%)
Maori	15 (6%)
Pacific	3 (1%)
Asian	2 (1%)
Other	13 (5%)
Education	
No formal qualification	52 (22%)
NZ secondary school qualification	93 (40%)
Overseas secondary school qualification	33 (14%)
University degree or diploma	18 (8%)
Polytechnic degree or trade or technical certificate	18 (8%)
Professional qualification	18 (8%)
Other	3 (1%)

Table 2. Health status of participants

Health status	n (%)
Excellent	16 (6%)
Very good	84 (32%)
Good	128 (49%)
Not so good	31 (12%)
Poor	3 (1%)

Table 3. Long term conditions of participants

Condition	n (%)
Arthritis	107 (41%)
Heart disease	66 (25%)
Respiratory	50 (19%)
Diabetes	45 (17%)
Chronic pain	39 (15%)
Cancer	24 (9%)
Mental health	8 (3%)
Other	111 (42%)

In response to the question ‘How do you feel about looking for on-line health information?’ 22% reported they liked being able to find information quickly; 18% looked on-line for health information before visiting their doctor; and 5% liked searching many websites. However, 11% did not like using on-line health information because they did not know which information they could trust. Figure 1 shows these results, including that only 3% reported feeling frustrated by not being able to find what they are looking for or feeling confused by finding too much information (5%).

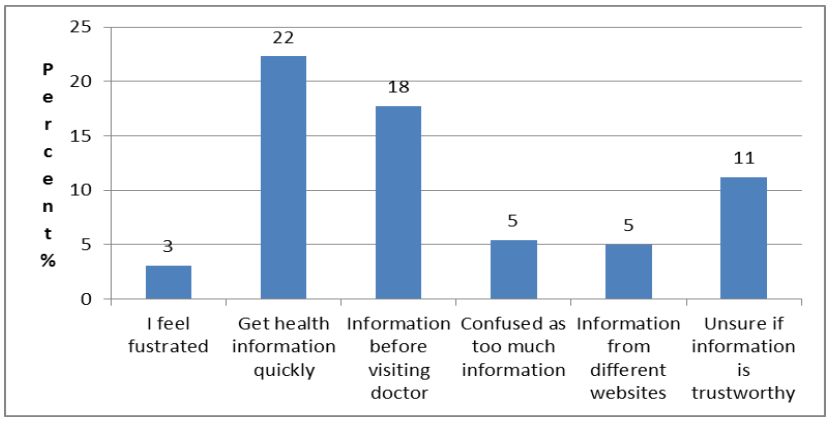

Figure 1. Participants responses to using the internet for locating health information

Most of participants (90%) preferred to receive health information from their doctor or other health professional, 13% preferred obtaining information from the

internet, while only 10% considered email or text messaging (0.4%) preferable. Free telephone services were more popular than free on-line health websites with 21% of participants having used HealthLine (national free phone health service) and 14% QuitLine (national free smoking cessation phone service). However, HealthPoint (1%) and Health Navigator (2%), both government supported websites, were not often accessed.

5. Discussion

This is the first study exploring health information seeking behavior targeting ICT use among older consumers in NZ. Most participants were NZ European reflecting the ethnic profile of older New Zealanders (88%) [14]. However, Asian (5%) and Pacific peoples (2%) were under-represented within the ≥65 population, although this also reflects a disparity in life expectancy[14]. Previous studies identified education as a strong determinant for older people's use of health ICT[7,15] and this study showed older consumers with a university degree more likely to seek health information than others, although the difference was not statistically significant. Having an existing health condition has been found to strongly predict use of on-line health information[15], but this finding was not borne out in this study.

The internet has become a popular health information source for older people; and while this study found almost 30% of participants went on-line to search health information, this proportion is lower than the 64.7% of those ≥65 who have access to the internet[1]. Since about two thirds of NZ older consumers seek health information offline there is a continued need to ensure health information is distributed through traditional media sources also, and there is scope to increase awareness of existing health-related websites. In this study older consumers mainly sought health information about their health conditions, prescribed medicines, and healthy living, which supports the findings of US studies[3,16]. Additionally, most of the older consumers sought information for themselves rather than for someone else, which is similar to the findings of Tian and Robinson[17].

Participants in this study perceived the health information they found to be both useful and trustworthy. This finding may be explained by the result from a study that perceived usefulness and trust are correlated[8]. Previous studies have found on-line health information has been useful[18], as it keeps older people informed[19-21]; and this can help them make health related decisions[20], changes to lifestyle[18], and improve access to healthcare[8]. In terms of trust, older people trust information from nurses and doctors more than that from inanimate sources, such as the internet[22]. However, not knowing which information they could trust was also a common problem[8]. Few participants in this study encountered negative experiences when seeking on-line health information. However, frustration of being unable to find what is wanted is a known problem[23]; as is confusion from information overload[18].

Limitations include the small sample size, sampling method and lack of age bands for sub-group analyses. Low participation of Maori and other ethnicities are also a limitation. Lastly, by the nature of a quantitative study, there is no in-depth understanding of reasons behind the use and nonuse of e-Health and a further qualitative study, is needed. While NZ needs to continue providing free telephone health services there is a need for further study to explore how to increase awareness

and use of free, non-commercial, government supported on-line health information websites. Despite these limitations this study adds new knowledge of how NZ older people use ICT.

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