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The Construction of Non-Communicable Diseases in Malaysian Newsprint Media

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Abstract

Non-communicable disease prevalence rates have increased significantly in Malaysia for the past decades, in parallel with rises in many other middle-income countries. However, little attention has been directed at exploring the information available to the public on NCDs, and how it is constructed. Drawing on a social constructionism approach, news media are understood as organisations that produce meanings about the world through news reports, presenting through various media outlets. This thesis examines the construction of NCDs in Malaysian newsprint media, at a time of heightened awareness of their burden on population health. The study employed three multi-method studies. First, a content analysis of NCD and other health issues was conducted in a sample article of mainstream newspapers in Malaysia. Subsequently, NCD-related news was subject to a thematic analysis to explore the dominant frames used in presenting NCD related content. The final study involves a series of in-depth key informant interviews with journalists in Malaysia to examine the factors that influence the construction of NCD and other health issues in the news.

Findings from the analysis of the news content revealed that NCD is an important news agenda in the Malaysian newsprint media, with an emphasis on cancer. Malaysian newspapers reporting tended to overemphasise individual or behavioural determinant and interventions to manage or respond to the chronic disease. Newspapers positively portrayed the role of government and other stakeholders in managing NCD issues. Through the journalists' perspective, the study revealed that the journalists viewed their primary role as a disseminator of health information. Nonetheless, their work is heavily influenced by the news media routines and government agency.

The research is the first of its kind to examine the construction of NCD news in Malaysian mainstream media. The findings of the study demonstrated areas in which coverage could be improved through the understanding of the NCD complexity by the news producers.

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List of Abbreviations

BN - 'Barisan Nasional' (National Front)

COPD – Chronic Obstructive Pulmonary Disease

CSR – Corporate Social Responsibility

DALYs – Disability-adjusted life years

HIC – High-income country

ICT – Information and communication technologies

IHME – Institute for Health Metrics and Evaluation

IPH – Institute for Public Health

LMIC – Low and middle-income country

MDG - Millennium Development Goal

MOH – Ministry of Health

NHMS – National Health and Morbidity Survey

PMEBs – Professionals, managers, executives and businessmen

R&D – Research and Development

R&R – Rest and relaxation

SDG - Sustainable Development Goal

UN – United Nation

Upper MIC – Upper middle-income country

Chapter 1. Introduction

1.1 Introducing the Study

Over the past decades, non-communicable diseases (NCDs) have become the leading cause of global mortality, accounting 70% of global deaths (World Health Organization [WHO], 2017). Interestingly, the burden of NCDs is not evenly distributed through the globe (Benziger, Roth, & Moran, 2016; WHO, 2015), with about 80% of NCD deaths occurring in low- and middle-income countries (LMICs). People living in high-income countries (HICs) are 15% less likely to die from NCDs than those living in LMICs (WHO, 2014). With the emerging NCD problem adding to the existing communicable disease burden, LMICs are now bearing a double burden of diseases (Low, 2016).

The increasing burden of NCDs over the past decades has led to a rise in knowledge and understanding of strategies for prevention and treatment (Alwan et al., 2010). One cost-effective strategy, identified by the WHO, is the promotion of public health awareness via mass media. Mass media has long been a tool for health communication, due to its potential to reach diverse population (Catalán-matamoros, 2010; Wakefield, Loken, & Hornik, 2010). Of all media outlets, the news media plays a critical role in disseminating information on health-related issues. News media transmits important health and medical information about prevention and treatment of health conditions, and translates complicated health and scientific discoveries into easily disseminated and understandable forms for the public (Cho, 2006; Johnson, Sionean, & Scott, 2011; Viswanath et al., 2008). By doing so, news media is able to promote health awareness and thus, influence lifestyle changes, such as mobilising the audience to take up health screening (Jones, Denham, & Springston, 2006; Marlow, Sangho, Patnick, & Waller, 2012). News media's role is not limited to informing the audience—they can also influence ways of thinking about health issues, depending on how and where and how

frequently, health information is presented (Entman, 1993; McCombs & Shaw, 1972; Vliegenthart, 2012b; Weaver, 2007). The influence of news media has the potential, at least, to penetrate every societal level from the individual, the community, the government and other social institutions. The way news media frames discussions of health issues have been identified to contribute to changes in current public health policies (Ali, Alfadl, & Fathelrahman, 2011; Baillie, 1996; Cho, 2006).

This study is guided by the social constructionism approach, where news media in this study is conceived as the product of social constructed reality. Social construction of reality refers to the understanding that our social world is a human product (Scott & Marshall, 2009). Reality is an outcome of the social interactions between individuals and society (Berger & Luckmann, 1966). Therefore, the news itself is not a reflection of ‘reality’ but rather a ‘mediated reality’. Instead of simply mirroring what is ‘out there’, the news content itself is the ‘reality’. The sociology of news production addresses various factors that shape health news content (Shoemaker & Reese, 1996, 2014). In the process of producing news content, which involves the selection, gathering and presentation of stories, journalists are influenced by myriad factors, ranging across institutional cultures and human dynamics (Arroyave, 2012). Shoemaker and Reese (1996, 2014) proposed a model that explains factors influencing the production of news content, which includes 1) journalists, 2) news media routines, 3) media organisation, 4) extra media forces and 5) social system (Shoemaker & Reese, 1996, 2014). In the construction of news, each level interacts with and influences the others.

With the premise that news is constructed and subject to many influences, as well as being an important medium of health information, this study is interested to understand the role of media in constructing NCD news and other health issues in LMIC, in this study context, Malaysia. Guided by an initial question of how Malaysian news media has presented NCD to the public, the main research objectives are:

- To examine how Malaysian news media covers and presents NCDs and other health issues.
- To study the factors that influence Malaysian news journalists in constructing NCDs and other health issues in newspapers.

To that end, this research is located in the news construction or production study. The news production study is concerned with how news media producers function. The news production describes how news producers operate and interact other stakeholders in constructing the news (Seale, 2003). Therefore, the study does not intend to investigate the effect of news presentation on audience perception.

1.2 Significance of the Study

This study aims to contribute theoretically and empirically to the field of health news construction by focusing on NCD news presentation and news construction practices in LMICs. Previous reviews have identified a lack of investigation of health and mass media in LMICs, especially on NCD issues (Hannawa et al., 2014; Kim, Park, Yoo, & Shen, 2010; Nazione, Pace, Russell, & Silk, 2013). These reviews found that research that analysed the relationship between media and health issues was mostly limited to HICs. One reason that explains the concentrated studies of health communication in HIC is that health communication field is considered established in this regions and they have a substantial research capacity (Wakefield, et al., 2010), leaving a considerable gap in health communication research activity in LMICs. With this gap and the epidemiological shift of NCDs in LMICs, it is essential and timely to address the role of mass media in health communication in one LMIC. By investigating health communication in LMICs, the scholarship of health communication is enriched through new perspectives on environmental, economic, political and healthcare systems, drivers of news reporting and production (Hannawa et al., 2014). This study will contribute to addressing this

gap, by examining news media's role in presenting and constructing NCD issues in the Malaysian context.

The context of the research is the Malaysian media landscape. The primary rationale for selecting Malaysia is that it is one of the upper middle-income countries (upper MICs) significantly affected by NCDs. Over the past few decades, the country has experienced tremendous economic growth, resulting in rapid industrialisation, urbanisation and modernisation (Hopkins, 2006; Shin, Hassan, Abd, Awaisu, & Ghazali, 2007; Yusoff, Hasan, & Jalil, 2000). Rapid growth has brought modern ways of living, which are highly associated with unhealthy dietary patterns and low levels of physical activity. These behavioural risk factors are reflected in increasing rates of NCDs and their risk factors among Malaysians (Chan et al., 2015; Rampal et al., 2010; Yasin, Chan, Reidpath, & Allotey, 2012). As news media is regarded as an important source for health information in Malaysia, it is important to investigate how news media presents NCDs to the public (Anwar, Sulaiman, Ahmadi, & Khan, 2010; Pon et al., 2006). To date, analysis of health issues in Malaysian media is scarce; previous health news analyses cover different but specific topics, including breast cancer, H1N1, HIV/AIDS, Methadone Therapy Management (MMT) and child abuse.

Further, examining the NCDs in the Malaysian media landscape provides a different media setting. The news organisations in Malaysia are highly influenced by the government through law pertaining to the media and ownership of the media organisation. In addition, the Malaysian journalism adopted development journalism and adhere to the Asian- and Malaysian- values (Abbott, 2011; Firdaus, 2006; Ramano, 2005; Tamam & Tamani, 2011; Tapsell, 2013; Waisbord, 2009) (See Chapter 4 for further details). This media environment has resulted a rigid and limited press freedom. The high intervention by the government in the news media is in contrast to previous health news analyses setting which often conducted in

the U.S. The U.S media system is classified as Liberal Model where there is a limited intervention of the state and the journalists enjoy the press freedom (Hallin & Mancini, 2004).

The analysis of news media content provides insights into the dominant presentation of NCD issues. This identified dominant presentation of NCD issues may reflect which agenda and frame the news media intends to set in readers (Reese, 2008). From the reception perspective, the theories of agenda-setting and framing explain how news media influences people to develop schema and place priorities on an issue based on news media presentation of the issue (Scheufele, 1999). From the news production perspective on frame- and agenda-building, the production of news content is influenced by several factors, such as journalist values and characteristics, journalistic routines, news organisational structure and extra media forces (Berkowitz, 1987; Shoemaker & Reese, 1996; Vliegenthart, 2012). Therefore, news content is a reflection of the sociocultural interaction that shaped it (Reese, 2008). To that end, analysing news media content not only determines the news media presentation of an issue but demonstrates the news construction process. However, it is important to note that the final news content is less transparent in indicating the context of its construction (Brüggemann, 2014).

1.3 Research Objectives

The thesis aims to investigate 1) how Malaysian news media covers and presents NCDs and other health issues and 2) the factors that influence Malaysian news producers in constructing NCDs and other health issues in newspapers. The study is structured in three different phases.

Phase 1 examines the coverage of NCDs and other health stories in Malaysian newspapers. It starts with a preliminary study to map the coverage of NCDs against other health stories. As there are a number of NCD types, this phase also includes a content analysis to investigate further how newspapers cover types of NCDs over a five-year timeframe. The results of these

analyses demonstrate the salient issues that the news media intend to set for the audience. The following questions are answered in the content analyses:

- How many news articles pertaining to health-related news?
- What are the key categories of health topics presented in major daily Malaysian newspapers?
- What is the percentage of health-related stories specific to NCDs compared with other health issues?
- Has the quantity of NCD coverage changed over time?
- Which types of NCD are frequently covered?

Since the news media also shapes audience way of thinking on an issue, Phase 2 examines how NCD issues are presented in Malaysian newspapers. Specifically, it highlights the dominant themes the news media mention in presenting NCD issues. By using thematic analysis, the study addresses the following questions:

- What were the main topics of NCD articles identified in the sample?
- What were the themes used in presenting the NCD issues in the sample?

Finally, to understand the factors behind the coverage and the presentation of NCDs and other health issues in the news media, the research conducted key informant interviews with journalists. The results of this study shed light on the current health reporting practices and the influences of NCD and health news construction in the news media. The in-depth interviews with journalists probed the following question:

- What or who influences the construction of NCD news in Malaysian newspapers?

1.4 The Structure of the Thesis

This thesis consists of ten chapters, including two on the research context, one each on the theoretical background, literature review and methodological approach, three on the study and a concluding general discussion chapter.

Chapter 2 summarises the current context of NCDs, from both the global and Malaysian perspectives. It reviews the epidemiology of NCDs, the risk factors and the current global strategies. The chapter further provides background on NCD trends, risk factors and the Malaysian health landscape.

Chapter 3 provides an overview of the contemporary construction of news media content framework and theories that underpin the research. Theories of agenda-building, frame-building and the model of hierarchical of influences are explained.

Chapter 4 presents the Malaysian media landscape. This chapter provides an overview of the current setting of media in Malaysia and the Malaysian media system. Additionally, it provides the historical background of the current political system in Malaysia.

To posit this research in the health communication realm, Chapter 5 presents a literature review of previous news analyses of NCDs. The literature review examines the main NCD topics analysed, the most common methods of analysis, the theories or conceptual frameworks used for the analyses, the countries in which the newspapers analysed were from, and finally, the key findings of the analyses.

Chapter 6 outlines the methodological approach of this research, which employed social constructionist epistemology in analysing the construction of NCDs and other health issues in the news media. Additionally, the chapter provides an overview of the studies in the thesis.

Chapter 1. Introduction

Chapter 7 presents Phase 1— an examination of the coverage of NCDs and other health stories in Malaysian newspapers through quantitative content analysis. This phase consists of two content analyses. The first captures health topics in Malaysian newspapers and compares NCDs against other health topics. The second examines the coverage of NCD articles over a five-year period. The newspapers included in the studies are daily newspapers: *Berita Harian*, *Utusan Malaysia*, *The Star*, *Harian Metro* and *Kosmo!*. (See table 6 for details of the newspapers)

Chapter 8 describes Phase 2—a qualitative thematic analysis of NCD issues in Malaysian newspapers. This study discusses the significant and prevalent themes mentioned in presenting NCD issues, which are not easily identified through quantitative content analysis.

Chapter 9 presents Phase 3, which investigates the construction of health news from the perspective of Malaysian newspaper journalists.

Chapter 10 summarises the study and further integrates the findings of the studies with broader literature and concludes with implications of the study and future research directions.

Chapter 2. NCDs: The Global Disease Burden

2.1 Introduction

The primary aim of this thesis is to understand the presentation and construction of non-communicable diseases (NCDs) in the news media; therefore, it is pivotal to first understand the current NCD situation. This chapter is divided into two main parts. The first begins by reviewing NCDs from a global perspective and includes an outline of the epidemiology of NCDs, risk factors for NCDs and global strategies for NCDs. The second part of this chapter focuses on NCDs in Malaysia and aims to contextualise the current research. It reviews the prevalence of NCDs in Malaysia, key risk factors and Malaysian strategies for dealing with NCDs.

2.2 Epidemiology of NCDs

An NCD refers to a medical condition or disease that is non-transmissible and non-infectious between individuals. It is also interchangeably referred to as chronic disease, because of its long duration, slow progress and long-term healthcare treatment (Allotey et al., 2011; WHO, 2011). For the past decade, NCDs have been the leading cause of global mortality. According to the latest study by the Global Burden of Disease, NCDs caused approximately 72.3% of global deaths in 2016 (Abajobir et al., 2017). The leading cause of NCD deaths in 2016 was cardiovascular disease (CVD) (17.6 million deaths), followed by cancer (8.93 million deaths), chronic respiratory diseases (3.54 million) and diabetes (1.6 million) (Abajobir et al., 2017). NCDs not only contribute to global mortality but increase the total number of disability-adjusted life years (DALYs). DALY is a measure of overall disease burden, a combination of health loss caused by premature death and non-fatal disability. A recent systematic analysis conducted by the Global Burden of Disease found that, although total global DALYs from

1990 to 2016 was mostly unchanged, the proportion of NCDs contributing to DALYs increased through these years. The leading causes of DALYs at the global level are CVD and chronic respiratory disease (Abajobir et al., 2017).

Interestingly, the burden of NCDs is not evenly distributed across the globe—some 80% of NCD deaths occurred in low- and middle-income countries (LMICs) (Benziger, Roth, & Moran, 2016; WHO, 2015a). Historically, NCDs were initially prevalent in the developed countries (Boutayeb & Boutayeb, 2005). However, by the beginning of the 2000s, NCDs had become more prevalent at the global level. At the same time, an increasing trend was apparent in LMICs. The trend is projected to increase by more than 50% in these countries (Alleyne et al., 2013). People living in HICs are less than 15% likely to die from NCDs, whereas those in LMICs are exposed to significantly higher probabilities (WHO, 2014b).

This alarming projection for NCD deaths in LMICs is associated with the adverse effects of an increasing ageing population, globalisation and rapid unplanned urbanisation (Alwan et al., 2010; Chongsuvivatwong et al., 2011; WHO, 2014b). Rapid development has brought changes in population-level lifestyle; for example, people in these countries are increasingly consuming high-calories meals, becoming less physically active and are being targeted by tobacco, alcohol and junk food marketing (Alwan et al., 2010; Boutayeb & Boutayeb, 2005). The rising burden of NCDs and their risk factors are likely to affect the health, social and economy, of these countries. For example, NCDs are argued to have a disproportionate impact on the poor because of increased exposure to risk factors. Poorer people are, for example, more likely to live in environments with weak regulation of the risk factors (Beaglehole, Bonita, Horton, et al., 2011). Further, NCDs may lead to poverty, where pre-existing economic conditions worsen with the cycle of debt and illness. Limited physical ability because of NCDs affect household costs, as a result affecting society's labour force, and subsequently, overall economic output

(Beaglehole, Bonita, Horton, et al., 2011). By 2030, it is estimated that NCDs will cost nearly 47 trillion dollars globally (Bloom et al., 2011).

2.3 NCD Risk Factors

Many NCD risk factors are modifiable, and thus, the millions of NCD deaths are preventable. NCDs are significantly associated and causally linked with four behavioural risk factors: 1) tobacco use (including exposure to second-hand smoke), 2) a diet high in fat, salts and sugar, 3) physical inactivity and 4) harmful use of alcohol (Alwan et al., 2010; Beaglehole, Bonita, Alleyne, et al., 2011). These unhealthy lifestyle risk factors are expressed through metabolic and physiological risk factors, also known as intermediate risk factors. They are raised blood pressure (hypertension), overweight or obesity, raised blood glucose level (hyperglycemia) and abnormal blood lipids (hyperlipidemia). Apart from the modifiable behavioural risk factors, there are non-modifiable risk factors, such as age and heredity (genetic) factors (WHO, 2014b).

Although NCDs patients are often blamed for their lifestyle choices, the causation pathway of NCDs is complicated. Underlying the behavioural risk factors are socioeconomic determinants out of an individual's control, such as poverty, inequality, unemployment, social instability, unfair trade and global imbalances (Beaglehole, Bonita, Alleyne, et al., 2011). These socioeconomic determinants are influenced by macro-level factors, such as globalisation, government policies, income structure and cultural context (McCracken & Philips, 2012). Although these macro-level factors (also known as upstream determinants) seem distant from the emergence of NCDs, they produce socioeconomic inequalities between or within nations. For example, people from low social income groups may not have the leisure for regular physical activity because of work and family commitments, income constraints or the built environment setting. They also may not be equipped to make informed health decisions because of a lack of education. Further factors exacerbating this condition include persuasive

marketing campaigns from the alcohol, tobacco and junk food companies (Alwan et al., 2010; Boutayeb & Boutayeb, 2005; McCracken & Philips, 2012). Figure 1 outlines the causation pathway of NCDs.

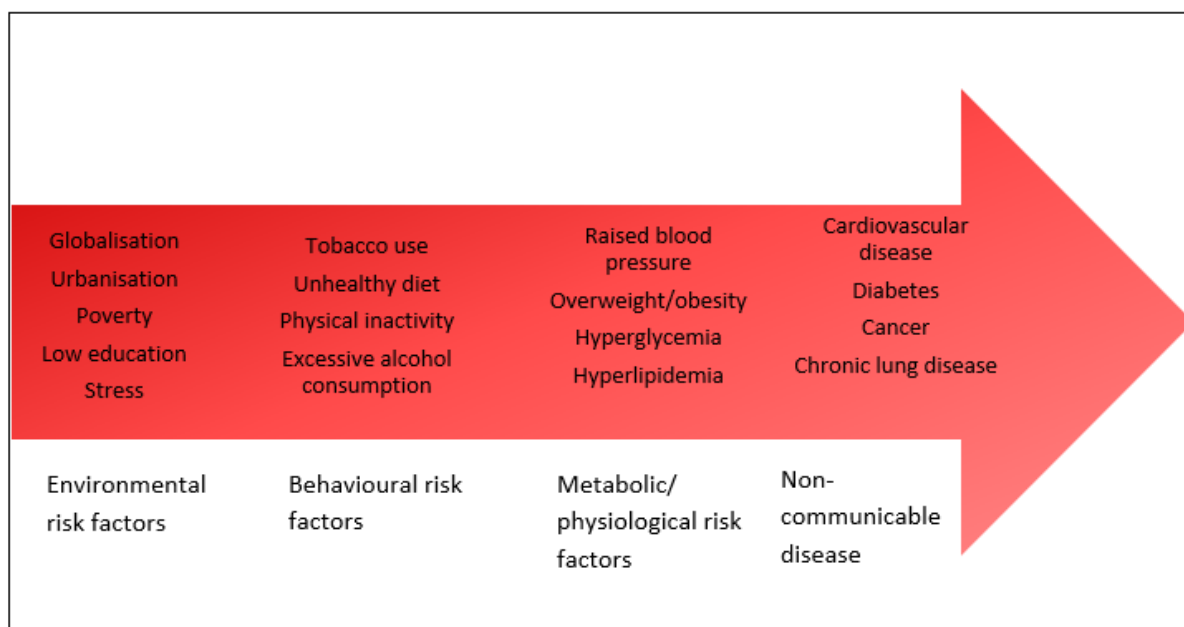


Figure 1. Causation pathway for non-communicable diseases (adopted from Dans et al., 2011)

In 2016, tobacco use (smoking tobacco or smokeless tobacco) and exposure accounted for 7.1 million deaths across the world (Abajobir et al., 2017). The latest analysis by Global Burden of Studies found that tobacco use is one of the leading modifiable causes of premature death, causing 177.3 million DALYs, associated with chronic respiratory diseases (30.3%), cancer (19.2%) and CVDs (18%) (Abajobir et al., 2017). A comparison of smoking prevalence between 2007 and 2013 found a decline at the global level, however, LMICs accounted for higher smoking prevalence than HICs (WHO, 2015b). Studies showed that smoking was more prevalent among socioeconomically disadvantaged groups than more advantaged groups (Bauman, Phongsavan, Schoeppe, & Chey, 2010; Hiscock, Bauld, Amos, Fidler, & Munafò, 2012; Nagelhout et al., 2012; Thakur et al., 2013). Poverty, low education and low social position are among the risk factors for tobacco consumption. For example, the prevalence of tobacco use is double among the poor when compared with the wealthiest groups in Malaysia,

Philippines, Laos, Vietnam and Myanmar (Dans et al., 2011). Factors leading to this trend include low support and motivation for quitting, stronger addiction to tobacco and the targeting of these groups by tobacco companies (Hiscock et al., 2012). Further, the globalisation of tobacco marketing, trade, research and industry has increased the production and consumption of tobacco (Beaglehole & Yach, 2003; Yach & Bettcher, 2000). This development further exacerbates the health disparities within and between LMICs.

Apart from smoking, unhealthy dietary patterns are also a leading risk factor for NCDs. Unhealthy dietary patterns refer to high saturated and trans-fatty acid intake, high sugar and salt intake and low consumption of fruit and vegetables (Dans et al., 2011). Unhealthy dietary patterns lead to NCD metabolic risk such as hypertension, hyperglycemia, hyperlipidemia, overweight and obesity ($BMI \geq 25\text{kg/m}^2$) (Alwan et al., 2010). A recent study showed that hypertension, hyperglycemia and high BMI are among the leading risk factors for global death and DALYs (Abajobir et al., 2017). Ischaemic heart disease and stroke were the most significant sources of DALYs attributable to hypertension, whereas diabetes, ischaemic heart disease and chronic kidney diseases were the primary sources of DALYs attributable to hyperglycemia.

Studies have shown that there is a substantial variation in unhealthy dietary patterns between countries (Abajobir et al., 2017; Imamura et al., 2015). In HICs, unhealthy dietary patterns are associated with increases in portion size, take-away food intake, snacking and sweetened beverage intake (Popkin, 2006). Although a similar trend was found in LMICs, HICs scored better in terms of healthy dietary patterns than LMICs (Imamura et al., 2015). Similar to smoking, poor dietary patterns are often associated with globalisation. Globalisation has brought modernisation in food processing, marketing and distribution techniques which have led to many changes in the global food system (Popkin, 2006; Rayner, Hawkes, Lang, & Bello, 2006). For example, the fresh local market is disappearing and being replaced with

supermarkets owned by multinationals and regional and local larger supermarkets. Despite the benefits they have brought to LMIC economic growth, these supermarkets have opened opportunities for processed, fat-, sugar- and salt-laden food in the market. The availability of these types of food have caused adverse effects on public health (Popkin, 2006).

Physical inactivity is also among the leading risk factors for NCDs. Physical inactivity and low physical activity was linked to 3.2 million deaths and 2.8% of DALYs in 2010 (Lim et al., 2012). A study estimated that 6% of the global disease burden from heart disease, diabetes and cancer were attributable to physical inactivity (Lee et al., 2012), with a low level of physical activity across the globe—some 31% of adults around the world are physically inactive. This percentage is higher in HICs and middle-income countries (MICs) than low-income countries (LICs) (Sallis et al., 2016). Other than socioeconomic status, physical inactivity is correlated with age and gender. Physical inactivity is more prevalent as age increases and in women (Hallal et al., 2012). The decline in physical inactivity in developing nations has been driven by economic activity; for example, developing countries such as China and Brazil have been shifting away from agriculture to manufacturing and services. This shift has led to increases in machine usage and labour-saving technology, greater access to home technologies and vehicles. People are becoming more sedentary with the lower demand for movement at work and at home and in travelling (Ng & Popkin, 2012).

The 2016 Global Burden of Disease study estimated alcohol as the seventh leading risk factor for DALYs. It is attributable for 99.2 million DALYs, an increase of more than 25% over the past 16 years (Abajobir et al., 2017). Harmful use of alcohol can cause chronic diseases and injuries; for example, alcohol has been causally linked to numerous cancers (oral, oesophageal, colon and rectal, breast and liver), diabetes, hypertension and stroke (Beaglehole & Yach, 2003; Rehm & Imtiaz, 2016). This burden of disease is more significant in LICs and poor populations than in HICs and wealthy populations (Rehm et al., 2009). Alcohol not only affects

the individual's health, but accounts for substantial costs to society. A substantial economic cost attributable to alcohol has been identified in HICs and MICs, with the most significant contributors productivity loss, healthcare costs and direct law-enforcement costs (Rehm et al., 2009). The consumption of alcohol is not equally distributed, with the Eastern Europe region recording the highest consumption and the Middle East region the lowest (Abajobir et al., 2017; Rehm & Imtiaz, 2016). Many factors affecting alcohol consumption have been identified either at the individual or societal level; for example, at the societal level, cultural and religious factors significantly affect alcohol consumption. This scenario is reflected in the low level of consumption in the Middle East, as a large proportion of the population is of the Islamic faith, which has very high rates of abstention (WHO, 2011). Apart from cultural, other environmental factors include economic development, availability of alcohol and the law and enforcement related to alcohol consumption (WHO, 2015).

2.4 Global Strategies Against NCDs

As previously discussed, NCDs have a significant impact, especially in LMICs and for those in low socioeconomic groups. Many factors cause NCDs to be more prevalent in LMICs. First, these regions are already burdened with curtailing communicable diseases (Allotey, Davey, & Reidpath, 2014; Alwan et al., 2010). With the latest developments in NCD issues in these regions, LMICs are now burdened with NCDs along with the burden of infectious diseases (Beaglehole, Bonita, Horton, et al., 2011; Boutayeb, 2006; Habib & Saha, 2010). As these countries are still developing, health issues have to compete with other national priorities, such as reducing poverty, developing infrastructure, ensuring access to education and mitigating against environmental problems (Dans et al., 2011). Second, this double burden of NCDs and communicable diseases overstretch the already strained health systems of many LMICs. The health systems often have limited resources to tackle NCDs and are poorly prepared to manage chronic care (Malan, Mash, & Everett-Murphy, 2016; Remais, Zeng, Li, Tian, & Engelgau,

2013). NCDs require long and slow treatment, which causes a financial burden on individuals, families, communities and the country's economy (Allotey et al., 2011). Hence, the combination of the current burden of communicable diseases and the unprepared health system results in LMICs becoming vulnerable to the effects of NCDs.

To address NCD issues in LMICs, the WHO has played a significant role in launching the global movement. Previously, NCDs were not the main focus of United Nation's (UN) Millennium Development Goals (MDGs), despite their emerging burden to the world—NCDs were allocated under the goal of combating HIV/AIDS and other diseases (Beevers, Fuster, & Voûte, 2005). The MDGs represent a high-profile international partnership that involves UN members collectively achieving goals between 2005 and 2015 (Stachenko, 2013). Thus, the WHO exerted pressure on the UN Assembly by discussing how NCDs undermine the efforts towards achieving the MDGs (WHO, 2010), stressing that NCDs are more than just a public health problem, but rather a developmental issue requiring the development of an international and national framework for prevention and control and strengthening of health systems. The WHO 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Non-Communicable Diseases was launched in 2008 (WHO, 2008). Finally, following the release of this plan, a high-level meeting on NCDs took place in September 2011, which resulted in a political declaration on the prevention and control of NCDs from UN (United Nation) members (United Nations (UN), 2012). The UN finally included NCDs as a specific Sustainable Development Goal (SDG) target in 2015 (Boerma et al., 2015).

The latest WHO Global Action Plan for the Prevention and Control of NCDs 2013–2020 was endorsed by the World Health Assembly in 2013 (Boerma et al., 2015). This plan includes six key strategic objectives: 1) to raise the NCD priority for NCD prevention and control at global and national levels, 2) to strengthen national capacity, 3) to reduce modifiable risk factors and underlying social determinants, 4) to reorient and strengthen health systems, 5) to promote and

support research and development for NCD control and prevention and 6) to monitor trends and evaluate progress towards preventing and controlling NCDs (WHO, 2014a, 2014b). There are nine targets to be achieved by 2025, which include specific targets for reduction in risk premature mortality, harmful use of alcohol, insufficient physical activity, intake of salt, the prevalence of current smokers, the prevalence of raised blood pressure and the rise in diabetes and obesity. They also set a target of increasing percentages of availability for NCD treatment (WHO, 2014a).

2.5 Context of the Research: Malaysia and NCDs

In the earlier section of this chapter, it was established that the global burden of NCDs is increasingly affecting LMICs. In contextualising the research, this section focuses on NCDs in Malaysia, an upper MIC (upper middle-income country). The following sections provide general background on the demographic profile of Malaysia and the current situation of NCDs, concluding with a description of current strategies for managing NCDs.

Malaysia is a federal constitutional elective monarchy located in South-East Asia. It consists of two regions: one partly on a peninsula of the Asian mainland (Peninsular Malaysia) and the other at the north of the island of Borneo (West Malaysia). With a total area 329,847 square kilometres, Malaysia is inhabited by a population of 31.19 million (Institute for Health Metrics and Evaluation (IHME), 2017). It is a multi-ethnic nation with three main ethnicities: Malays (68.8%), Chinese (23.4%) and Indians (7%) (and others, accounting for 1%). The official religion is Islam, and the official language is Malay. The biggest age group in Malaysia is 15–64 years (69.5%), followed by the youngest age group, 0–14 years (24.5%). The older population accounts for only 6% of the total population (Department of Statistics Malaysia, 2016). Malaysia is a federation of 13 states and three federal territories.

Based on the World Bank classification, Malaysia is an upper MIC, with a gross national income (GNI) per capita of USD9,850 in 2016 (World Bank Group, 2017). Over the past 30 years, Malaysia has undergone considerable economic growth and massive development as a result of industrialisation, globalisation, urbanisation, modernisation and an improved educational system (Hopkins, 2006; Shin et al., 2007; Yusoff et al., 2000). However, like other developing countries, Malaysia has also experienced an epidemiological transition with the socioeconomic development and demographic transformation (Chongsuvivatwong et al., 2011; Zaini, 2000). The rapid change introduced modern ways of living that have resulted in a radical transformation of traditional dietary patterns, lifestyle and occupational activity. The result of changes include nutrient-poor food with higher fat, salt and sugar content, a decrease in physical activity and an increase in smoking, reflected in the increasing rates of NCDs in Malaysians (Yasin et al., 2012). For example, over the past 30 years, the prevalence of type 2 diabetes has tripled, from 6.35% in 1986 to 17.5% in 2015 (Institute for Public Health (IPH), 2015; Letchuman et al., 2010).

NCDs have become a significant health challenge in Malaysia; in 2014, NCDs accounted for 73% of total population mortality in Malaysia (WHO, 2014). For over 15 years, these diseases have been the primary cause of public hospital admissions (Ministry of Health Malaysia (MOH), 1995, 2012). The latest Global Burden of Disease report (2016) found that NCDs accounted for the majority of death and disability in Malaysia (diabetes, ischaemic heart diseases and COPD). Parallel to that, the metabolic and behavioural risks of NCDs dominated the risk factors that caused most death and disability (IHME, 2017). Reviews on CVD research in Malaysia found that coronary artery disease caused 23.34% of hospital deaths in 2014, while stroke prevalence is 0.7% (Kooi, Peng, Aziz, & Looi, 2016; Seong & Meng, 2016).

Cancer accounts for 15% of Malaysian deaths (WHO, 2014). The latest data from the National Cancer Registry in 2017 described the three most common cancers among Malaysians as breast

cancer (17.7%), colorectal cancer (13.2%) and lung, trachea and bronchus cancer (10.3%). Females have a slightly higher cancer risk than males. Similar to the risk factors reported in the National Health and Morbidity Survey (NHMS), there is an increasing trend in cancer prevalence with age (National Cancer Registry Department, 2017). The Global Burden of Disease revealed that the prevalence of COPD is 19.5% per 100,000 people, and higher in males than females. The primary risk factor for COPD is tobacco smoke (Clinical Practice Guidelines Working Group, 2009).

In 2015, the Ministry of Health (MOH) of Malaysia conducted the fifth National Health and Morbidity Survey. The MOH conducts this survey every five years to monitor the health of the population in Malaysia (Awaluddin, Abd Ghani, & Salleh, 2017). They published a comprehensive report on NCDs and their risk factors, presenting the prevalence of diabetes mellitus, hypertension and hypercholesterolemia (see Figure 2). The data depicts a steady increase in risk factors such as high blood sugar (diabetes) and high blood pressure (hypertension). High blood cholesterol recorded a decreasing trend from the previous survey (IPH, 2015).

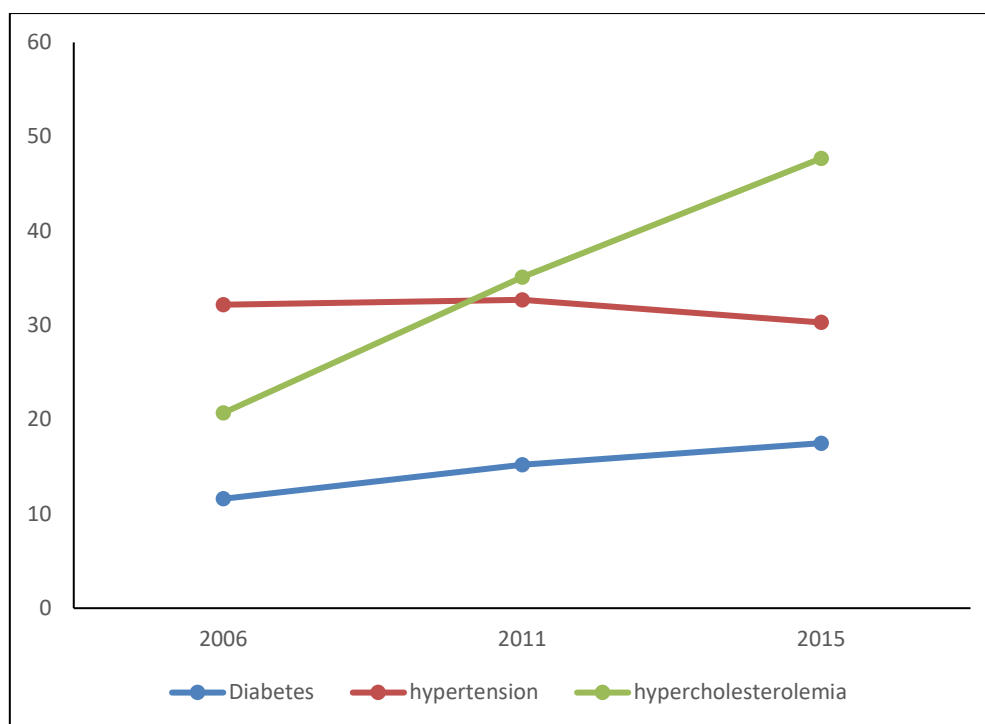


Figure 2. Percentages of prevalence of NCDs and metabolic risks among adults (Awaluddin et al., 2017; IPH, 2015).

The survey also compared the risk factors against demographic factors such as age, location of residence, gender and ethnicity. Overall, there is an increasing trend in the prevalence of risk factors with age. When comparing demographic areas, the findings showed that diabetes and hypertension are more prevalent in urban than rural areas (IPH, 2015). For most of the risk factors, females scored higher than males. The survey categorised ethnicities as Malay, Chinese, Indian and other Bumiputera (which refers to natives of Peninsular Malaysia and West Malaysia). Diabetes and hypocholesterolemia were most prevalent among Indians (22.1%, 12.3%), while Chinese scored the lowest or second lowest for most of the risk factors (IPH, 2015).

Within five years, diabetes has become the most prevalent of these three diseases, with an increase of 31.0% from 11.6% (1.5 million adults) in 2006 to 15.2% in 2011 (2.6 million adults) (IPH, 2008, 2011). In the 2011 NHMS, about half of the diabetics identified in the survey were previously undiagnosed with the disease—they represent approximately a million new diabetes

cases in the space of just five years. Previously, between 1986 and 1996, only a 2% increase in diabetes was recorded (Shin et al., 2007). The impaired fasting glucose has also risen each year, with the latest NHMS recording 4.9% in 2011 (IPH, 2011).

2.5.1 Risk factors for NCDs in Malaysia

2.5.1.1 Unhealthy dietary patterns

Nutrition transition refers to a process of change from low availability of calories to high consumption of fats, sugars and energy-dense processed food. This term suits the change in Malaysian dietary patterns (Ismail et al., 2002). Rapid economic development has resulted in increasing household incomes and increasing urbanisation, changing workforce and family structures (Baker & Friel, 2014). These changes, in turn, affect food availability, consumption and dietary patterns. This transition is reflected in the consistent rise of wheat and rice consumption in Malaysia over the past 30 years (Lipoeto, Geok Lin, & Angeles-Agdeppa, 2013; Rajamoorthy, Rahim, & Munusamy, 2015). Another indicator is the rapid consumption growth in processed food and sweetened beverages per capita over the past two decades (P. Baker & Friel, 2014). The nutrition transition has led to excessive consumption of food high calories, fats and sugars, associated with increasing rates of obesity and overweight. Over the past three decades, the prevalence of obesity has dramatically increased (Ghee, 2016). This trend is apparent when comparing the results of the previous and current NHMSs (see Figure 3). Since obesity is highly associated with diet, it is essential to understand the Malaysian dietary pattern and correlated determinants.

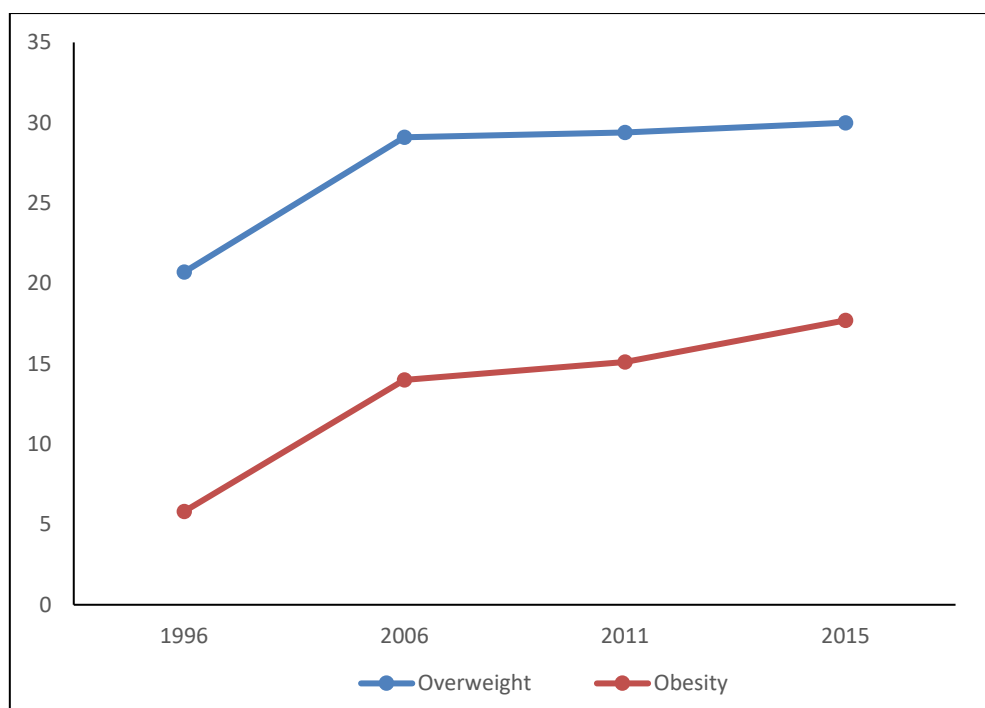


Figure 3. Percentages of overweight and obesity prevalence in Malaysia (IPH, 2008, 2011, 2015)

Based on the Global Burden of Disease Study, the risk factor contributing the most to death and disability in Malaysia is unhealthy dietary patterns (IHME, 2017). Malaysian unhealthy dietary patterns consist of low consumption of vegetables and fruit (Yen, Tan, & Feisul, 2015) and excessive sugar, salt and fat intake (Baker & Friel, 2014; Health Online Unit, 2017). Less than 10% of Malaysians adults consume five servings of fruit and/or vegetables per day, as recommended by the WHO (MOH, 2011). Malaysian consumption of sugar has caused health issues, as the daily sugar intake of the average adult exceeds the WHO recommendation and Malaysian dietary guidelines (of less than 50 g per day). On average, Malaysian adults consume seven teaspoons of sugar daily, comprising four teaspoons of table sugar and three teaspoons of sweetened condensed milk (Health Online Unit, 2017). This data is a manifestation of the top ten foods consumed by Malaysians; for example, Malaysians consume sugar daily through condensed milk added to beverages and local *kuih* (cookies) (IPH, 2014). As for sodium intake, a study found that Malaysian daily sodium intake is between 6.9 g and 7.15 g salt (IPH, 2016). This amount exceeds the WHO recommendations by 38–43% based on the recommended

amount of 5 g per day. The top sodium contributors are soy sauce in cooking and added salt in processed food and condiments (IPH, 2014, 2016). In addition, Malaysia has the highest per capita consumption of fat and oil (37 kg in the Asian region (Baker & Friel, 2014), from deep frying food using vegetable oil (Lipoeto et al., 2013). This high consumption of fat and oil may be associated with Malaysia being one of the top producers of palm oil, which subsequently affecting the dietary pattern and public health (Baker & Friel, 2014).

Many recent studies have investigated the socioeconomic determinants correlated with dietary patterns in Malaysia (N.-F. Abdullah, Teo, & Foo, 2016; Garba, Rampal, Hejar, & Salmiah, 2014; Karupaiah et al., 2013; Yen et al., 2015). The three most common determinants are ethnicity, level of income and level of education. Most studies found that ethnicity is a crucial determinant of dietary patterns and also contributes to variation of food preference and preparation (N.-F. Abdullah et al., 2016; Garba et al., 2014). For example, the majority of Malay and Indian traditional cooking uses excessive oil for deep frying and coconut milk for curries. Malays also consume a large variety of sweet food for dessert or as part of their primary meal (N.-F. Abdullah et al., 2016; Garba et al., 2014; Goh, Ho, & Goh, 2013; Karupaiah et al., 2013; Yen et al., 2015). In fact, they both scored the highest prevalence of NCDs among other ethnic groups (IPH, 2015). Indians consumed the least fruit and vegetables, dairy foods and food variety in comparison with other ethnicities (Karupaiah et al., 2013; Yen et al., 2015). In contrast, the Chinese were found consistently practice healthy dietary patterns (N.-F. Abdullah et al., 2016; Karupaiah et al., 2013). Another critical determinant is the level of income. The results across these studies were consistent: high-income earners are more likely to consume adequate nutritional food than low-income earners (N.-F. Abdullah et al., 2016; Karupaiah et al., 2013; Yen et al., 2015). For example, low-income households tend to eat less fruit as they need to spend their money on other food, clothing and housing (Hashim & Shuib, 2012). This issue is especially prevalent among the low-income earners in urban areas (Karupaiah et al.,

2013). Another common determinant is level of education. Studies have found that individuals with higher levels of education are better at decision-making regarding food choices (Garba et al., 2014; Yen et al., 2015).

2.5.1.2 Physical activity

Another modifiable risk factor for NCDs is physical inactivity. The WHO recommends adults engage in at least 150 minutes of aerobic physical activity weekly (WHO, 2010). Insufficient physical inactivity is highly associated with CVD, diabetes mellitus, cancer, hypertension and other chronic diseases (Alwan et al., 2010). The latest NHMS found approximately 7.1 million Malaysian adults were physically inactive. This number represented 35% of the adult population aged 18–59 years old (IPH, 2014). This data contribute to the declining trend of physical activity rate among Malaysians over the past 30 years (IPH, 2014; Lian, Bonn, Han, Choo, & Piau, 2016; MOH, 2011).

Many studies have investigated the relationship between sociodemographic factors and physical inactivity among Malaysians. The most significant determinants of physical activity are gender, age, ethnicity, educational level, area of residence and income. In particular, females, older age groups, people of Chinese ethnicity and well-educated and high-income earners are more likely to be physically inactive than others. Studies have found that physical inactivity is prevalent in females (A. A. Aziz et al., 2013; Yong Kang Cheah, Lim, Kee, & Ghazali, 2015; Yong Kang Cheah & Tan, 2014; Kaur et al., 2015; Lian et al., 2016; Sreeramareddy, Kutty, Jabbar, & Boo, 2012). Comparable results were found regardless of whether the sample is drawn from children, adolescents, young adults, adults or the elderly. One of the main reasons contributing to this finding is cultural and religious expectations of females. In Malaysian/Eastern culture, females are regarded as the home managers and caregivers of the family. Hence, they spent limited time on physical activity, as most of their time is spent on childcare and home production activities (Yong Kang Cheah, 2011; Yong

Kang Cheah & Tan, 2014; Lian et al., 2016). As for religious expectations, there is a predominant view in Muslim countries such as Malaysia that highly physical activities are inappropriate for women (Kaur et al., 2015; Sofian, 2010). However, this view is contrary to Islamic teaching, which encourages physical activity for both women and men to become healthy (Sofian, 2010).

Based on the research findings, in Malaysia, physical activity has an inverse relationship with age. As expected, the younger age group is more active than the older group (IPH, 2014; Lian et al., 2016). The prevalence of physical inactivity among 50–59-year olds is 40.1%. One factor is the biological process of ageing (Kang et al., 2014), which results in physical limitations and health problems among older adults, limiting physical activity (Jamil, Singh, Ismail, & Omar, 2015). Other than biological factors, social structure and cultural factors also influence the high prevalence physical inactivity in the older age group in Malaysia. For example, since the retirement age in Malaysia is 60 years old, retired Malays in rural and urban areas spend most of their time socialising with neighbours and family and attending religious activities (Aziz et al., 2013; Ministry of Human Resources, 2013). These activities seldom include physical activities.

Residents in urban areas are more likely to be physically inactive in comparison with those who live in rural areas (IPH, 2014). Urban communities lead a sedentary lifestyle because of mechanisation of their activities. This lifestyle has resulted in lower occupational activity and lower active commuting (Bauman et al., 2011). Further, in Malaysia, rapid economic and physical development has not been accompanied by social development, implying tremendous pressures on existing social facilities (Hashim & Shuib, 2012)—there are limited facilities for physical activity in urban neighbourhoods (Kaur et al., 2015).

2.5.1.3 Smoking

The current smoking prevalence in Malaysia is 22.5%, a slight reduction of 0.3% from the 2011 Global Adult Tobacco Survey (GATS) (IPH, 2012, 2015). This percentage represented almost 5 million Malaysians aged 15 years and above. Tobacco use is the third leading risk factor for death and disability in Malaysia (IHME, 2017). Common NCDs attributed to tobacco in Malaysia are cancer, CVDs, respiratory diseases and stroke (IPH, 2012). Tobacco use is highest in males, the Malay ethnic group, rural areas and individuals with low levels of education (IPH, 2015).

A high percentage of Malaysian men smoke (43%), whereas only 1.4% of Malaysian women smoke. Despite the increasing rate of smoking among women globally, the prevalence in Malaysia is comparatively low, at 1% over the past decade (IPH, 2008, 2012, 2015). This significant disparity of smoking between genders is because of social norms—in Malaysia, smoking is acceptable for men, but not women (Morrow, 2003; Parkinson et al., 2009). Looking at prevalence among ethnic groups, most smokers are from the Malay ethnic group. Approximately one-quarter of Malays (24.7%) and other Bumiputras (25.8%) are currently smokers; remarkably higher than for Chinese (14.2%) and Indian (16.5%) Malaysians (IPH, 2015; Lim et al., 2013). Similar to other Asian countries, tobacco and smoking play a crucial cultural role. Smoking activities and exchanging cigarettes are common at cultural gatherings, such as Malay weddings (Morrow, 2003).

Smoking also poses religious issues in Malaysia, as the Malaysian Islamic authorities have issued a *fatwa* (Islamic ruling) on smoking—smoking is forbidden because of its potential harm to health (Elkalmi, Alkoudmani, Elsayed, Ahmad, & Khan, 2016). However, the numbers of smokers among Malays (who are predominantly Muslim) remains high (IPH, 2015). A study investigating how this ruling affected Muslim perceptions of smoking found that a significant proportion of non-smokers agreed with the rationale of the ruling (Elkalmi et al., 2016).

Another study looking at the perceptions of adult smokers on religion and religious leadership and association with quitting found that the majority are aware of religious discouragement of smoking, but do not view smoking as forbidden (Yong, Hamann, Borland, Fong, & Omar, 2009). A minority believed that religious leaders are motivational sources to quit smoking. Therefore, the religious factor may have some potential to reduce smoking prevalence in Malaysia.

2.5.1.4 Alcohol consumption

Prevalence of alcohol drinkers has continuously low in Malaysia in comparison with other countries in the Asia Pacific (OECD/WHO, 2016). The NHMS recorded a decline in prevalence from 11.6% in 2011 to 7.7% in 2015 (IPH, 2011, 2015). More than half of the current drinkers are either binge or heavy episodic drinkers, and the percentage of risky drinkers has been increasing dramatically over the past five years (IPH, 2015). Although the prevalence of alcohol drinkers is low, the proportion of road traffic deaths attributable to alcohol is relatively high in the region (23%) (OECD/WHO, 2016). Few studies have investigated the socioeconomic determinants of alcohol consumption and risky drinking patterns in Malaysia (Abdul Mutalip, Kamarudin, Manickam, Abd Hamid, & Saari, 2014; Yong Kang Cheah, 2015; Jernigan & Indran, 1999; Manickam, Abdul Mutalip, Abdul Hamid, Kamaruddin, & Sabtu, 2014; A. K. G. Tan, Yen, & Hasan, 2016). Heavy drinking is associated with low-income earners, rural areas and indigenous ethnic groups from West Malaysia who have low education levels (Abdul Mutalip et al., 2014; Yong Kang Cheah, 2015). The latest NHMS found that consumption of alcohol is the highest in other Bumiputras, followed by Chinese, Indians and Malays (IPH, 2015).

As alcohol does not affect the majority of the population, it has never been treated as a priority by the Malaysian central government (Lasimbang et al., 2017). The main reason for this is that the primary population of Malaysia is from the Malay ethnic group. By the Malaysian

constitution, Malay is defined as individual of Malay descent and a follower of Islam. Thus, Malays are strictly prohibited from consuming alcohol. The majority of Malays live in East Malaysia. Contrary to West Malaysia, East Malaysia is comprised of 80 ethnic groups, often addressed as other Bumiputras. The two states in East Malaysia, Sabah and Sarawak, showed the highest consumption of alcohol (IPH, 2011). Alcohol has an essential traditional role in most indigenous ethnic groups in East Malaysia (Shoesmith, Oo Tha, Naing, Abbas, & Abdullah, 2016). For example, home and traditionally produced alcohol beverages such as *Tapai* and *Montoku* are consumed during festivals and special occasions. In these communities, the prevalence of heavy drinkers is higher in men than women. Nonetheless, the burden of massive alcohol consumption affects both genders. Men are often affected by biomedical effects, whereas women bear the burden of social, financial and physical effects, especially via the risk of domestic violence (Lasimbang et al., 2017).

In general, ethnicity, gender and age have significant correlations with the modifiable risk factors. However, there is similar pattern identified in each of the risk factors, the modifiable risk factors are more prevalent in the socially disadvantaged group. For example, those who have low level of education and low level of income consumed less vegetable and fruit, more susceptible to smoke and harmful consumption of alcohol. Therefore, NCD prevention and control strategies must acknowledge and address these problems.

2.5.2 Health system in Malaysia and NCDs

In dealing with the escalating burden of NCDs in Malaysia, it is important to understand the Malaysian health system and its strategies for NCD prevention and control. This section discusses the healthcare system in Malaysia and current strategies adopted to deal with NCDs.

The Malaysian healthcare system has successfully improved population health outcomes in comparison with other similar upper MICs (Mustapha et al., 2014). For example, life

expectancy at birth rose by more than 10 years between 1970 and 2016, from 61.6 to 73.2 years for men and 65.6 to 78.0 years for women (IHME, 2017; Jaafar et al., 2013). This current life expectancy is above that of other upper MICs, but below that of HICs (Jaafar et al., 2013). Improvement in health status has been achieved by increasing percentages of GDP spent on health expenditure, from 2.0% to 4.49%, an increase from RM 8,190 million in 1997 to RM 49,731 million in 2014 (MOH, 2016; Yu, Whynes, & Sach, 2008).

Malaysia has a dichotomous public–private system of healthcare services. The public sector heavily subsidises Malaysia’s public healthcare system through general revenue and taxation collected by the federal government (Jaafar et al., 2013; Yu et al., 2008). The public sectors are the main source of total health expenditure, with the MOH contributing 44% (MOH, 2016). For that, Malaysians can access public primary healthcare by paying a nominal fee of RM 1 (equivalent to USD 0.24 in 2017) in accordance with the Fees (Medical) Order 1976 (Yu et al., 2008). The government also subsidises the secondary healthcare given in public hospitals and tertiary healthcare that involves specialist services (Yu et al., 2008). Private sector sources of finance are fee-for-service, out-of-pocket patients payment and private insurance (Jaafar et al., 2013; Yu et al., 2008). The expense of utilising health services at private facilities is higher than public facilities. Thus, access to private health services is limited to the richer segment of the population (Thomas, Beh, & Nordin, 2011; Yu et al., 2008). In addition, with the overburdened system and long waiting times, people choose to get primary healthcare from the private health service (Ng et al., 2013). Private household out-of-pocket expenditure is the second highest contributor to total health expenditure (39.3%). Only 6.4% of the total health expenditure came from private insurance (MOH, 2016). In general, the Malaysian healthcare system is dependent on the Malaysian government.

Public healthcare services are available across the country. The thrust of the public health system is primary healthcare provided by health centres and community clinics. Health centres

are built in highly populated areas, while community clinics target smaller populations in rural areas (Aljunid, n.d.). In managing NCDs, these primary healthcare centres and clinics provide NCD services such as promotive, preventative or wellness, screening, intervention, treatment and rehabilitation (Mustapha et al., 2014). The screening services are offered to patients who present to primary healthcare facilities, irrespective of the purpose of their visits. These preventative strategies aim to detect early risk factors and thus provide early intervention through health education and monitoring (Mustapha et al., 2014). For health conditions that require further examination, the primary healthcare centres or clinics directly refer to hospitals or specialist centres. Common policies and operating procedures between clinics and hospitals enable this referral system (Mustapha et al., 2014; Thomas et al., 2011). However, a study appraised the management of hypertension in Malaysian health system identified barriers in health care delivery system (Risso-Gill et al., 2015). For example, an overwhelming volume of patients attending public clinics limited the engagement time between the patients and the health professionals.

Private healthcare is operated for profit, mainly by providing curative and personal healthcare. Private healthcare provides services mainly in urban areas, through physicians' clinics and private hospitals (Aljunid, n.d.; Lee, 2015). Apart from the public and private sectors, there is another component of the Malaysian health system, provided by non-governmental organisations (NGOs) and traditional practitioners (Juni, 2014). Most NGOs cater to the health needs of particular groups. For example, the National Cancer Council provides preventative and financial service for cancer patients. Traditional medicine, in contrast, is provided by traditional medicine practitioners. This type of medicine is still relevant in Malaysia, especially among Chinese and Malays. A large section of the population from these ethnic groups use traditional medicine services and products for healthcare (Shaharudin, Sulaiman, Emran, Shahril, & Hussain, 2011; Silvanathan & Low, 2015).

The main key player of the public health system is the MOH, which not only provides the bulk of total national health expenditure, but also a comprehensive range of services including health promotion, disease prevention, and curative and rehabilitative care through clinics and hospitals (Jaafar et al., 2013; Yu et al., 2008). They also formulate, fund and administer policies and programmes, with MOH state offices directing service delivery by districts offices, hospitals and centres. However, the MOH exerts little regulatory power over the private sector (Jaafar et al., 2013).

Similar to other LMICs, Malaysia also deals with the burden of the emerging NCDs due to the rapid economic transition and thus demographic and epidemiological transition (Jaafar et al., 2013). The burden challenged the Malaysian health system as the current system was originally designed for acute care (Das & Horton, 2012). Most of the health system of LMIC were not designed to manage chronic conditions which burden the healthcare cost of the household, communities and ultimately impacting the economy (Allotey et al., 2014, 2011). Moreover, although the number of NCDs mortality and morbidity increased, communicable diseases such as dengue and potential pandemic such as avian flu are still burdening the health system (Jaafar et al., 2013).

Malaysia has been proactive in addressing NCDs by producing a National Strategic Plan for Non-Communicable Disease (NSP-NCD) 2010–2014. This plan was in line with the WHO 2008–2013 Action Plan for the Global Strategy for Prevention and Control of Non-communicable Diseases and the Western Pacific Regional Action Plan for Non-communicable Diseases in 2009 (WHO, 2009). This plan aims to prevent or delay the onset of CVD and diabetes and associated complications (MOH, 2010b). The vision is to enhance the quality of life of Malaysians to promote longer and more productive lives. The plan is expected to reduce the main shared modifiable risk factors. It consists of seven key strategies: 1) prevention and promotion, 2) clinical management, 3) increasing patient compliance, 4) action with NGOs,

professional bodies and other stakeholders, 5) monitoring, research and surveillance, 6) capacity building and 7) policy and regulatory intervention (MOH, 2010b; Mustapha et al., 2014). As a continuous effort, MOH published an NSP-NCD for 2016–2025 in 2016. Prevention and promotion in the NSP-NCD include various features from media, school curricula, workplace policy, food control and community-based activities (MOH, 2010a).

Other than the National Strategic Plan, within MOH, the task of combating NCDs is delegated to allied sub-sectors. First is the Non-Communicable Disease Section. Under the Public Health Department and Disease Control Division, this section aims to provide adequate and effective health promotion, prevention, early diagnosis and detection (Non-communicable Disease (NCD) Section, 2010). It is also responsible for the prompt rehabilitation of those who are affected by NCDs. Second is the Health Education Division, which has a broader responsibility in planning, implementing, coordinating, monitoring and evaluating health promotion and education programmes throughout the country (Health Education Division Malaysia, 2012). Although this division has a bigger responsibility in promoting and educating Malaysians on health, it plays an important role in fighting NCDs, and is in charge of managing health campaigns such as the healthy lifestyle campaign and managing health education programmes through mass media.

In conclusion, the Malaysian government is committed to reducing NCDs by producing NSP-NCD and delegating the task of NCD prevention and control within the MOH itself. Further, the government is already burdened with current public health costs and the NCD problem is expected to impose more costs on the health system. NSP-NCD is timely and important, as it outlines the strategic plan of the Malaysian government to reduce the effect of NCDs on public health.

2.6 Summary

This first part of this chapter established that NCDs and risk factors are significantly prevalent across the world, especially in LMICs and socially disadvantaged populations. The second part discussed the current situation of NCDs and their risk factors in the context of Malaysia. Parallel to many LMICs, Malaysia also experienced an increasing in NCD, concurrent to the socioeconomical development. The discussion on NCD risk factors in Malaysia highlighted that sociodemographic and behavioural risk factors are highly correlated. Similar to the findings at the global level, socially disadvantaged groups in Malaysia are vulnerable to many NCD risk factors. Another interesting finding is that cultural factors play a significant role in influencing NCD behavioural risk factors.

This chapter also outlined the health system in Malaysia and strategies to address NCD issues. The Malaysian healthcare system is dichotomous, consisting of public and private healthcare. Nonetheless, the public healthcare system, regulated under MOH, has become the major player in addressing NCDs, providing comprehensive services related to NCDs with the aim of managing the issues. In addition to the public health service, the MOH has adopted strategic plans and delegated the task of health promotion and control within its structure.

Chapter 3. Theories of News Media Construction

3.1. Introduction

This chapter aims to provide an overview of the selected model that influences the construction of news content and selected theories that underpin the research. Prior to presenting the news media theories and model, the chapter briefly mentions the importance of health news in health communication. Next, the chapter discusses the construction of news content based on the model of hierarchy of influences. The chapter then explains the two main theories in news construction: agenda-building and frame-building.

The association between health communication and news media is well established. Issues that the news media portrays become essential to the audience as news media assigns meanings and provides legitimacy (Zamith, Pinto, & Villar, 2012). This is one of the key functions that makes the news media an essential tool for health communication; a field that aims to improve individual and population health through communication activities, which enhance health literacy (Ishikawa & Kiuchi, 2010). According to Berkman, Davis and McCormack (2010), health literacy is defined as “the degree to which individuals can obtain, process, understand, and communicate about health-related information needed to make informed health decisions” (p.16). Therefore, the health information provided in the news media is crucial for the audience to learn about health and understand health problems, potentially influencing audience’s cognition, attitudes and behaviour regarding health issues (López-Guimerà, Levine, Sánchez-Carracedo, & Fauquet, 2010).

Apart from disseminating health information, the way news media presents health issues influences how the audience perceives the importance of the issue (agenda-setting) and the way they define the issue (framing). Therefore, the news media affects how an illness is perceived

in terms of its prevalence, severity and outcomes (Williamson, Skinner, & Hocken, 2011). However, previous studies have identified that there is a discrepancy between news media coverage of diseases and the actual prevalence of diseases. For example, the news media focuses more on coverage of communicable diseases (such as HIV/AIDS and H1N1) than chronic diseases, even though the rate of mortality of chronic diseases is higher than communicable diseases (Chang, 2012; Hellyer & Haddock-Fraser, 2011; Hoffman-Goetz, Shannon, & Clarke, 2003). This discrepancy between actual diseases and media depiction indicates that it is essential to assess news media presentation of health issues to prevent misconception of information, such as disease severity.

However, it is important to note that health news media content and its presentation are results of the news construction process. This process involves stories selection, news gathering, news reporting which are under the influence of myriad factors (Reese, 2008; Shoemaker & Reese, 1996, 2014). By examining the influences on health news media construction, one can understand the driving factors that lead to the presentation of health issues in the news. Further, this understanding also helps to determine who/what and why such issues are presented as the way they are. For example, the discrepancy between the actual disease prevalence with the news coverage may be explained through the examination of the influences of news content and presentation. The next following sections will discuss these influences, followed by specific processes of news construction: agenda-building and frame-building.

3.2. Construction of News Content

Studies on news media content often employ content analysis to describe how the news media presents an issue. The results of this approach also enable inferences about the possible effects of the messages to the audiences. The results of content analysis can also be used to infer the context in which the message was constructed and the intention of the communicator (Reese,

2008). To develop these inferences, the news is viewed as a product constructed by news producers, rather than as a reflection of reality. This approach is situated in the core tenet of social constructionism: knowledge and conception of meaning are contextual and products of social interaction (Berger & Luckmann, 1966). News producers actively select, present, structure and shape the news under the influence of a variety of factors (Hall, 2005; Shoemaker & Reese, 2014). Therefore, the view of the world (in this context, health issues) that the news media portrays is known as mediated reality (Shoemaker & Reese, 2014). The following discussion on news construction is based on the perspective of general and health news in media research.

3.2.1 Model of Hierarchy of Influences on News Content

With limited space, time and resources, news producers can only ascribe news status to a finite number of issues or events (Young, Alhabash, Rodgers, & Stemmler, 2011). Therefore, with the view that news media is a product of a construction process, many questions arise when examining the content of the news media; for example, how and why specific news topics and stories are selected or not selected, and what and who influences the news producers in deciding which news should be published (Colistra, 2012). One of the approaches to understanding this selection is examining the related influences between internal and external forces on news media content (Shoemaker, 1991 cited in Pang, 2006). Previous studies have detailed several levels of influences on news media content (Reese, 2008; Shoemaker & Reese, 1996, 2014; Whitney, Sumpter, & Mcquail, 2004).

With regard to the construction of news, this study adopted the view that news media content is a product, constructed under the influence of a variety of factors (Reese & Shoemaker, 2016; Shoemaker & Reese, 1996). This model also highlights that each level interacts with the other levels, also known as the sociology of news production. The influential work of Shoemaker

and Reese (1996, 2014) theorised on these influences by outlining the complexity of the news-making process and terming it the Hierarchy of Influences Model of media content. The model outlines the levels of influence on news construction, or in other words, the factors that come into play when news is being prepared (Shoemaker & Reese, 1996). Levels of influence include 1) individuals, 2) media routines, 3) news organisations, 4) extra media and 5) the ideological level. In their latest work, Shoemaker and Reese (2014) modified the extra media level to become social institutions, and the ideological level to become social systems. Reese (2008) reduced this scheme to four levels, combining the media routines and organisation levels. Whitney et al. (2004) proposed an even simpler framework, classifying the influences as arising from individuals, organisations and institutions. This research adopts the model proposed by Shoemaker and Reese (1996, 2014) as it includes detailed levels of influence.

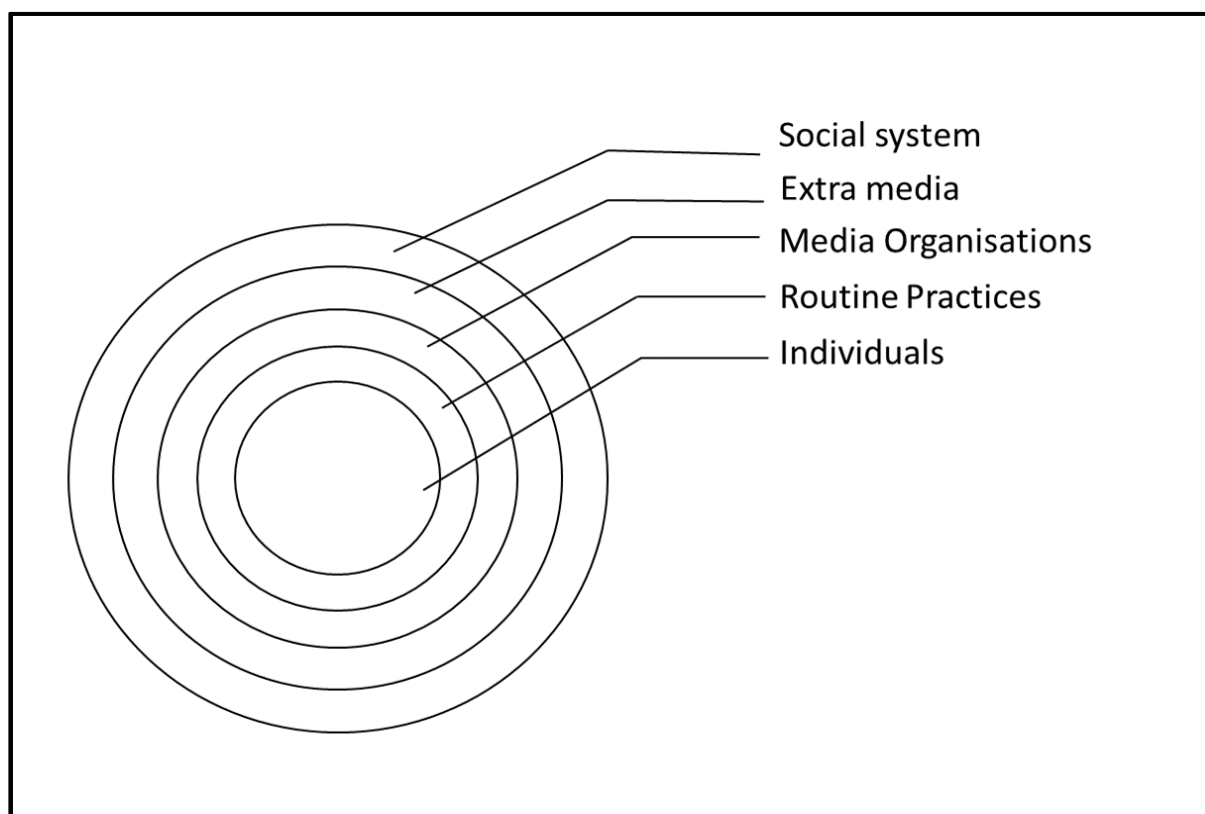


Figure 4. The Hierarchy of Influences Model (adopted from Shoemaker & Reese, 1996, 2014).

The interaction between each level of influence in this framework—the sociology of news production—results in news content and its presentation. It is important to note that this is not the only approach in terms of sociology of news examining the process of news construction. Previously, Schudson (1989, 2002) discussed the American sociology of news construction or generation process from three perspectives. First, the political economy perspective, which links news construction to the structure of the state and the economy and to the economic foundation of the news organisation (Schudson, 1989, 2002). He explained that news producers operate under the ruling capitalist class. For example, the book *Manufacturing Consent: The Political Economy of Mass Media* by Herman and Chomsky (1988) introduced the propaganda model, which argues that the media serve the interests of the state rather than those of the individual. The second approach is drawn from the sociological perspective, which focuses on social organisation, occupations and professions. This perspective explores how journalists operate within the constraints of the news organisation and occupational demands. For Schudson (2002), in the third approach, ‘a cultural approach emphasises the constraining force of broad cultural traditions and symbolic systems, regardless of the structure of economic organisation and occupational routines’ (p. 251). Some of these approaches may overlap and not be wholly distinct, similar to Shoemaker and Reese’s model, where each level may overlap and not be exclusive to one level (Shoemaker & Reese, 2014). In fact, there are several similarities between Shoemaker and Reese’s model and Schudson’s perspective, including that Schudson’s sociological perspective is similar to the individual, routine practices and media organisation levels. However, this study will mostly refer to the Hierarchy of Influence Model as it provides a visualisation of the framework of influences in the news construction process.

The highest level of the model is **the social system**. A social system is composed of a number of subsystems, such as ideological, political, economic and cultural systems (Shoemaker & Reese, 2014). Its position at the highest level of this model indicates that the social system’s

influence is pervasive. The social system's characteristics affect the interactions between the social institution, the existence of media organisations, media routines and the values of journalists as individuals.

The next level of the hierarchy of influence is the **extra media factors**. Shoemaker and Reese (2014) revised this level and named it social institutions. The boundaries between institutions within a social system are not definite, but rather, fluid, complex and multi-layered (Shoemaker & Reese, 2014). McQuail (2010) locates the media institution at the centre of three overlapping influences: economics, politics and technology. Previous studies have specified numerous extra media factors, such as government, politics, economics, culture, history, official sources, institutionalised sources of power, interest groups, advertisers and the public relations sector (Hallin & Mancini, 2004; McQuail, 2010; Owen, 2013; Shoemaker & Reese, 2014).

Extra media forces have been explored in the study of comparison of media systems. In the early study of media systems, an influential publication by Siebert, Peterson and Schramm (1956), *Four Theories of Press*, argued that a media system reflects the norms of the political system within which it operates. They categorised the Western media system as 'authoritarian', 'libertarian', 'social responsibility' and 'communist'. In the authoritarian approach, the media functions to support, unchallenged, the state's authority to influence and advance society. An example of this theory of the press is China, where the government and media is in total integration as the government officially owns all domestic media (Merrill, 2000; Shoemaker & Reese, 2014). On the contrary, the libertarian theory of the press argues that the state should not control individuals' exchange of ideas. The social responsibility theory of the press proposes that the media determine their own responsibilities towards the public and operate based on these responsibilities (Hallin & Mancini, 2008). The communist theory is another variation of the authoritarian theory, where media is used as a tool of social transformation (Hallin & Mancini, 2008).

In a later comparison of media systems, Hallin and Mancini (2004) introduced different sets of variables that influence the media systems in the US and European countries. Instead of characterising a media system based on the political system, they examined how development of the media market, integration of media with political parallelism, the degree and nature of state involvement in the media and development of journalistic professionalism influence national media systems (Hallin & Mancini, 2004, p. 8). They introduced three models: 1) the Polarised Pluralists or Mediterranean Model (France, Greece, Italy, Portugal and Spain), 2) the Democratic Corporatist or northern European Model (Austria, Belgium, Denmark, Finland, Germany, the Netherlands, Norway, Sweden and Switzerland), and 3) the Liberal or North Atlantic Model (Britain, the US, Canada and Ireland).

Taking an example of the Liberal (also known as the ‘Anglo-American model’) to further explore the influence of extra media factors, the following will discuss the media systems in the US and Britain. This Anglo-American model is generally characterised by strong development of the newspaper press, journalistic professionalism, very limited political parallelism, weak government intervention and strong market influence. In the US, the state and politics have a limited role in the media (Hallin & Mancini, 2004). Historically, in the first half of the nineteenth century, both forces played dominant roles in the news media. The state or government heavily subsidised the infrastructure for the early press to survive; however, the evolution of the dominant philosophical tradition and the interpretation of the First Amendment of the US Constitution has resulted in an emphasis on the idea of freedom of the press (Hallin & Mancini, 2004). The state role in the US media further reduced with the strong development of commercial newspapers, which dominated the press by the end of the nineteenth century. The development of a large-scale newspaper industry arose in conjunction with the development of industrial capitalism. Commercialisation also changed newspapers from a small-scale enterprise requiring subsidies from wealthy individuals, political parties or the state

into highly capitalised and highly profitable businesses (Hallin & Mancini, 2004). This commercialisation has led to true mass readership, reaching all classes of society. Newspaper markets are essentially local and the economics of the advertising-supported local newspaper market led to a single monopoly newspaper. By the end of the nineteenth century, the big newspaper companies were among the largest manufacturing companies in the US. This in turn played down political involvement in the press, such that commercialisation freed the newspapers from being dependent on subsidies from politicians and the state. As a result, the press is now focused on emphasising the news and reducing political rhetoric and commentary as well as the earlier newspapers (Hallin & Mancini, 2004).

Another extra media force that influences the construction of news is culture. According to Zald (1996), culture is ‘the shared beliefs and understandings, mediated by and constituted by symbols and language, of a group or society’ (p. 262). Hall (1986) argued that news content is influenced by the dominant culture, which shapes journalists’ thinking. As an example, in a 1973 news analysis of British news coverage of racial conflict, the study found that the local news obliged the British cultural tradition, which contains elements derogatory to foreigners, especially black (Hartmann & Husband, 1973). This indicates that media operate within the culture and are obliged to use cultural symbols. Previous scholars have characterised national culture along several dimensions: individualism/collectivism, uncertainty avoidance, power distance, masculinity/femininity and long-term orientation (Hofstede, Hofstede, & Minkov, 2010); in the US, journalists hold a set of cultural values such as ethnocentrism, altruistic democracy, responsible capitalism, small-town pastoralism, individualism, moderatism, social order and national leadership (Gans, 1979; Shoemaker & Reese, 2014).

Other extra media influences include globalisation, convergence, privatisation and digitalisation. For example, globalisation and digitalisation have significantly changed the way news media organisations and media practitioners operate (Franklin, 2011; Hermida, 2010).

Since the arrival of the internet and social media, the transmission of information has transformed, such that people refer to new media such as blogs, websites and social media to seek and receive information. Digitalisation and globalisation have also changed journalist routines; for example, instead of a daily news cycle, the cycle is now shorter, creating continuous deadlines (Deuze, Bruns, & Neuberger, 2007; Van Der Haak, Parks, & Castells, 2012).

The next level of influence is **the media organisation**, which refers to how organisational roles, internal structure, ownership of the organisation, policies, goals, actions, rules, memberships, interactions with other organisations, bureaucratic structure, economic viability and stability affect news content (Shoemaker & Reese, 1996, 2014). An example of the internal structure of a news media organisation is their financial model, which refers to how the news media staff, operation and distribution are funded and sustained. There are a variety of financial models, such as government license fees and taxes, philanthropy, advertising, subscription, pay-per-view and crowdsourced contributions (Van Der Haak, Parks, & Castells, 2012). For example, the British Broadcasting Corporation (BBC), the main television network in the UK, is funded by taxpayer money and carries no advertising (Van Der Haak, Parks, & Castells, 2012). News media ownership also dictates news media content. For media organisations owned by giant corporate conglomerates, the business interests of the media conglomerate often shape the media content (Oswald, 1994). As a result, media organisations such as broadcasters or newspapers sell audiences to advertisers (De Dobbelaer, Van Leuven, & Raeymaeckers, 2017; Oswald, 1994). In the US, the national television advertisers consist of large corporations such as General Motors, with the real estate industry the biggest advertiser in the newspapers (Oswald, 1994; Shoemaker & Reese, 2014). As a consequence, there is a concern that media companies tend to prioritise the interest of their stakeholders over the public interest, since their ultimate goal is profit (Oswald, 1994). Other than presenting content in the

interests of stakeholders, previous studies have found that different types of newspaper ownership result in different ways of presenting an issue in the news (Kiwanuka-Tondo, Albada, & Payton, 2012; Lee, Hong, Kim, Hong, & Lee, 2013); for example, newspapers that are owned by the government emphasised HIV-prevention in presenting HIV issues, as they act as advocates of the government's agenda and HIV-prevention campaign (Kiwanuka-Tondo, Albada, & Payton, 2012).

Other than news media internal structure such as the news media ownership, previous studies also have demonstrated that actors and factors at the organisational level are highly influential in determining the construction of news (Reese & Shoemaker, 2016; Rosen et al., 2016; Tanner & Friedman, 2010; Wallington et al., 2010b). For example, the size of the organisation may determine the journalists' burden, as bigger organisations can afford to hire journalists in specific subjects who face fewer constraints in reporting health stories (Tanner & Friedman, 2010). Another example of how the news organisation influences news content is the editorial authorities. Because of hierarchy in the news organisation, the editor's personal interests and judgements can overrule journalist story selection (Amend & Secko, 2012). Nonetheless, the editorial decision must be aligned with the organisational structure, motivation and policy.

The next level is **routine practices**. A seminal study by Tuchman (1972) explained how journalists shape their news following a 'strategic ritual' or media routine, referring to repeated practices and forms that facilitate journalists accomplishing their tasks while working within production constraints in an uncertain world (Lowrey, 2008). The routines range from task operation in newsgathering such as evaluating newsworthiness (Campbell, 1997; Hinnant, Oh, Caburnay, & Kreuter, 2011; Rosen et al., 2016), interacting with sources (Conrad, 1999; Morrell et al., 2015) and working under time constraints (Leask, Hooker, & King, 2010). As the nature of news production is time restricted and of limited resources, journalists prioritise stories in which the raw material can be made into news in the most efficient process and also

appeal to readers (Berkowitz, 1994; Foster, Tanner, Kim, & Kim, 2014; Larsson, Oxman, Carling, & Herrin, 2003; Len-rios et al., 2009; Shoemaker & Reese, 1996; Viswanath et al., 2008).

In making decisions on which stories to produce, a body of literature is dedicated to examining news values, addressing the criteria of stories to be selected, and formulating a standard routine for journalists to follow (Galtung & Ruge, 1965; Golding & Elliott, 1979; Harcup & O'Neill, 2001, 2017). According to Harcup and O'Neill (2001), for stories to be selected as news stories, they must generally feature one or more of the following: 1) the power elite (stories about prominent individuals in society, organisations or institutions), 2) celebrity (stories about famous people), 3) entertainment (stories about human interests, animals and showbusiness), 4) surprise (stories with an element of surprise or oddity), 5) bad news (stories with negative overtones), 6) good news (stories with positive overtones), 7) magnitude (stories with potential significant impacts for large numbers of people), 8) relevance (stories pertinent to the audience context), 9) follow ups (stories pursuing issues already in the news) and 10) newspaper agenda (stories aligned with the news organisation's agenda).

Health journalists use similar criteria in selecting highly newsworthy news, drawing on factors such as timeliness, novelty, relevance, proximity, unfamiliarity, impact and human interest (Amend & Secko, 2012; Hodgetts et al., 2008; Hooker et al., 2012; Leask et al., 2010; Viswanath et al., 2008). As some health information might be new to the audience, journalists try to make the story relevant by localising or presenting the story through a human-interest angle. For example, in explaining the impact of a disease, they use exemplars or individual accounts (Hinnant, Len-Ríos, & Young, 2013; Viswanath et al., 2008). In addition, journalists try to make the health information relevant by providing culturally appropriate content, acknowledging the importance of knowing their target audience's background (Friedman, Tanner, & Rose, 2014; Hinnant & Len-Ríos, 2009).

Other than news value routines, media practitioners establish sourcing practices. Gans (1979) compared the journalist–source relationship to dancing, as journalists seek sources for the supply of information and evidence, whereas sources seek journalists to install their voices and information in the public discourse (Carlson, 2009). News sources, often located outside the organisation’s boundaries, have the ability to shape news content subtly, by providing context, filtering information and emphasising the angle of the news stories (Shoemaker & Reese, 2014). Sources with higher social power are more likely to be successful in highlighting an event or issue (Conrad, 1999; Viswanath et al., 2008). Journalists are susceptible to receiving commercial incentives and pressure from powerful sources such as the government and corporations (Hjavard, 2012). Further, these sources often supply the journalists with cheap but important info. Previous studies have shown that government officials and experts, such as scientists, are among the primary sources, as journalists are under the impression that information from these parties is accurate and comprehensive, and may serve as an essential form of evidence (Carlson, 2009; Johnson et al., 2011; Wallington, Blake, Taylor-Clark, & Viswanath, 2010b). This perception leads to excessive reliance on these sources, thus indirectly enforcing the domination of their voices in the news agenda, preventing perspectives from other sources (Arroyave, 2012).

The influences of sources are prevalent in health and medical news reporting because of the nature of the content, which involves technical reporting and reporters’ limited expertise in the medical field (Tanner, Friedman, & Zheng, 2015). Health news media practices also involve sourcing practices, which refers to journalists finding sources or resources for news story ideas, interpreting facts and providing quotes (Viswanath et al., 2008). The most common sources used in health news are public officials and experts, such as scientists, researchers and health professionals (Viswanath et al., 2008), who are considered knowledgeable and credible, legitimising the information and subsequently the news story (Avery, 2010; Carlson, 2009; De

Dobbelaer et al., 2017). Journalists highly value sources who can explain complicated technical health issues (Waddell et al., 2005), because most journalists lack medical knowledge and training, and it is difficult for them to decipher complicated jargon and health issues (Larsson et al., 2003; Tanner et al., 2015). In selecting sources, journalists consider their accessibility, their reputation and their established relationship with journalists (Amend & Secko, 2012).

Other than sources such as public officials and experts, journalists also deal with ‘parajournalists – public relations (PR) firms, public information officers, political spin doctors and the publicity staffs of a variety of institutions, both corporate and non-profit’ (Schudson, 2003, p. 3). This information provided by the PR practitioners are usually pre-packaged to known as ‘information subsidy’ (Zoch & Molleda, 2009). Information subsidy can be in the form press conferences or press news releases that promote the viewpoint of certain organisations on an issue (Carlson, 2009; Zoch & Molleda, 2006). One of the PR functions is to enhance an organisation’s visibility, especially in the mainstream media, and to disseminate information related to activities conducted by organisations to the public through mass media (Lynch, Bennett, Luntz, Toy, & VanBenschoten, 2014). In the science arena, PR practitioners function as a bridge between journalists and scientists and thus provide an avenue of indirect communication between the public and scientists (O’Neill & O’Connor, 2008). However, the relationship between journalists and PR practitioners is complex, with preconceptions and prejudices on both sides. As both parties function as news gatekeepers, journalists detest the idea of having restricted access to information while PR practitioners ‘increasingly resent the unelected power wielded by the media’ (White & Hobsbawm, 2007, p. 284). Journalists often view PR practitioners as dubious sources and consider press releases from PR practitioners limited and lacking news values (Mohd Yahya & Md Sidin, 2012).

Other sources of health news include interest groups and health-related industries. Interest groups communicate their views on issues through the media to influence legislation, public

opinion and behaviours (Shoemaker & Reese, 2014). They usually install their interests in media discourse through media campaigns or 'pseudo-events'. They conduct a campaign for a certain period of time, to access the media discourse at the same time, and promote their interests (Boorstin, 1971). A study by Owen (2013) showed how an interest group movement, a transnational civil society campaign named The Access to Medicine campaign, changed the media discourse of generic HIV/AIDS medicine. The study found that a key discourse change occurred during the period of the South African lawsuit against Big Pharma, where generic HIV/AIDS medicine was elevated from an excluded criminal threat to a respected legitimate option (Owen, 2013). As highlighted by this study, the health-related industry also has a place in the health news discourse. On another note, concerns have arisen as health-related industries, such as the pharmaceutical industry, manufacturers of medical devices, complementary medicines and food, have high potential to influence a positive portrayal of their products in the news reporting by providing press releases and information and facilitating journalist access to medical scientific experts (Schwartz, Woloshin, & Moynihan, 2008). Nonetheless, a study by Lippworth et al. (2015) indicated that journalists were mostly sceptical regarding the industry, and both journalists and industry members viewed that journalists held the power in their interactions; thus, it is unlikely that this industry influences the news reporting process.

The first level of **influences is journalists**. This level discusses the potential influences on news content from factors that are intrinsic to journalists (Shoemaker & Reese, 1996), drawing on four distinctive yet unfixed factors: 1) characteristics, personal background and experience, 2) current attitudes, values and beliefs, 3) professional backgrounds, roles and ethics, and 4) power within the organisation (Shoemaker & Reese, 2014).

One of the earliest works on individual influences on news media content dates to the 1950s, examining the editor's personal reasons for rejecting or selecting potential news items (Reese & Ballinger, 2001; White, 1950). White (1950) applied the term 'gatekeeper', an individual

with the power to decide the flow of news reports through the ‘gates’ of a news medium into the news channel (McQuail, 2010), and concluded that the editor’s decision was highly subjective, based on his or her personal interests and social background (Wanta, 2008). Following White’s gatekeeper, a series of studies by Weaver and Wilhoit examined how professional conceptualisation guides the journalist’s role as gatekeeper (Weaver & Wilhoit, 1996, 2007 cited in Reese, Vos, & Shoemaker, 2009). Baker and Faulkner (1991) defined the conceptualisation of the role as “a resource used to pursue interests and enact positions”(p.283). Examples of role conceptions are ‘disseminator’, ‘watchdog’, ‘interpretive’ and ‘populist mobilizer’ (Weaver & Wilhoit, 1986, 1996 cited in Hinnant, Jenkins, & Subramanian, 2016).

Shoemaker and Reese (1996) outlined how factors that are intrinsic to journalists have potential influence on news content. These intrinsic factors may refer to personal background, attitudes and values, professional backgrounds and role conception and power in the organisation (Shoemaker & Reese, 2014). For example, a journalist’s personal interest in a health issue may lead them to select and develop stories related to that issue (Tanner et al., 2015), while their conception of their role potentially leads them to pursue their interest, and hence, present health stories based on that conception (Baker & Faulkner, 1991; Hinnant et al., 2016; Tandoc et al., 2013). A recent study on role conceptions of health journalists found that they are more engaged with the idea of working as interpreters, adversarial and facilitators, rather than disseminators (Hinnant et al., 2016). One of the reasons for dissociating from the disseminator role is that health journalists perceive themselves as advocates in promoting health awareness and motivating healthy behaviours (Tanner et al., 2015).

3.2.2 Agenda-Building Theory

In explaining agenda-building theory, it is first necessary to define what an ‘agenda’ is. In news media, an agenda is a collection of issues or events perceived as salient by news producers and

other stakeholders (Young et al., 2011). Agenda-building suggests that the process of media agenda formation and transferral involves reciprocal influence between various stakeholders, such as the government, political parties, corporations and non-profit organisations (Kiouisis, Park, Kim, & Go, 2013). In the agenda-building process, news producers or journalists identify, select, develop and evaluate the importance of facts, sources and background research in stories, to select specific issues or events to be featured in the news and others to be ignored (Len-rios et al., 2009; Nisbet, 2008; Scheufele, 2000). This story selection is a result of interplay between many stakeholders, both internally (i.e., journalists and the news organisation) and externally (i.e., sources of information and the public or audience) (Cobb & Elder, 1972; Lang & Lang, 1981; Len-rios et al., 2009; Shoemaker & Reese, 1996).

Agenda-building was first introduced by Cobb and Elder (1971) and further extended by Lang and Lang (1981) in research on political news coverage in the US. Lang and Lang (1981) pointed out that the agenda-building process is not exclusive to media producers but involves a reciprocal influence between the government, public and the media. A study by Berkowitz (1987) further noted that journalists rely heavily on routine news events, such as press conferences, as the source of coverage, suggesting that public officials often dominate the agenda-building process (Berkowitz, 1987; Strand, 2011).

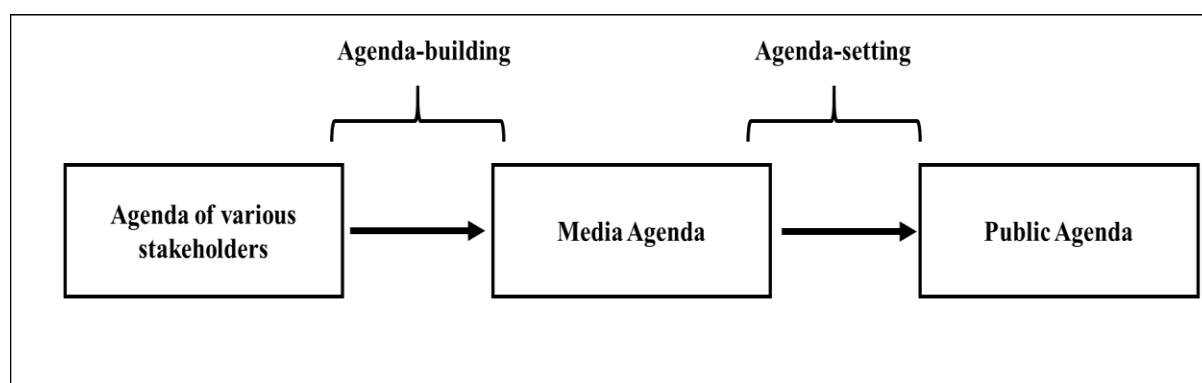


Figure 5. An overview of agenda-setting research (modified from Scheufele, 2000).

Agenda-building originates from the agenda-setting research. The central point of agenda-building is how some stories feature in the media agenda and others do not (Nisbet, 2008; Scheufele, 2000). Agenda-building theory includes the process of journalists identifying, selecting and developing story ideas, evaluating the importance of using facts, sources and background research in the stories (Len-rios, et al., 2009). Although journalists are the key forces in the process, this theory also discusses how the process involves an interplay between many stakeholders, both internally (journalists and the news organisation) and externally (extra media forces, sources of information and the public or audience) (Cobb & Elder, 1972; Lang & Lang, 1981; Len-rios et al., 2009; Shoemaker & Reese, 1996). In contrast to agenda-building, agenda-setting theory examines how the news media agenda is transferred to the audience, and mostly focuses on the effects of news agenda on the audience's agenda (Nisbet, 2008; Scheufele, 2000). There is limited empirical work on agenda-building compared with agenda-setting (Kioussis et al., 2013; Vliegenthart, 2012). Figure 5 is a simplified representation of agenda-setting research.

Studies in health news have identified that sources and journalistic norms or routines play important roles in the agenda-building process. The journalists, working under a 24-hour cycle production, are required to find news that can be gathered and reported predictably, which allows careful rationing of resources as well as meeting assigned deadlines (Berkowitz, 1994; Len-rios, et al., 2009). For that, their routines on the amount of time or space allocated for news reporting are usually based on the news values appealing to their audience (Foster et al., 2014). Sources also play important roles in the agenda-building process. The relationship between sources and media practitioners is described as symbiotic (Conrad, 1999; Tanner & Friedman, 2010). For example, journalists need expert sources to provide perspective and clarification, while expert sources require journalists to get their views into the media (Conrad, 1999; Tanner & Friedman, 2010). Government officials are important official sources of breaking news

(Tanner & Friedman, 2010). Other sources include corporations, non-profit organisations and activist groups (Kiouisis et al., 2013).

The researcher conducted a 'mini' literature review on agenda building by applying keywords such as 'agenda building', 'agenda setting', 'health' and 'news' to the ProQuest and Scopus databases. In the end, only articles that used agenda building in their studies were included in this review. This review aims to provide a snapshot of the latest developments in agenda-building theory in the health communication context. To date, a total of 12 studies investigating agenda-building in health news have been documented. Using agenda-building theory, these studies examined the antecedents of health news content via two approaches: 1) investigating news producers or news sources through interviews and surveys, 2) projecting the factors that influence health news coverage based on the results of news content analysis. Studies on agenda-building in health news include a number of health topics. The most commonly investigated topic in various news media outlets is general health stories (McCauley, Blake, Meissner, & Viswanath, 2013; Tanner & Friedman, 2010; Tanner, 2004; Waddell et al., 2005; Wallington et al., 2010b). General health stories in this context refer to any news related to health, without specifying the type of health condition. The second most studied health topic is communicable disease, focusing solely on HIV/AIDS (Bardhan, 2002; D'Angelo et al., 2013; Jung, 2013; Rim, Ha, & Kiouisis, 2008), followed by health care policy (Foster et al., 2014; Kiouisis et al., 2013).

Based on the studies analysing the content of health news, findings support the complex interaction in the agenda-building process. Studies on the coverage of health care costs, policy and HIV/AIDS issues revealed that external factors, such as social system, sources of information (US president, government officials, congress members, stakeholder groups, experts) and information subsidies (press releases), significantly influence health news coverage (D'Angelo et al., 2013; Foster et al., 2014; Kiouisis et al., 2013). They also indicated

that internal influences, such as media organisational system (i.e., conservative versus progressive) and news routines (news routines and dependency on press releases), play significant roles in shaping health coverage in the news (D'Angelo et al., 2013; Foster et al., 2014; Kioussis et al., 2013). Research interviewing or surveying journalists extended these content analysis findings; for example, they not only identified that sources that notably shape the health news agenda, but found that the relationship between sources and journalists could also shape the news agenda (Bardhan, 2002; Waddell et al., 2005). Characteristics of journalists that play a major role in agenda-building include journalist experience, educational background, expectation towards the audience (McCauley et al., 2013; Tanner, 2004; Waddell et al., 2005; Wallington et al., 2010b).

3.2.3 Frame-Building Concept

Framing is another concept of news construction and presentation. In the process of news construction, journalists employ specific frames in presenting news stories, in a process known as framing. Frame-building is part of the integrated framing process; temporally, frame-building occurs prior to frame-setting. Prior to explaining the frame-building concept, it is necessary to discuss the background and definition of framing, as there are a variety of definitions. The section below explains the concept of framing as a process and then locates frame-building in this process.

Despite numerous definitions and descriptions of framing, the common general assumption shared by researchers today is that 'frames are a pattern of making sense of the world' (Brüggemann, 2014, p.62-63). Framing is originally derived from two different fields—the sociological and psychological sciences—and has been adopted by many disciplines, such as sociology, economics, linguistics, social movements research and communication (Bryant & Miron, 2004; Pan & Kosicki, 1993; Vliegenthart, 2012b). It first appeared in sociological

tradition in Goffman's work, which outlines that frames work at the individual level, as interpretive schemata that humans apply to make sense of the world (Goffman, 1974; Scheufele, 2006).

Previous scholars have developed several definitions and concepts of framing. In communication studies, Gitlin and Tuchman are among the earliest scholars that introduced framing as a tool to understand news as a social construction and social resource (Zhou, 2008). To date, the most cited definition of framing in the sociological tradition is from Robert Entman (1993, as cited in Vliegthart, 2012):

To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and treatment recommendation for the item described. (p.52)

Entman's definition of frame explains that a frame may constitute several elements of an issue such as its definition, causes, moral evaluation of the problem and a recommended treatment of the issue (Matthes & Kohring, 2008).

As part of the development in framing studies, researchers conceptualise framing as a complex process (D'Angelo, 2002; de Vreese, 2005; Scheufele, 1999). De Vreese (2005) discussed how the dynamic communicative process involves two stages: frame-building and frame-setting (Figure 6). The first stage, frame-building, refers to the process of emergence of the frame. D'Angelo (2002) detailed the frame-building stage as an examination of antecedent conditions that produce frames. These antecedent conditions may refer to factors that influence the development of news media frames such as journalist-centred influences, 'organisational routines' and external factors (Gans, 1979; Scheufele, 1999; Shoemaker & Reese, 1996). The second stage of the dynamic communicative process is frame-setting, which involves the interplay between media frames and audience predisposition. Frame-setting research examines

how news frames activate and interact with an individual's prior knowledge to affect interpretation and recall of information for decision making (D'Angelo, 2002). Therefore, the frame can affect learning, interpretation and evaluation of issues and events at individual and societal levels (de Vreese, 2005).

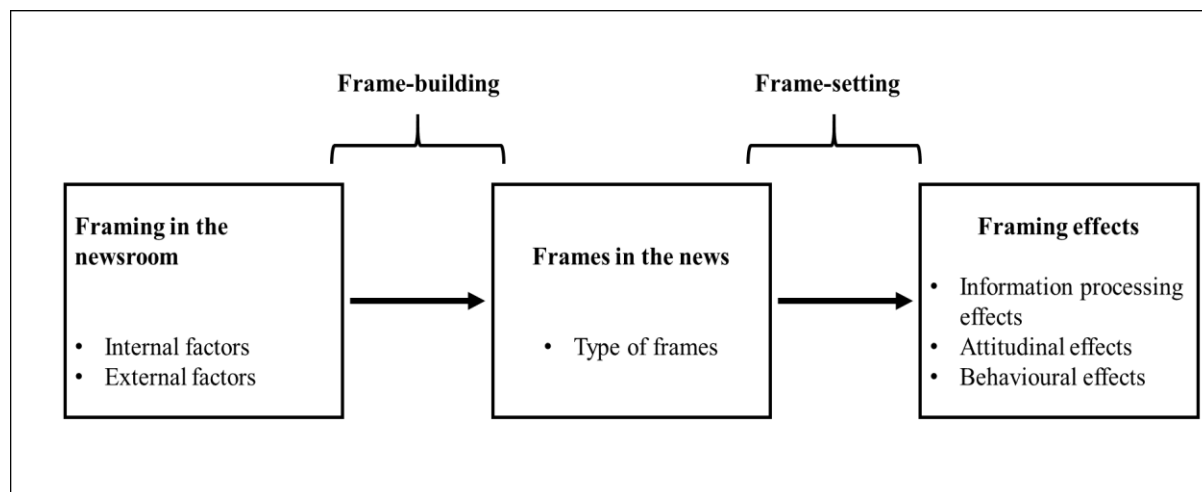


Figure 6. An integrated process of framing (modified from de Vreese, 2005).

Although framing has become as one of the popular guiding theories in media communication research, previous studies claimed that frame-building received less attention in comparison to frame-setting studies (Bartholome, Lecheler, & de Vreese, 2015; Hänggli & Kriesi, 2012; Matthes & Kohring, 2008; Potter, 2014; Vliegthart, 2012). Frame-building research is concerned with the influences on journalists' news construction practices that lead them to adopt specific frames (Dekavalla, 2016). In journalistic framing practices, the journalists do not only write stories, but they define what is at issue (Brüggemann, 2014). However, the selection of the frames is often influenced by various variables and actors, known as frame sponsors (Deprez & Raeymaeckers, 2010).

'Frame sponsors' compete with each other to influence the selection of media frames (Carragee & Roefs, 2004; Deprez & Raeymaeckers, 2010). Frame sponsors include social actors and

variables such as policymakers, cultural norms and values, political actors and socio-economic movements. For example, Hänggli and Kriesi (2010) explored the decisive power of political actors in framing debate on immigration policy in Switzerland, Zhou and Moy (2007) demonstrated the public opinion influences on media frames, and Gamson et al. (1992) demonstrated that social movements such as environmental and anti-nuclear movements can shift the news media discourse. These frame sponsors craft the news in the way they want it and thus slant the story (Kee, Ibrahim, Hassan Basri, & Nie, 2011; Zamith et al., 2012). However, it is important to note that only those frame sponsors who are in a position of power hold the broader authority on the story relative to journalists (Kee et al., 2011). Nonetheless, frame-building is not only influenced by the interaction between journalists and frame sponsors; other factors such as news media organisational values, media routines and social system should also be taken into account (Shoemaker & Reese, 2014).

At the organisational news level, journalists operate within and according to the news media organisational structure and values. The ownership and economic logic of the news organisation may create a potential conflict of interests that interact with individual journalistic procedures (Shoemaker & Reese, 2014). Intrinsic factors to news production refer to individual journalists, the news routines and the news media organisational structure and function (Deuze, 2005; Shoemaker & Reese, 1996; Zhou & Moy, 2007). In framing an issue, journalists' occupational identity, belief system and characteristics can influence the way they present the issue (Deuze, 2005; Zhou & Moy, 2007). Gitlin (1980) in his seminal work on framing noted that news routines may cause a frame to be selected over others; for example, framing the new left in the media involved an ongoing struggle between activists and journalists, where the routine practices and disorganisation of the movement led to framing of the left movement as a "chaotic, leaderless amalgam of radicals" (Gitlin, 1980 as cited in Vliegenthart, 2012, p.938).

In building story frames, journalists take into account the newsworthiness of the story; factors such as proximity, conflict and context of the issue (Donsbach, 2004).

Limited studies examine frame-building (Borah, 2011); accordingly, there are limited studies on frame-building of health news. Two studies have examined the factors that influence frame in health news, with both employing frame analysis (Saguy & Almeling, 2008; Wells, 2014) to identify that health news is often presented through individual frames rather than societal frames. An 'individual' frame primarily presents the responsibility for causing and solving health conditions as lying fully with the individual, while a 'societal' frame presents health conditions as a result of a combination of flaws in social and environmental conditions, solvable via a societal approach (Chang, 2012; Kim & Willis, 2007) (Further explanation on types of frame in 3.2.3.1). Both Saguy and Almeling (2008) and Wells (2014) found that journalistic routines and press releases shape the framing of health stories.

3.2.3.1 Types of frame

The development of framing theories has also resulted in a typology of frames. There are two main types of frame that studies have identified: generic and issue-specific. Issue-specific frames are concrete interpretive frames, pertinent only to specific topics or events (Brüggemann, 2014; de Vreese, 2005). Conversely, the generic frame is abstract and applies to a multitude of topics, transcending thematic limitations (Brüggemann, 2014; de Vreese, 2005). An example of generic frames is episodic vs thematic framing (Iyengar, 1991), where the episodic frame is news depiction of public issues at an individual and specific-event level, while a thematic frame refers to news that emphasises general outcomes, conditions and statistical evidence. The thematic frame provides background, consequences and other contextual information (Dorfman, Wallack, & Woodruff, 2005; Iyengar, 1991). Due to the lack of context, readers who are exposed to episodic news frames tend to attribute responsibility to

the people portrayed in the story. In contrast, readers who are exposed to thematic frames perceive a shared responsibility between individuals and other stakeholders, such as government and health professionals (Dorfman et al., 2005). Table 1 presents a list of other generic frames established in previous studies (Aalberg, Strömbäck, & de Vreese, 2012; Brüggemann, 2014; de Vreese, 2005; Semetko & Valkenburg, 2000).

Table 1. Types of Generic Frames.

Type of generic frames	Definition
Conflict	Features the social conflicts as a mean to capture audience interest
Human interest	Features individual's story or an emotional angle to the presentation of an event, issue or problem
Responsibility	Presents a problem in a way that attributes the responsibility for its cause or solution to either government or group or individual
Morality	Presents an issue in terms of moral prescription
Economic consequences	The potential or actual economic impact of the issues or events

Studies on frames used in health news identified two prevalent frames, which are ‘societal’ and ‘individual’ frames. Individual frame primarily presents the responsibility of causing and solving a health condition as fully lying on the individual. Therefore, solving the problem requires modifications at an individual level (Chang, 2012; Kim & Willis, 2007). Previous studies have further specified individual frames to medical and behavioural frames (Gounder & Ameer, 2018). The difference between these two frames is the controllability dimension, where “the behavioural frame views health issues through the lens of behavioural deviance, with high onset-controllability” (Gounder & Ameer, 2018). To support the behavioural frame, market justice argument was often used for the relationship between behaviour and control, such as free will and personal responsibility (Dorfman et al., 2005; Gounder & Ameer, 2018). Solutions for behavioural frames were mostly around individuals modifying their health-related behaviours, such as diet and exercise (Gounder & Ameer, 2018). As a result, this frame

shifts and distances the responsibility of other stakeholders, for instance the industries, from being responsible for the consumption behaviour of consumers (Conrad, Mackie, & Mehrotra, 2010; Gounder & Ameer, 2018). In contrast to behavioural frame, medical frame distances individuals from the blame as it depicts health conditions as being beyond individual control, such as genetics risk factor (Conrad et al., 2010; Gounder & Ameer, 2018).

Societal frames present health conditions as resulting from certain flaws in social and environmental conditions, for example, the disparities in socioeconomic status due to unequal distribution of economic resources and unsafe environments (Kim & Willis, 2007). These flaws affect the availability and affordability of health-related choices and further limits an individual ability to solve the problem (Dorfman et al., 2005). Addressing this problem involves changes in social factors, such as government policies and regulations of business practices (Kim & Willis, 2007).

The news media emphasised the individual causes of NCD health conditions as poor diet selection and physical inactivity (Chau et al., 2017; De Brún et al., 2012; Hamad, Pomeranz, Siddiqi, & Basu, 2015; Hilton et al., 2012; Jeong, Gilmore, Bleakley, & Jordan, 2014; Stefanik-Sidener, 2013). The presentation of a societal frame, which may include the lack of health facilities, modern living, food affordability, food advertisement and marketing, were found to be less likely to be discussed in the news media compared with individual causes (Gollust & Lantz, 2009; Hilton et al., 2012). Similar to the coverage of individual causes, the news media also emphasised individualised strategies for NCDs over societal level solutions. News coverage of government policies, health education, government and community programmes were also less likely to be presented, compared with lifestyle changes, such as diet modification and being physically active (Barry, Jarlenski, Grob, Schlesinger, & Gollust, 2011; De Brún et al., 2012; Donaldson et al., 2015; Gollust & Lantz, 2009). Such presentations have

failed in depicting the complexity of NCDs factors and in offering solutions by ignoring the social responsibilities in the news media discourse (Kim & Willis, 2007).

Kim and Willis (2007) proposed three justifications for such media presentation: 1) the American mainstream views, 2) the affiliation between public health and politics, and 3) *episodic* news framing. The media depicts society as a complete and established entity, therefore placing the blame on corrupt or irresponsible individuals for many problems. Kim and Willis further explained that “public health is inherently political, involving compromise and conciliation of volatile issues”. These issues affect interests of pro-social and advertisers (Kim & Willis, 2007). Thirdly, the news media often presented an issue as a specific event or personal story, which is known as *episodic* framing (Iyengar, 1991; Kim & Willis, 2007).

As discussed previously, the frame used in the news media is a result of influences from competing factors such as journalists’ intrinsic factors, news routines, news organisations and extra media forces (Gans, 1979; Scheufele, 1999; Shoemaker & Reese, 1996). For example, in the context of health news presentation, the lack of societal frame usage can be associated with journalists’ difficulties in covering health disparities and social determinant issues (Gasher et al., 2007; Wallington, Blake, Taylor-Clark, & Viswanath, 2010a). Two qualitative studies identified these challenges, mostly referring to intrinsic factors of news organisation, including 1) the structure of health news desks (focusing on diseases and treatments rather than the production of health), 2) the lack of news values for stories of social determinants (no human-interest angle in explaining the complex interrelated causes of health), and 3) working under constraints, which restricts them from doing extensive research for comprehensive reports on social determinants (Gasher et al., 2007; Wallington et al., 2010a).

3.3. Approaches in Studying News Construction

Having discussed news construction based on the hierarchical model of influences, agenda-building and framing, it is also important to note the approaches in studying the news construction process. Most framing and agenda-setting studies are based on the analysis of media content (Brüggemann, 2014; McCombs, 2005). According to Shoemaker and Reese (1996), content analysis can be categorised into two approaches: behaviourist and humanist. The behaviourist approach to content analysis concerns the effects the content produces on the audience, while the humanist approach identifies how the content reflects society and the culture producing it (Shoemaker & Reese, 1996). Therefore, this methodological choice lies with the humanist approach, which assumes that journalist practices and context in shaping news content are manifested in media content (Reese, 2008). However, the final frame and agenda presented in the news are less transparent in exhibiting the factors that influence its construction production (Brüggemann, 2014). Therefore, this research adopts a suggestion from previous studies, combining interviews of journalists and analysis of the news articles in explaining factors that influence news construction, frame-building and agenda-setting (Brüggemann, 2014; Scheufele, 2006).

3.4. Summary

This chapter discussed the influences on news construction guided by the hierarchical influences model. This model summarises the level of influences involved in news production content, such as journalists and their routines, news organisations, the extra media and the social system. This model suggests that news construction is a complicated process; it does not lie solely in the hands of journalists. Instead, journalists are under the influence of many other factors in selecting, gathering, reporting and presenting the news.

Chapter 3. Theories of News Media Construction

This chapter also examined agenda-building and frame-building, where both processes result in a particular presentation of health issues. This presentation is an outcome of the interaction between stakeholders and journalists in news agenda- and frame-building processes. Since this study is guided by the constructionist approach, it is essential to examine these influences based on the current context and the landscape of the study. The following chapter will address these influences based on the scope of the research, the Malaysian media landscape.

Chapter 4. Malaysian Media Landscape

4.1. Introduction

The previous chapter (Chapter 3) discussed the theoretical frameworks and concepts in news construction; this chapter provides an explanation of news media background of the research scope, the Malaysian media landscape. According to the model of hierarchy of influences of media content (Shoemaker & Reese, 1996, 2014), news content is not only shaped by internal factors, such as journalists, media routines and the news media organisation, but by external influences, such as social system and other extra media factors. These external influences affect the values and the structure of news media organisations as well as journalists and their routines.

With this view, this chapter assesses how extra and intra media forces such as historical, economic, political and culture influence the Malaysian news media landscape. Previous studies have identified that the press system in Malaysia is highly influenced by factors such as the multiracial society, government policy, economic development, and the political and legal system (Abbott, 2011; Firdaus, 2006; Ramano, 2005; Tamam & Tamani, 2011; Tapsell, 2013; Waisbord, 2009). The chapter begins by describing Malaysian newspaper settings to set the research scope (Section 4.1). Next, it outlines how the semi-authoritarian political system, a series of historical events and economic growth have led to the highly regulated news media environment in Malaysia (Section 4.2). The chapter continues by discussing the mechanism of government control over Malaysian mass media as well as the development journalism, Asian- and Malaysian values in the Malaysian mass media. Section 4.3 discusses the influences on the news media reporting practices. This chapter also briefly discusses the transition of news media (from traditional to new media) in Malaysia.

4.2. Malaysian Newspaper Setting

Malaysia has 72 daily and 16 weekly or bi-weekly newspapers with a total circulation of approximately 3.1 million (Audit Bureau of Circulations Malaysia [ABC Malaysia], 2016; Tamam, Jalarajan, & Govindasamy, 2012). Being a multiracial nation with a population of 32 million people of three main ethnicities (Malay, Indian and Chinese), a variety of newspapers cater to different audiences based on ethnicity and language (Firdaus, 2006; Mahidin, 2017). The vernacular newspapers are inclined to highlight social and political issues related to their ethnic groups, as the news producers are mostly from the respective community (Yang & Ahmad Ishak, 2012). Since Malay is the national language, the Malay newspaper audience is not limited to Malays but includes other ethnic groups as well (Firdaus, 2006). A similar pattern is observed for English newspapers, where the audience is better distributed among ethnic groups (Firdaus, 2006; Niner, Ahmad, & Cuthbert, 2013), because of the status of English as Malaysia's second language. Readers of English newspapers are not segregated based on ethnicity, but on socioeconomic status—most are English-educated elites residing in urban areas (Shaari, Ngu, & Raman, 2006).

The pattern of newspaper readership reflects the ethnic distribution in Malaysia (Nielsen Malaysia, 2013; Selva, 2012). The greatest readership arises from the main ethnic group of Malaysia, the Malays (62.5%), followed by the Chinese (27.8%) (Nielsen Malaysia, 2013); Indians contribute just 9.7% of newspaper readership. Assessing the distribution of readership based on age, the greatest number of readers is in the 20–29-years age group, followed by the 50-years-and-above age group (Nielsen Malaysia, 2013). The age group with the least number of newspaper consumers is the 15–19-years group.

4.3. Malaysian Media System

The current Malaysia mass media is heavily influenced by the government because of the various government control mechanisms over the media: laws pertaining to media and media ownership (Abbott, 2011; Tapsell, 2013). This current media system is a result of the political system, a long history of events and the political ideologies of the nation.

4.3.1 Malaysian Political System and Historical Context

Malaysia has claimed that it practices a parliamentary democratic system since gaining independence from British rule in 1957 (Jaafar et al., 2013). In a democratic country, citizens have the freedom to articulate their views in public domains (Anuar, 2000). Parallel to this notion, mass media in democratic countries must possess freedom and liberty in informing, educating and entertaining their audience (Watson, 1998). This media freedom enables them to function as 1) surveillance on socio-political development, 2) a platform to encourage public affairs debate, and 3) a mobiliser for public participation and learning (Jebril, Stetka, & Loveless, 2013; McQuail, 2010). In the context of Malaysia, although it practices democratic general elections, the democratic system is not fully integrated as media freedom is restricted (Kim, 2001; Shriver, 2003). Consequently, previous studies often characterised the Malaysian government as semi-democratic or semi-authoritarian (Abbott & Givens, 2015; Shriver, 2003; Weiss, 2013). In an authoritarian regime, mass media freedom is restricted, and they must support the government, whether voluntarily or involuntarily (Mohd Sani, 2005). Evidently, the mass media in Malaysia serves as the agent and the mouthpiece of the government (Shriver, 2003; Tapsell, 2013; Watson, 1998).

4.3.1.1 Historical Background of Malaysian Media

A series of historical events contributed to the current government control over the Malaysian media. Historically, the development of the Malaysian media, especially newspapers, was

closely associated with socio-political affairs (Othman, 1992; Shaari et al., 2006). Therefore, it is essential to review media historical events to understand the underlying causes that led to government-media controlled through law and media ownership. The following sections review the historical events that marked changes in Malaysian media.

Pre-Independence of Federation of Malaya

From the early 1800s until the 1930s, newspapers in Malaysia functioned for commercial purposes, or were local community newspapers. The English newspapers that belonged to British traders and rulers mostly served the commercial needs of British and Europeans. The principal content of the newspapers was commercial news and advertisements (Shaari et al., 2006). Prior to the independence movement, each vernacular newspaper served the interests of the respective ethnic group. For Malay newspapers, concerns mainly pertained to the local community, religion and later Malay nationalism (Abbott & Givens, 2015). As for Chinese and Indian newspapers, the press updated readers with the current events in their homeland. From the 1940s until 1957, Malaysia was working towards independence. During this period, Indian and Chinese newspapers shifted to support the agenda of national independence (Othman, 1992; Shaari et al., 2006).

The authoritarian concept was initially practised by the British after World War II. When the war ended, the British colonial administration established an emergency law as Malaya was under threat of guerrilla movement by the Communist Party of Malaya. During this emergency rule, the British enacted laws such as the *Sedition Ordinance 1948* and the *Printing Presses Ordinance 1948* to strictly regulate the newsprint media. This historical event indicates that the media and state worked closely to counter the insurgency (Kim, 2001). However, some argued that this law was enacted not only to contain the communist movement but to restrain the nationalist movement (Mohd Sani, 2005). To date, these two acts are still in effect, and have only been amended in the last five years.

Post-Independence

Continuing the British legacy, the ruling party in Malaysia practised authoritarianism in relation to the mainstream media and thus maintained power over them (Means, 1996). The media played an essential role in national development by supporting and advancing the government's agenda. One of the major events that led to this system was the riots that erupted after the general election in 1969. A state of emergency was declared to prevent further casualties and violence. Following this racial rioting, the government used the Sedition Act to prevent the media from publishing stories that could ignite disharmonious relations between races (Mohd Sani, 2005). The government also introduced a national ideology with the principles of peaceful reunification and racial tolerance. To promote this agenda, media were used to emphasise national identity, promote national integration and keep the peace (Hamzah, 2009). The ethnic tragedy also led to constitutional amendments related to the prohibition of public questioning on national ideology and 'sensitive issues' such as Malay special rights and privileges, Malay as the national language and many other issues (Means, 1991).

In the 1970s, the Malaysian government changed the ownership structure of the press. This change was a result of an amendment to the Printing Presses Bill that aimed to ensure that the local press belonged to Malaysians. This amendment ended foreign ownership of Malaysian newspapers. Ideally, this change brought a sense of ownership of Malaysians over their public domain. However, the change allowed the ruling political government and their economic allies to monopolise and control the media (Anuar, 2000). The series of purchases of the press from foreign companies by various partners of the ruling coalition opened further opportunities for a pervasive government intervention in media.

One clear example of government intervention in the print media was 'Operasi Lalang' (Weeding Operation), which took place during the major political crackdown in 1987 (Brown, 2005). This operation was conducted by the government as a preventative measure to overcome

an economic, racial and leadership crisis. Over a hundred politicians, social activists and media practitioners were arrested (Pang, 2006; Somiah, Hamzah, Mohamed, & Aziz, 2010). The government justified detention without trial as the parties playing up ‘sensitive issues’ and criticising government policy on suppressing freedom of expression (Ding, Koh, & Surin, 2013). The government revoked three newspapers that they perceived to be critical of government’s policies (Pang, 2006). This event was also one of the factors that led to the current culture of self-censorship among journalists and editors (Abbott, 2011). The act of self-censorship enables news producers to select, write and edit news before publishing (Ibrahim et al., 2011). Nonetheless, they must ensure that publications align with the government’s policy and agenda. By the end of the 1980s, Malaysian mainstream media outlets were completely dominated by the conglomerates with links to the ruling political parties (Kasmani, 2016). The change of ownership resulted in the mainstream press being a pro-ruling coalition, ‘Barisan Nasional’ (BN) (National Front) (Anuar, 2005).

Along with the rest of the world, Malaysia has experienced an ICT revolution. The Malaysian government announced the National Telecommunication Policy (1994–2020) (Abdullah, Hassan Basri, Hasim, & Abd Rahman, 2009), which aims to utilise ICT for economic growth and national development (Office of Prime Minister Malaysia, 2013). ICT development has given rise to a new dimension of mass media, new media, which coincided with access to the internet.

1998 marked an escalation in usage of new media, when the Deputy Prime Minister of Malaysia, Anwar Ibrahim, was fired (Rajaratnam, 2009). Many issues were raised during his dismissal, however, coverage from mainstream media was biased towards the Malaysian government and did not fairly cover Anwar’s side. Unhappy with the biased coverage from the mainstream media, Malaysians searched for alternative sources through the new media (Hasbullah, 2008). The new media provide more freedom and are not under government control

as the mainstream media (Mohd Amirul Akhbar, 2011). It was during this time the first Malaysian web-based newspaper was established, *Malaysiakini.com* (Malaysianow.com) (Pang, 2006). This alternative news website pioneered the liberalisation of Malaysian media from government control and the law, as the Malaysian government pledged a no-censorship policy for the internet (Uimonen, 2003). The internet enables democratisation of the public sphere, where the exchange of opinion is possible.

Throughout Malaysian history, one of the main government agendas has been to maintain social stability and peace. The government in power has been using mass media as the primary tool to unify the nation (Hamzah, 2009; Pang, 2006; Somiah et al., 2010). During the post-colonial era, it was important for mass media to support political efforts towards national unity and modernisation, especially for countries with deep divisions in terms of religion, ethnicity, language and tribal identities (Waisbord, 2009). In Malaysia, prior to independence, the British practised 'rule and divide', where they placed different ethnicities into different economic sectors, which resulted in uneven structural, political and socioeconomic status (Shamsuddin, Liaw, & Ridzuan, 2015). Subsequently, because of these deep divisions, in the post-independence era, the newly independent government faced challenges in developing the nation, promoting social stability and strengthening the economy (Waisbord, 2009). Therefore, the government requires support from the media, especially news media, to facilitate and deal with these challenges. For that, the government exerts control over the Malaysian mass media through laws and media ownership. Although this control may be viewed from the positive light (i.e.: supporting the development of the nation), this control also results in unbalanced journalism as the media tend to avoid from explaining the negative issues related to the government. For example, the Malaysian media is not allowed to publish news that may potentially tarnish the government reputation and credibility (Adibah, Khairie, & Su, 2017).

4.3.2 Development Journalism, Asian and Malaysian Values in Malaysian Journalism

The roles of unifying and building the nation are parallel with the concept of development journalism, a concept practised by new independent and developing countries worldwide in the 1960s and 1970s, including Malaysia (Ramano, 2005; Tamam & Tamani, 2011). Development journalism proposes that media practitioners should be ‘supporting government policies and programs designed to build integrated, stable and economically “developed” societies’ (Waisbord, 2009, p.149). Conceived in the 1960s, this concept conceptualises that journalism should help to support the development process by alerting ordinary people to the social, cultural and political aspects of development problems and offer possible solutions (Chalkley, 1980; Ogan, 1970). For that, journalists are required to refine their reporting skills to produce news that can be easily understood by people with low educational levels. As a result, ordinary people would be empowered, and consequently, be part of the development process (Ramano, 2005; Xu, 2009). In other words, development journalism highlights the social responsibility of news producers in their practices. According to Romano (2005), from development journalism perspectives, journalists function as:

- Nation builders: Instead of being sensationalism-oriented (as in Western journalism), news reporting should focus on contributing to maintaining social stability, building harmony and strengthening the economy.
- Government partners: Journalists are in a partnership with the government for nation-building. Press freedom is subjected to the nation’s economic priorities and development needs.
- Agents of empowerment: Journalists should empower and prioritise ordinary people, not elites, in the development process.

- Watchdogs: Journalists should constructively criticise and highlight the weaknesses in the government's performance.
- Guardians of transparency: Journalists should monitor the government with a high transparency level.

However, with the variation of social, economic, cultural and political settings in every nation, the empirical practice of development journalism varies (Xu, 2009). Therefore, there are countries where dominant political forces insist development journalism match with the prevailing political culture, which then justifies the government's control over mass media (Ramano, 2005; Shah, 2008). For Anuar (2000), over time, the initial concept of development journalism has been corrupted, causing the mass media to serve the interests of the government, and only offer positive portrayals of the government or ruling elites (Anuar, 2005).

In the context of Malaysia, the government promoted development journalism, and it served the country well during the rapid economic growth phase after the 1970s. During this phase, journalism played a major role in propagating governmental and national policies to educate and empower the people, engaging them in the country's efforts towards economic development (Wong, 2004). The government also regulates the mass media on the grounds of maintaining stability and avoid conflicts between ethnicities (Anuar, 2005). The Malaysian government regulates mass media through laws pertaining to media and media ownership (Abbott, 2011; Tapsell, 2013). This control leads Malaysian journalism to serve the government, instead of the interests of the public (Tamam & Abdullah, 2015).

Apart from its ability to facilitate development, modernisation and economic growth, Malaysia also chose to adopt this concept as it is consistent with Asian values. The emergence of Asian values begun around the same time as development journalism became popular in the Asian region, the 1970s (Wong, 2004). According to Massey and Chang (2002), the concept of Asian

values refers to “the idea of a shared, continental identity forged from core beliefs unique to a geographically vast land that is noticeably diverse by most other measures” (p.988). Core elements of Asian values include 1) human rights are not universal but rather contextual, based on social, economic, cultural and political conditions (Hoon, 2004), 2) family above self, community above individual (Wong, 2004), 3) social and economic rights over political rights (Hoon, 2004), 4) constructive engagement is a better option than confrontation (Wong, 2004), and 5) respect must be shown for authority and order (Massey & Chang, 2002). Asian values also highlight consensual, group-oriented tradition, and promote the collective right of the community, such as for social security and economic prosperity (Ismail, 2013). This perspective is contradictory to the Western liberal approach, which focuses on individual rights and freedoms (Wong, 2004). Journalism guided by Asian values, known as Asian journalism, views media freedom as coming with responsibility, and preserves communal harmony by avoiding highlighting conflicts and respecting authority (Massey & Chang, 2002). As a result, the notion of development journalism in Malaysia is guided by the consensus-oriented Asian values, which underpin the function of news media in reporting news, serving the larger good of society (Wong, 2004). Malaysia justifies their use of Asian values in journalism as defending their own (Asian) principles, cultural identities and diversity in modernisation and development from the perceived threats of Western cultures and values (Xu, 2009).

Apart from Asian values, the journalism in Malaysia is also influenced by the culture; a set of shared values among members of the society (Ariff & Beng, 2006; Shaari, 1997). As Malaysian society composed of several multi-ethnic groups, cultural values, norms, religions and languages influence every aspect of communication, including the news construction process. Taking the major ethnic group in Malaysia, the Malays, as an example, the cultural and religious beliefs are highly pervasive in the day-to-day interactions. Previous studies listed

three major influences on communication in Malay community: a) the customs ('adat'), b) the Islamic traditions, c) the Malay values (Awang, Maros, & Ibrahim, 2013; Shaari, 1997).

The customs (adat), defined as "a comprehensive and rather formidable code of behaviour and forms of ceremony", are highly influential in the daily social interactions. An example of adat is the respect for hierarchy that is based on social status, education, skill and age. In general, Malay's adat emphasises on conducting social interaction with etiquette such as gentleness in actions and in the selection of the words used. This adat thus does not condone open criticisms as a code of conduct in the media (Shaari, 1997). The second influence of Malay communication value is the Islamic traditions which are guided by several principles: 1) the normative religious ethics as explained in the Quran, through the traditions of the Prophet and the discussion of the religious scholars, 2) the ummah (the Islamic community) which the interests of the ummah are of higher significance, rather than individual interests, c) taqwa (God-fearing), the ethical conduct of individuals that is based on fear of God and not on personal autonomy (Shaari, 1997). The ummah and taqwa principles are rather in contrast with the libertarian philosophy of the West which upholds individual freedom and interest (Shaari, 1997). As for the Malay values, the main root of the Malay values is conflict-avoidance which results in indirectness, humility, accommodating, and politeness (Awang et al., 2013). For that, the media practitioners are mindful of the social fabric and the sensitivities of the plural societies in the process of news construction. They are well-aware of taboo subjects thus presenting subjects related to racial and religious sensitivities in the news media is avoided (Alkaff & McLellan, 2017; Shaari, 1997). Even if there is a controversial issue being presented in the news media, the issue is presented in a way that it does not challenge the core of Malay culture (Hanafiah & Mohd Yusoff, 2015). For example, the controversial issue of cloning in the Malaysian news is dominated by the voice of the local religious scholars which are also

aligned with the government's orientation. The journalists steer clear from any views that are against the government stance on the issues (Hussein, Hamid, & Aziz, 2006).

The practices of these values in Malaysian journalism is somewhat aligned with the development journalism and Asian values. Since development journalism aims to support the government agenda towards economic development, the local values complement with the role that mass media holds where both aims to maintain stability and avoid conflicts between ethnicities (Anuar, 2005; Awang et al., 2013; Shaari, 1997). When comparing the Asian values with the Malay culture and values, both are parallel as they appreciate group-oriented tradition, promoting collective right of the community (Ismail, 2013).

4.3.3 Mechanisms of Government Control over Malaysian Mass Media

With the combination of Asian- and Malaysian- values together with development journalism in the semi-authoritarianism political system, the Malaysian government controls media freedom through two mechanisms: laws pertaining to media, and media ownership (Abbott, 2011; Tapsell, 2013). The government's control over the media results in limited freedom and liberty of the Malaysian mass media. This control is reflected in the recent World Press Freedom Index, which ranks countries according to the level of freedom available to journalists, and ranked Malaysia 144 out of 180 countries (Reporters Without Borders, 2016). Reporters Without Border, which publishes the index, commented that Malaysian laws continue to be the biggest obstacle and threat to journalism (Reporters Without Borders, 2016), as they restrict the freedom of speech in the media, and allow the government to censor articles and fine, or even close down, media outlets that they find to be critical of or threatening to the government (Abbott & Givens, 2015; Mohd Sani, 2005).

Studies have identified at least five laws that govern the Malaysian media industry: *Printing Presses and Publications Act 2012*, *Security Offences (Special Measures) Act 2012*, *Sedition*

Act 1948, Official Secrets Act 1972 and Defamation Act 1957 (Abbott, 2011; Mohd Sani, 2005; Peng, 2005; Singh, 2003). Through these acts, the government exerts control over the media to ensure that they facilitate the government's agenda. The *Official Secrets Act* allows the government to ensure that the media only publishes official information with authorisation (Abbott & Givens, 2015). Before the latest amendment in 2012, the *Printing Presses and Publications Act* gave the Home Minister the absolute power to revoke printing permits and licenses of publishers. Media practitioners or publishers who 'maliciously' print false information are heavily fined and jailed (Abbott & Givens, 2015). The latest amendment to the act removed the absolute power of the Home Minister, whose decisions can now be challenged in court (*Printing Presses and Publications (Amendment) Act 2012*). These acts are the major legislative tools used to establish government's political and economic control of the media. With these laws, any organisation that is not favourable towards the government would be unlikely to receive permits for printing presses or publication (World Association of Newspapers and News Publishers [WAN IFRA], 2014).

Another mechanism of governmental control over the media is media ownership. Although Malaysian newspapers are privately owned, most are influenced either directly or indirectly with the ruling parties (Shriver, 2003; WAN IFRA, 2014). The ownership of the major newsprint media belongs to two major conglomerates: Media Prima Berhad and Utusan Group Berhad. Media Prima Berhad is the media investment wing of UMNO (United Malays National Organisation), a ruling Malay political party (Fee, Appudurai, & Fee, 2011; WAN IFRA, 2014). Media Prima Berhad not only publishes two English and four Malay newspapers, but the conglomerate owns 100% of the private free-to-air television channel in Malaysia (Anuar, 2012). In 2013, Media Prima Berhad's newspaper readership and circulation were the largest in Peninsular Malaysia, as well as the TV viewership (WAN IFRA, 2014). On the other hand, UMNO and its nominees own Utusan Group Berhad that publishes *Utusan Malaysia* and

Kosmo!, by owning more than 50 percents of the company shares (Abbott, 2011; WAN IFRA, 2014). In the late 1950s, the ruling government began to recognise how influential the media impact on the public perception. Therefore, the government leaders decided to take over the press as an effort to secure their political power (Sani, 2008). The ownership takeover triggered a ninety-three-day strike by the *Utusan Malaysia*'s editor and journalists, yet the government finally succeeded the takeover in 1961 (Abbott, 2011; Mohd Sani, 2014; Sani, 2008). The chief editor of *Utusan Malaysia* at that time viewed the takeover as 'the death of press freedom' in Malaysia (Abbott, 2011). To date, *Utusan Malaysia* operated as a mouthpiece for UMNO (Mohd Sani, 2014). The other two parties that are constituents of the current coalition ruling parties, Malaysian Chinese Association (MCA) and Malaysian Indian Congress (MIC), also hold a substantial ownership in the Malaysian press (Brown, 2005; Mohd Sani, 2014). MCA, through its official holding company, Huaren Holding Sdn Bhd, owns *The Star*, which has the highest readership among English newspapers. The company also owns two radio stations, RedFM 104.9 (English radio) and 988 (Chinese radio) (Tan & Ibrahim, 2008). Tamil newspapers, *Tamil Nesan* and *Malaysia Nanban*, are both owned by the previous MIC president (Brown, 2005).

The government -political-party controlled press has resulted in both positive and negative impacts on the media landscape in Malaysia. From the viewpoint of the government, this ownership control ensures that only reporting that they consider as 'responsible' would be published. The close watch on the press could also avoid any malicious contents towards the current government (Yahya, 2006). For that, elites—in this context, the political actors from the governing parties—gain extensive coverage, while the opposition party and their criticisms are restricted (Ufen, 2009). However, looking from a different angle, this government-controlled media environment led to homogenous information and controlled reporting, thus suppressing any opposing and critical view towards the government on the current affairs (WAN

IFRA, 2014; Yahya, 2006). For example, reports on landslide in *Utusan Malaysia* focused more on the measures taken by the government rather than highlighting the factors that led to the problem (Ahmad & Lateh, 2016). One of the possible outcomes of this type of reporting is that the media content offers no challenge on the audience's intellectual judgement and thus developing a highly receptive society (Yahya, 2006). In addition, this government-political-party controlled press also erodes the press' credibility (Yahya, 2006). The public would divert their source of information from mainstream media to alternative media. Such scenario occurred during the coverage of the Deputy Prime Minister, Anwar Ibrahim in 1998, where there was a public outcry due to the biased media coverage (Hasbullah, 2008).

Another impact of the government-political-party controlled press is the source of advertising revenues. Since the Malaysian newspapers are dominated by government-linked media conglomerates, the conglomerates received most of the billions of ringgit in Malaysian annual advertising expenditure (WAN IFRA, 2014). However, the question of who pays for the advertisement is rather controversial. According to Nielsen advertising spending information, the highest product or service categories were the Malaysian institutions (WAN IFRA, 2014). Although the government is not a business entity, nonetheless, it is the highest source of advertising revenues of the country, thus establishing a cyclical flow of money where taxpayers' money is used to purchase advertisements in government-linked newspapers (WAN IFRA, 2014). The spending of advertisement is a mix of public advertising such as health campaign, as well as promoting government-political-party.

4.4. Malaysian News Media Reporting Practices

News media production involves numerous processes such as selecting, gathering, reporting, editing and publishing of stories. The previous section of this chapter discussed how the government heavily controls the news media through laws and media ownership because of

the political system, historical context and economic growth requirements, encouraging the government to adopt development journalism, Asian- and Malaysian-values journalism. This section discusses how these conditions influence news media reporting practices such as news information sourcing, news organisational structure and operation, and journalists' role.

Working under news organisations that are either directly or indirectly owned by the ruling government, and in a working environment that is subjected to laws, journalists are incumbent to portray the ruling government, and its affiliated party in a positive light (Manan, 2001; Rajaratnam, 2009). For that, the news media in Malaysia relies heavily on the elites (dominant political party in Malaysia) and the government for sources of news information (Ahmad & Lateh, 2016; Fong & Ishak, 2015; Latif, 2015). These stakeholders control the information presented in the news media and ensure that it aligns with the government agenda (Ahmad & Lateh, 2016). The heavy reliance on the ruling political parties as news sources results in a tendency to create a specific picture of power and hegemony by legitimating their status and policy decision in the media (Fong & Ishak, 2015; Mohd Don & Lee, 2014). By doing this, the ultimate aim is to orient the public discourse according to the government agenda. This practice is especially common in news related to local political, ethnics and social affairs (Ahmad & Lateh, 2016; Fong & Ishak, 2015; Mohd Don & Lee, 2014). In addition, sourcing news information from government officials implies that they hold the power as the authoritative source for the latest and official public affairs (Latif, 2015). Therefore, it is not surprising to observe government initiatives being highlighted in the Malaysian news media, compared with public debates on public affairs (Samani, Amin, Maliki, & Rezali, 2010). A content analysis on landslide reports that *Utusan Malaysia* highlighted the measures taken by the government in addressing the issues, rather than presenting the victims opinion or factors contributed to the problem (Ahmad & Lateh, 2016).

At the level of the news media organisation, journalism practices in Malaysia follow hierarchical ranks and orders (emphasised within Asian- and Malaysian-values journalism), where the power of news staffs increases with rank (Latif, 2015; Othman, Mat Nayan, & Tiung, 2013). For example, after journalists gather and report stories, the decision of selecting which stories to publish or broadcast lies in the hands of the sub-editor. If selected, stories are then further discussed and finalised in the daily meeting of editors, as a final gatekeeping process (Latif, 2015). Stories that are selected through this multi-level gatekeeping must be in parallel with the news organisational values, national interest, Asian-, Malaysian- and government values. If the process of editing and reporting fails to conform with these values, the editor has the power to cut the story (Latif, 2015). In summary, the news stories produced by the Malaysian news media is shaped by the political and economic values and social boundaries within which they work (Yang & Ahmad Ishak, 2012, 2013, 2015).

The current Malaysian media environment, which is highly regulated by the government and majorly influenced by the cultural values, also influences journalists' conceptualisation of their role. Previous surveys have shown that Malaysian journalists have mixed views of their role in this highly regulated media environment (Tamam & Abdullah, 2015; Tamam et al., 2012). Most journalists see themselves merely as the disseminator and the interpreter, with no critical judgements in their reporting (Tamam & Abdullah, 2015; Tamam et al., 2012). The majority conceptualise their role as the disseminator (getting information quickly to the public), followed by the role of the interpreter (providing analysis and interpretation of issues and problem) (Tamam & Abdullah, 2015; Tamam et al., 2012). Journalists showed less support for analytical-objective (discussing national policy and developing intellectual and cultural interest of the public) and mobiliser (providing a platform for public to express their views and motivating their engagement) roles (Tamam & Abdullah, 2015). One of the explanations for such conceptions is that, the journalists must submit to the government agenda in order to keep

their job as there are laws pertaining to media, which eventually jeopardising their organisation and profession should their news reporting were against the government agenda. Furthermore, the Asian and Malaysian values that they practice emphasise on conflict avoidance and being respectful towards others. Tamam and Abdullah (2015) also found journalists were less passionate about the role of watchdog (monitoring and highlighting weaknesses in the government's performance). This lack of support for this role comes as no surprise given the highly regulated journalism environment, manufactured by the government, which restricts them from being critical of the government. This limitation of freedom of the press also inhibits journalists from practising investigative journalism (Adibah, Khairie, & Su, 2017). Further, gathering detailed information from government linked sources involves bureaucracy and red tape (Adibah et al., 2017). As a result, Malaysian journalism is more inclined to 'cue journalism' or 'passive journalism', where they merely disseminate information to the public when they receive a cue from government officials or ruling elites (O'Neill & O'Connor, 2008; Tamam & Abdullah, 2015).

The news reporting practices in Malaysia do not only involve journalists-sources relationship, the PR-journalists relationship is also noted as an important practice in news reporting. Previous study found that news editors value the media relation practices between the news media and the PR practitioners (Mohamed Ariffin, 2016). The editors suggested that to improve the effectiveness of the relationship, it is important for the PR practitioners to include materials with news values, to be equipped with training and experience in order to be able to comprehend how news media works, as well as being effective in enhancing the image of the organisation that they present (Mohamed Ariffin, 2016). Another positive relationship between the news media and PR is reflected from a study examining the role of PR in the Malaysia's MOH during the Severe Acute Respiratory Syndrome (SARS) outbreak (Sannusi & Siarap, 2014). The results showed that PR strategies and tactics have facilitated the ministry in

handling the issues. The strategies included daily media press conferences which provided current information to the media and the public (Sannusi & Siarap, 2014). The result of this study supports previous surveys conducted between Malaysian journalists and PR practitioners, where the latter believed that the information they provided enables journalists to perform more satisfactorily. However, the journalists in the survey did not think that PR practitioners contributed strongly in their job performance (Kaur & Shaari, 2006). In addition, the relationship between PR and news media is dictated by the influence of the media corporate organisation policies. A study in media relations found that political authorities and advertisers have strong influences in directing these policies (Mohamed Ariffin & Md Sidin, 2011).

4.5. Media Transition in Malaysia: from Traditional to New Media

Malaysia has been experiencing rapid growth in information and communications technology (ICT) since the 1990s. This rapid development has changed the landscape of the news industry worldwide, including Malaysian mainstream newspapers. The shift to online news media consumption is also driven by attractive features it offers, such as convenience, immediacy, accessibility and capability of providing alternative views (Omar, 2017; Wilson, Leong, Nge, & Hong, 2018). Online news also provides higher relative freedom than traditional news media. Consequently, a study showed that online news media in Malaysia is considered a mobiliser for public political participation (Willnat, Wong, Tamam, & Aw, 2013).

With the shift of news consumption from traditional to online news media, the readership of Malaysian newspapers has witnessed a decrease over the years since 2004 (Mohamed Ariffin & Jaafar, 2009). The declining trend was linked to the tremendous growth of internet users in Malaysia (Mohamed Ariffin & Jaafar, 2009; TheGlobalEconomy.com, 2017). However, a number of studies have suggested that there are other factors that have contributed to this trend. A study attributed the static growth, and even decline, in the circulation of hardcopy news to

the audience losing interest in political issues once the general election ended (Shahrul Nazmi & Normah, 2015). Another earlier study, examining the 10-year trend (1993–2003) in printed newspaper circulation, associated the declining trend in newspaper circulation with the economic downturn in the late 1990s (Hasim, 2003). Nonetheless, although there is an obvious switch from print to online media for news with the emergence of the internet and new media, there has been no complete migration of news consumption from traditional to new media in Malaysia (Hasim, 2003; Salman, Ibrahim, Abdullah, Mustaffa, & Mahbob, 2011; Shahrul Nazmi & Normah, 2015)—printed newspapers remain the principal source of information for Malaysians (Ali Salman et al., 2011).

The total adoption of online news media may be inhibited by several factors. First, the penetration of traditional media, such as television, newspaper and radio, remains higher than the new media (Selva, 2012). Television channels score the highest, reaching more than 90% across age groups in Malaysia, followed by the radio. Newspapers reach 50–70% of all Malaysian age groups. A survey report from the Malaysian Communications and Multimedia Commission (2016) showed that the internet appeals to the younger but not the older age groups. This generational gap between internet users is reflected in the user profiles of traditional media, with older age groups preferring to receive information via the traditional media such as television, radio and newspapers (Abdul Karim & Hasan, 2007; Freeman, 2013; Selva, 2012). Other than the age gap, the unequal distribution of sociodemographic determinants of internet users may also result in dependency on old media rather than online media. The latest internet user survey identified that 62.1% of users were from urban areas (Malaysian Communications and Multimedia Commission, 2016). This suggests that although internet penetration has been increasing in Malaysia (Statistics Department MCMC, 2017), traditional media is still relevant as a source of information, especially in rural areas and among the older age groups.

4.6. Summary

This chapter outlined the current newspaper setting and media environment in Malaysia. The variety of newspapers in different languages demonstrates that Malaysian media embraces the multi-ethnic society and caters to the need of each audience. As multi-ethnicity is one of the unique features of Malaysia, it is important to maintain stability and peace. The historical events showed that the government has been using mass media to achieve these aims. On the grounds of maintaining peace and social stability, the government controls the Malaysian mass media through laws pertinent to the media and direct or indirect ownership of media organisations.

The government also justifies restrictions with the rationale that it is important for mass media to support government efforts in social and economic development, parallel to the notions of development journalism and Asian values. As a result, news media reporting must be aligned with the government's agenda. This restriction also limits journalists' role in providing critical news reports. This highly indirect intervention by the government in the media is rather in contrast to the Anglo-American model, which has limited political parallelism, weak government intervention, yet strong market influence. In fact, the intervention has limited the press freedom, as reflected by the conceptualisation of journalist's role among the news media reporters in Malaysia. The cultural influences on Malaysian journalism also reinforce the limitation of press freedom. However, the significant ICT revolution has brought a significant shift in news media consumption, with the internet democratising the public sphere as it is relatively freer than traditional media. Nonetheless, there is yet to be a complete shift from traditional media to new media, which implies that traditional media is still relevant and important to Malaysians.

Chapter 5. News Analyses of NCDs: A Literature Review

5.1. Introduction

This chapter presents a literature review of peer-reviewed journal articles analysing news coverage of NCD issues. Previous literature reviews have only examined the analysis of general health news (Manganello & Blake, 2010; Nazione et al., 2013); to date, there has been no review documenting analyses of NCD news. This review fills this gap and further informs current research and future news analysis of NCDs. The findings of this review may determine the current invested focus of newspaper analyses on NCDs and future investigation areas.

The literature review answers five research questions. First, the review examines NCD-related topics of NCD news analyses, mapping the NCD topics present in the literature to help health communication practitioners identify which NCD topics have been given attention by the research academics. Further, the most attention paid may indicate which NCD topics are deemed essential health issues, and thus inform where future research is needed.

Research Question 1: What are the main topics of NCD that were analysed?

As previously discussed in Chapter 3, studies that analysed the news media content often employed a content analysis approach. Nonetheless, there are other methods available, such as discourse analysis and rhetorical analysis (Jensen & Jankowski, 1991). Therefore, this review aims to identify which method was used in analysing NCD news.

Research Question 2: What are the methods used in analysing the newspapers articles?

In health communication research, previous reviews have identified that research in this field is lacking a theoretical underpinning (Lwin & Salmon, 2015; Manganello & Blake, 2010; Nazione et al., 2013). It is essential to build research on theoretical guidance, since

incorporating theory in research provides a comprehensive understanding of the phenomenon (Nazione et al., 2013). Therefore, this literature review investigates whether NCD news analyses are guided by any theories or conceptual frameworks.

Research Question 3: What theories or conceptual frameworks are used to analyse NCD-related news articles?

Chapter 2 presented the emerging burden of NCDs at the global level. Therefore, it is important to map NCD news analyses, to identify which countries have been investing effort into evaluating NCD news.

Research Question 4: Which countries are the analysed newspapers from?

Finally, this review also aims to identify the main critical findings of the NCD news analyses. With the increasing prevalence of NCD in LMICs, it is expected that many news analyses conducted in LMIC.

Research Question 5: What are the key findings of the analyses?

5.2. Methods

The literature review only includes peer-reviewed journal articles that analysed the content of newspaper articles related to NCD issues. Figure 7 summarised the multistage process used in identifying relevant journal articles. The details of the process are described below.

5.2.1. Search strategy

A systematic search strategy was employed to identify journal articles extracted from five databases: PubMed, EMBASE, PsycINFO, CINAHL and Scopus. Since NCD covers various diseases, this review limited its focus to the four principal diseases: cardiovascular disease, cancer, diabetes and chronic respiratory disease (WHO, 2014b). The specific terms used

included newspapers, representation, cancer, cardiovascular diseases, diabetes mellitus, chronic obstructive pulmonary disease and asthma. Additional search terms were generated from a thesaurus and subheadings in relevant databases. The search also added prevention and risk factor as additional search terms to obtain a comprehensive literature review. The review created the final search string based on the combination of all terms (see Appendix 1). Table 2 lists the subjects and keyword terms used in the search strategy.

5.2.2. Inclusion and exclusion criteria

Once the articles from the database were retrieved, any duplicate title was eliminated. Next, the selection criteria were applied to the article's title and abstract. The articles were included if they met the following inclusion criteria: 1) published in an English or Malay peer-reviewed journal, 2) content analysis of newspaper articles issued from 2010 until 2015 and 3) only analysed NCD-related issues. Although there were many studies examining health news from other media outlets, the sample was limited to studies that analysed only newspaper articles. The reason for this limitation is to obtain a manageable result for the review. Further, every media outlet has a different circulation and population reach, therefore, restricting the sample to newspaper analysis enables relative results comparison. The review selected this time frame for two reasons: 1) to collect the latest studies of interest during the time of the review conducted and 2) to obtain a manageable result. To address Research Question 4, the literature review did not apply any geographical limitations in the search criteria. To refine the results, exclusion criteria were applied to the articles' titles and abstracts: studies that 1) analysed news from other media sources such as magazine articles, web pages and television, 2) included other methods such as interviews and surveys and 3) included other health issues were omitted.

Table 2. Search Terms.

Newspapers	NCD				Representation	Additional keyword
	<i>Non-communicable disease</i>	<i>Cancer</i>	<i>Cardiovascular Disease</i>	<i>Diabetes</i>	<i>Chronic Obstructive Pulmonary Disease</i>	
Newspapers	'Non-communicable disease'	Cancer	Cardiovascular disease	Diabetes mellitus	Chronic respiratory tract disease	Prevention
Newsprint		Neoplasm	Stroke	Diabetes mellitus type 2	Chronic obstructive lung disease	Risk factor
'Print media'			Heart disease		Asthma	Coverage
Newspaper article					Respiratory tract disorder	Reporting

Table 3. Exclusion and Inclusion Criteria of Studies.

Inclusion Criteria	Exclusion Criteria
English or Malay language	Used sample other than newspapers
Peer-reviewed journal	Included other methods than news analysis
Only content analysis of newspaper articles	Examined general health issues
Published between 2010–2015	Included non-related NCD issues
Only examined NCD-related issues	

5.2.3. Data extraction and analysis

Once the exclusion and inclusion criteria on titles and abstracts were applied, the full-text articles that fit the criteria were retrieved. To refine the results, a similar selection process was conducted on the content of the articles. Once the articles were finalised, the descriptive characteristics were recorded: title of the article, author(s), year of publication, main topic(s), country of the newspapers analysed, methods used, theory applied, study timeframe, type of newspaper and study sample. Any key findings relevant to the review were noted. Microsoft Excel was used to assist this process.

To address Research Question 1 (what are the main topics of NCD that were analysed?), the main topic of each article was examined in two stages. The first stage identified the main NCD topic of the article, where main topic is defined as the dominant and overall topic of the article (Beck et al., 2004). If a study assessed multiple NCD topics, the main topic was classified based on the primary focus and objective of the study. To offer a finer specification of the NCD topic, the main topic was specified into respective specific categories in the second stage (see Table 5).

The main topics were organised into specific disease, risk factor and solution of NCD. The articles that mainly analysed the representation of a specific NCD were classified under 'disease'. Articles that analysed multiple aspects of a disease, such as prevention, signs and symptoms, risk factors and actors, were also classified under 'disease'. The rationale for this classification is that they provide an overall news analysis of the disease. For example, a study by Jones et al. (2010) was classified under 'disease' as it analysed a range of news coverage of colorectal cancer. The articles analysed the frequency of the news articles, the coverage of symptoms and the stories of celebrities affiliated with the disease (I. H. Jones, Williamson, & Hocken, 2012). For further specification, this article was placed under the 'cancer' category in the second stage.

If an article's primary focus is NCD risk factors, it would be categorised under the 'risk factor' topic. The specifications of this topic are 1) behavioural, 2) metabolic and physiological and 3) environmental risk factors.

Articles focused on the solution of NCDs were categorised as 'solution', where the 'solution' topic was divided into 'treatment' and 'prevention' in the second stage classification. Subtopics were adopted from the 'cancer continuum', a term from the cancer research community (National Cancer Institute, 2011) that refers to the process of cancer from the beginning to the end, which includes prevention, detection, treatment, survivorship, and end-life care (National Cancer Institute, 2011). Since the continuum of cancer represents a similar process and stages of NCD, this review used the concept in detailing the 'solution' topic. Prevention was defined as any intervention that aims to stop, eliminate or postpone the emergence or development of NCD at the individual or population level (Tengland, 2010). Therefore, any article with the main topic of NCD prevention, such as limiting alcohol intake, tobacco control, sun protection, and preventive surgery, were classified under 'prevention' (Stryker, Emmons, & Viswanath,

2007). Any article with the main topics of surgery, radiation, medication, biological therapy, complementary or alternative treatments were categorised as ‘treatment’

In addressing Research Question 2, the methods used to analyse newspaper articles were noted. To address Research Question 3 (what theories and conceptual framework are used to analyse the newspaper articles on NCD-related issues?), articles were categorised under ‘theory’ if they explicitly referred to and mentioned how theories, frameworks, models or concepts underpinned the research design. Studies that mentioned these without further explanation on how they guided the research design were considered as ‘a-theoretical’. For Research Question 4, the countries in which the analysed newspapers were published were recorded. If the study included a sample from multiple countries, all countries were recorded.

In contrast to Research Questions 1–4, which describe particular traits of retrieved articles, Research Question 5 provides an overview of the articles’ critical findings. For that, the important findings related to this current review were analysed.

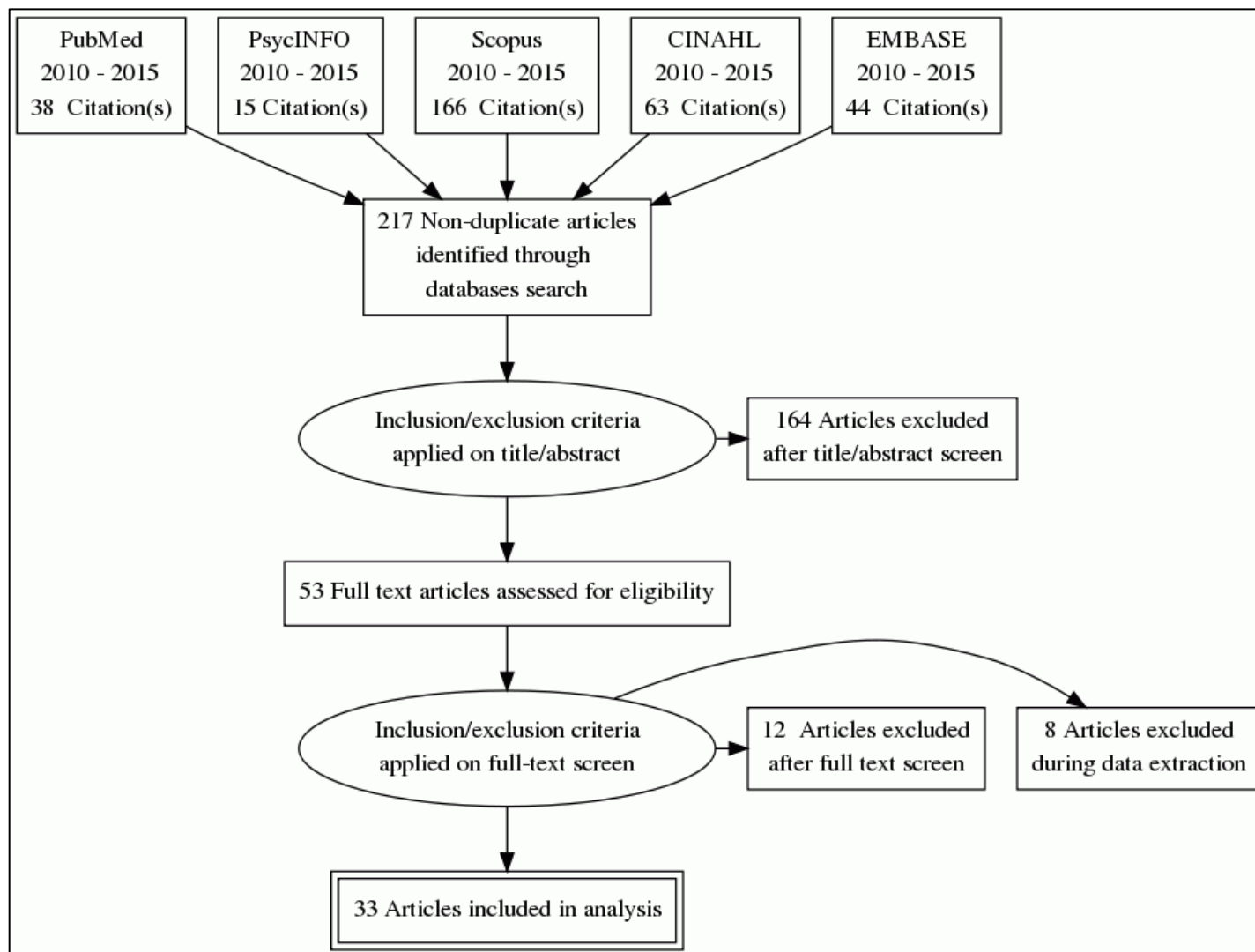


Figure 7. Flow diagram of study selection for the systematic review.

5.3. Results

Figure 7 depicts the multistage article selection process. The comprehensive database search yielded 326 articles. In total, 217 articles remained after duplicates were removed. After applying the inclusion and exclusion criteria on the title and abstract of the citation, 53 articles were retrieved for full-text review. To refine the results, a similar selection process was conducted on content of the retrieved articles, leaving 33 articles in the final sample.

5.3.1. Description of reviewed studies

Table 4. Characteristics of Reviewed Articles (n = 33).

Numbers may add up to more than 33 because of multiple countries listed in a study.

Characteristics	Numbers	%
NCD topic (see Table 5 for further details)		
Disease	8	24
Solution	16	48
Risk factor	8	24
Others	1	3
Theory		
None	29	73
Theoretical/conceptual	4	12
Method		
Content analysis	32	97
Others	1	3
Country		
UK	12	32
US	10	27
Australia	5	14
Canada	4	11
China	3	8
Other	3	9

In addressing Research Question 1, the review found that ‘solution’ emerged as the main topic of the NCD newspaper analyses. About half of the analyses focused on NCD solutions (n = 16). Within this topic (see Table 5), analyses of NCD prevention (n = 13) was higher than treatment (n = 3). The most commonly analysed prevention effort was regarding tobacco control (n = 9). The review classified eight studies under the ‘disease’ topic, where cancer was the most commonly analysed disease (n = 7). Analyses of news studied various types of cancer, ranging from general, skin, colorectal and bone cancer. Only one article analysed asthma.

Half of the articles that predominantly studied the news coverage of NCD risk factors (n = 8) assessed behavioural risk factors. The most common behavioural risk factors analysed were harmful use of alcohol and tobacco use (n = 3). Two articles specifically analysed the news coverage of physiological (hypertension and obesity) risk factors, and only one article studied biological risk factors (genetics). One article analysed the news portrayal of environmental factors on asthma.

Table 5. Specific Topics of Articles (n = 33).

Main topics	Specific topics	Number	%
Disease (n = 8)	Cancer	7	21
	Asthma	1	3
Risk factors (n = 8)	Behavioural	4	12
	Physiological/biological	3	9
	Environmental/societal	1	3
Solution (n = 16)	Prevention	13	39
	Treatment	3	9
Other (n = 1)	Survival rate report	1	3

For Research Question 2, the literature review revealed that the majority of studies used content analysis to analyse newspaper articles (n = 32). Three specified the type of content analysis they used: thematic analysis (n = 2) and rhetorical analysis (n = 1). One article used dispositive analysis (n = 1), where dispositive analysis is a method of critical discourse analysis used to analyse newsprint media (Cluckie, Rudd, & Mckevitt, 2012; Lupton & McLean, 1998). Regardless of the analysis method, all articles presented a certain amount of quantitative analysis. Only three articles provided in-depth qualitative analysis of the news content.

The literature review found that only 12% of articles explicitly stated and applied theories or concepts in their research design (n = 4). These theories or concepts referred to framing theory (n = 2) (Johnson, Sionean, & Scott, 2011; Mercurio & Elliott, 2011),, journalistic bias (n = 1)(Ries, Rachul, & Caulfield, 2011) and the dominant epidemiological paradigm (n = 1) (Mayer, 2012). Although many studies mentioned theories such as framing, agenda setting and gatekeeping, they fell short when applying this to research design, mentioning theories as part of the introduction or discussion section with no explanation of how they underpinned the study. Studies that used theory provided an explanation on how it guided the study in the methods section. Interestingly, this review identified that media-related theories were more dominant than health-related theories in NCD news analyses: dominant epidemiological paradigm is health-related theory, whereas framing theory, news values and journalistic bias are media-related theory and concepts.

For Research Question 4, the result of the review indicated that news content analyses were mostly conducted on newspapers published in the UK (n = 12), followed by the US (n = 10), Australia (n = 5), Canada (n = 4) and China (n = 3). Countries that were classified as 'other' are Malaysia, New Zealand and Japan. Two studies included newspapers from three different countries: the US, the UK and Canada.

5.3.2. Summary of the key findings

This section aims to address Research Question 5, on identifying key findings of the analyses. Similar key findings across the sampled literature were identified and categorised as 1) trends in NCD news coverage, 2) over-representation of breast cancer in NCD news, 3) risk factors for NCDs, 4) solutions for NCDs, 5) effects of NCDs, 6) sources of NCD news, 7) public health information in NCD news, 8) tone and slant of NCDs coverage in newspapers and 9) type of newspaper publication.

5.3.2.1 NCD newspaper coverage over time

The literature review found that many studies examined trends in NCD newspaper coverage (n = 19). To study trends, most calculated the frequency of NCD articles over the study timeframe. Overall, they found that an increasing trend in newspaper coverage of NCDs over time (n = 14). Nonetheless, four studies identified an inconsistent trend in NCD coverage by newspapers within the study timeframe.

On reviewing trends in NCD news coverage, the review identified two type of stories that have high potential in influencing newspaper coverage of NCDs: public health events and celebrity stories. The most common public health event influencing coverage was government intervention (n = 4). For example, the pattern of tobacco control issues was prevalent whenever debate over a new policy took place at the governmental level, and the policy was subsequently introduced to the public. Newspapers published a high number of stories on tobacco issues during the introduction of the tobacco initiative tax and smoke-free policies (Hilton, Wood, Bain, et al., 2014a; Patterson, Semple, Wood, Duffy, & Hilton, 2015b; Thrasher et al., 2014; Thrasher, Kim, Rose, & Craft, 2015). Apart from government intervention, newspapers also frequently covered other public health events, such as awareness programmes and charity events. For example, newspapers in Australia and China published a high number of articles

on tobacco control issues during World No Tobacco Day (He, Shen, Yin, Xu, & Lan, 2014; M. A. Wakefield, Brennan, Durkin, Mcleod, & Smith, 2011).

Although most of the literature studied trends in NCD newspaper coverage over time ($n = 19$), almost half did not investigate trends ($n = 14$). The main reasons for this are the primary objective or methods of study. For example, a study by Williamson et al. (2011) did not examine the trend in coverage as it aimed to compare media coverage of common cancers in the UK with their prevalence. Another study by Collin and Hughes (2011) did not provide coverage of trends since it intended to conduct a qualitative analysis of the representation of hypertension in media.

5.3.2.2 High coverage of breast cancer

Cancer is the most commonly analysed NCD in this sample of the literature ($n = 7$). In these studies, the review discovered that breast cancer received the highest news coverage in comparison with other types of cancer. This finding is consistent in studies that compared cancer coverage between years and across decades (Henry, Trickey, Huang, & Cohen, 2012; Jensen, Moriarty, Hurley, & Stryker, 2010). For example, a study by Jensen et al. (2010) showed that breast cancer consistently received the highest coverage in comparison with other types of cancer over three decades. A similar result is found when comparing coverage of cancer between 1988 or 1989 and 2008 in Canadian newspapers (Henry et al., 2012). Another study comparing news coverage of cancer with prevalence indicated that breast cancer not only received the most coverage but is over-represented (William et al., 2011). This is not limited to studies examining cancer coverage but extends to coverage of NCD treatment. A study of complementary and alternative medicine (CAM) found that breast cancer was most often mentioned in CAM-related articles (Mercurio & Elliott, 2011).

5.3.2.3 Risk factors for NCDs

In the literature, nine articles analysed NCD risk factors in newspapers in detail. These are not limited to articles with ‘risk factors’ as their main topic; some have either ‘disease’ or ‘solution’ as the main topic (see Table 5). The results of the content analyses showed that the media highly emphasised individual risk factors (n = 5), mostly associated with poor lifestyle choices. The media constantly depicted unhealthy dietary patterns and a sedentary lifestyle as the main drivers of NCD prevalence (n = 4). Studies on news coverage of cancer, type 2 diabetes, cardiovascular and obesity shared these findings (Hellyer & Haddock-Fraser, 2011; Hilton, Patterson & Teyhan, 2012; Jensen et al., 2010; Ries, Rachul, & Caulfield, 2011). Jensen et al. (2010) claimed that the portrayal of cancer risk factors is problematic, since newspapers have constantly highlighted poor diet and physical inactivity as the major risk factors for over three decades. A single study in the literature presented a different type of individual risk factor, attitude to alcohol consumption. This study examined newspaper framing of alcohol policy debate, revealing the construction of alcohol problems from critics’ and advocates’ perspectives. The critics of the policy presented alcohol problems in relation to drinkers and their problematic attitudes to alcohol (Hilton, Wood, Patterson, & Katikireddi, 2014b).

Apart from individual risk factors, the literature review identified studies analysing other types of NCD risk factors in newspapers, including environmental or societal (n = 4) and biological (n = 1) risk factors. One study specifically analysed the biological risk factor genetics (Caburnay, Babb, Kaphingst, Roberts, & Rath, 2014), comparing coverage of genetic-related information between African American weekly newspapers and general audience newspapers. Environmental or societal risk factors were studied in numerous newspaper analyses; for example, studies on obesity, type 2 diabetes, cardiovascular disease and alcohol policy (Hellyer & Haddock-Fraser, 2011; Hilton et al., 2012; Hilton et al., 2014; Ries et al., 2011). A study on obesity news acknowledged that the main risk factors for obesity not only depend on individual

choice, but are driven by the modern environment (Ries et al., 2011), where the modern environment was defined as the current social and physical environment that limits the opportunities for healthy choices. However, the results of this study showed there is scant representation of this risk factor in newspapers. Another study on obesity news analysis found that societal risk factors were significant in NCD news; the second most mentioned after individual risk factors (Hilton et al., 2012). This study further analysed and characterised societal risk factors as an abundance of processed and fast food, food and drink advertising and promotion, poor food labelling and education, technological change and modifications to modern living, and a lack of health services, interventions and facilities. These fit with the definition of environmental risk factors by Ries et al. (2011). Therefore, both environmental and societal risk factors can be used interchangeably. Similar to Ries et al. (2011), other studies on news related to type 2 diabetes, cardiovascular disease and hypertension also found limited discussion of societal factors in newspapers (Collin & Hughes, 2011; Hellyer & Haddock-Fraser, 2011).

Although newspapers frequently presented individual choice as the main NCD risk factor, two studies showed different results (Hilton et al., 2012; Jensen et al., 2010), indicating a mixed trend between individual and societal risk factors over time. For example, when Jensen et al. (2010) compared their analysis with two similar content analyses conducted in 1977 and 1980, they found that coverage of environmental factors has dramatically declined (Jensen et al., 2010). In contrast, a study by Hilton et al. (2012) on obesity news coverage found the opposite: over time, there has been an increasing trend in environmental and societal factors in obesity coverage whereas coverage on individual risk factors has decreased (Hilton et al., 2012).

5.3.2.4 Solution for NCDs

The review identified that within articles with a main topic of NCD solutions, there were more articles with the main topic of NCD prevention than NCD treatment (see Table 5). However,

this pattern is limited to the main topic of the articles, as the results section of the literature showed a different pattern. For example, studies with a main topic of cancer found that newspapers presented more coverage of NCD treatment than prevention (n = 3) (Henry et al., 2012; Jensen et al., 2010; Liu, Liu, Xiao, Cai, & Xu, 2010). Studies on news of skin cancer showed that almost half of the news cancer coverage discussed treatment and presented only a small portion on cancer prevention (Liu et al., 2010). A similar trend is also observed in an analysis of type 2 diabetes and cardiovascular disease news coverage (Hellyer & Haddock-Fraser, 2011b). Overall, NCD news coverage showed a lack of emphasis on NCD prevention.

Similar to risk factors, NCD solutions can be classified into societal and individual. In contrast to risk factor coverage, which highlighted individual risk factors, the review found that newspapers presented a mixture of individual and societal solutions for NCDs (n = 5). Two studies on cancer, diabetes and cardiovascular disease concluded that NCD news coverage provided more individual than societal solutions (Hellyer & Haddock-Fraser, 2011; Jensen et al., 2010). Other studies on cancer news found no growth in coverage of societal solutions over the years (Henry et al., 2012), while another found a slight shift in news related to obesity, from individual to societal solutions on obesity (Hilton et al., 2012). Ries et al. (2011) pointed out that individuals, government and industry have shared roles in promoting healthier choices to prevent and overcome obesity.

5.3.2.5 Effects of NCDs

The review found that many studies highlighted health effects as the main impact of NCDs (n = 8). For example, in content analyses of news coverage on smoking (n = 4), results showed that newspapers emphasised adverse health effects (Hilton et al., 2014a; McGee, Bang, & Marsh, 2014; Wakefield et al., & Smith, 2011; Wakefield et al., 2012). Studies on other NCD issues, such as UV threat, hypertension, obesity and alcohol consumption, indicated similar findings (Azar et al., 2013; Collin & Hughes, 2011; Hilton et al., 2012; Scully, Makin,

Maloney, & Wakefield, 2014). However, only one study examined news coverage of cancer effects on psychosocial aspects, such as psychological, social, existential or spiritual or religious (Henry et al., 2012). This study found low coverage of these aspects in both 1988 or 1989 and 2008, similar to rest of the literature.

5.3.2.6 Source of attributions

One of the most common analysed aspects of NCD news coverage is the information sources referenced in the newspaper articles (n = 16). Sources were grouped into four categories: personal accounts, health professionals, government or political sources and family. About half of the sampled literature identified personal accounts as the primary source of citation. Personal accounts refer to individuals diagnosed with NCDs. Celebrity NCD stories was also classified under personal accounts. The review found that medical professionals and government representatives or politicians were also frequently cited in the NCD news coverage.

5.3.2.7 Coverage on public health information

The review determined that many studies regarded public health information on NCDs in newspapers as problematic. Public health information on NCDs loosely refers to detailed and mobilising information that could inform the public to manage the disease and risk factors (Hilton et al., 2012; Johnson et al., 2011). Five studies described newspaper coverage on public health information as either limited, incomplete or inaccurate. Studies found that newspapers did not provide comprehensive information on the disease or related statistical data. For example, reporting on bone cancer in newspapers emphasised the effect on a single individual rather than detailed information on the disease (Al-Nammari, Danesh, Mussa, & Al-Hadithy, 2013). A lack of statistical information is also apparent in studies that analysed cancer-related news coverage. For example, a comparison of content analyses on cancer articles published in 2003 and in 1977 and 1980 found that the incidence rate was rarely reported (Jensen et al.,

2010). The content analyses consistently showed that incidence and mortality data on cancer news coverage was scarce.

Other than lacking detailed and statistical information, the review also identified that public health information on NCDs in newspapers is either inaccurate or incomplete. This problem occurred in reporting information on disease treatments and public reports on NCD survivorship (Cluckie et al., 2012; Higashi et al., 2013; Hind, Wailoo, & Sutcliffe, 2011). Studies on coverage of thrombolysis found that there were 12 significant inaccuracies in the news report on disease treatment (Cluckie et al., 2012). For example, instead of presenting thrombolysis as a treatment for stroke, an article presented thrombolysis as a treatment for transient ischaemic attack. Inaccurate presentation was observed in a study that analysed the coverage of breast cancer treatment (Hind et al., 2011), in which newspapers presented more on the benefits of breast cancer treatment than the associated risks. One study analysed the newspaper coverage on public reports of cancer survival data (Higashi et al., 2013), and found that newspapers used inaccurate descriptions of public reports, with potentially misleading information on cancer survival.

5.3.2.8 Tone and slant of NCD coverage

Numerous studies concluded that NCD coverage has shifted towards a more positive tone and slant. In some studies, they divided the tone and slant into event and opinion. Opinion slant refers to articles of opinion, such as editorials, reader commentaries or columnists. Event slant relates to the impact of the reporting of an event (He et al., 2014). The review indicated that news on NCDs has been portrayed in a positive tone over the years (Henry et al., 2012; Johnson, Henderson, Pedersen, & Stonecipher, 2011). For example, positive articles on cancer included coverage of fundraising events, survivorship and advances in scientific research (Henry et al., 2012). Analysis of the results also showed newspapers covered solutions for NCDs positively. For example, studies on alcohol and tobacco control showed that newspapers have positively

covered these issues. The majority of newspaper coverage is on supporting tobacco and alcohol control and against tobacco use (Azar et al., 2013; Gao, Chapman, Sun, Fu, & Zheng, 2012; He, Shen, Yin, Xu, & Lan, 2014; Helme et al., 2012; McGee, Bang, & Marsh, 2014; Patterson, Katikireddi, Wood, & Hilton, 2015a; Thrasher et al., 2014; Wakefield et al., 2011). Over the years, anti-tobacco messages have been increasing, reducing pro tobacco coverage in the media. Newspapers have also been presenting alcohol consumption, a risk factor for NCDs, in a negative light over the study timeframe (Azar et al., 2013).

5.3.2.9 Publication and NCD news

Seven studies compared the coverage of NCDs in different types of newspapers. Five examined the difference between ‘serious’, ‘middle market’ and ‘tabloid press’, the segmented newspaper market, with each catering to a distinct readership group based on class and age (Seale, Boden, Williams, Lowe, & Steinberg, 2007). Tabloid newspapers focus on sensational stories and gossip (Forster, Wardle, Stephenson, & Waller, 2010). They are often driven by commercial rather than a public interest agenda (Whitney, Sumpter, & Mcquail, 2004). ‘Serious’ newspapers are oriented towards national, political and international news, with a public interest agenda (Seale et al., 2007). Middle-market newspapers are a mix of both, providing entertainment and serious news coverage (Forster et al., 2010). A study found that ‘serious’ newspapers publish more NCD news and have a higher level of reporting NCDs (Hellyer & Haddock-Fraser, 2011). Another study found that ‘tabloid’ newspapers offered less serious and more sensationalist content (Hilton et al., 2012). The ‘tabloids’ provides more personal stories and used metaphors to engage with readers (Collin & Hughes, 2011; Mercurio & Elliott, 2011). Other types of newspaper comparisons are national vs. local newspapers and specific vs. general audience newspapers (Caburnay et al., 2014; He et al., 2014), where local and specific newspapers are more relevant to their audience and contain a greater mixture of opinion than the national and general audience newspapers.

5.4. Discussion

This study provides the first review of analyses of NCD-related newspaper articles. Previous reviews were either too broad or too specific. Two previous literature reviews assessed analyses of general health issues covered in the media (Kline, 2006; Manganello & Blake, 2010), while another specifically analysed content analyses of media coverage of a particular disease (McWhirter & Hoffman-Goetz, 2012). One of the significant findings of this review is that newspapers have started to give attention to NCDs in their reporting. The increasing trend in coverage of NCD topics, such as prevention, disease and risk factors, reflects growing attention, in parallel with the development of the NCD problem at the global level. Apart from this significant finding, this review has identified many potential areas for future research through the assessment of the studies' characteristics and their key findings. From the characteristics review, the review found that analyses of NCD-related news mostly focused on NCD solutions, often used content analysis, were not theoretically driven and were concentrated in HICs. In analysing critical findings, the researcher identified that many factors influence coverage of NCD news, that coverage emphasised cancer and highlighted individual risk factors, effects and solutions. These findings suggest a wide range of potential areas for future research in NCD news analysis.

Overall, the literature review found that NCD solutions are the focus of NCD-related news analyses. Tobacco control news coverage studies dominated the literature. This finding implied that research on health news is highly associated with government intervention. Newspapers play a crucial role in setting the government health intervention agenda to the public, therefore, assessing how newspapers represented interventions enabled identification of gaps and improvement for future health communication strategies. This domination also demonstrated a lack of studies on other NCD topics, especially on the type of NCD. With the domination of tobacco use and studies on cancer news coverage (see Table 5), many other NCD topics have

been left out of the news analyses. This finding is similar to previous literature reviews, which have found studies on tobacco and cancer are prevalent in health communication research (Freimuth, Massett, & Meltzer, 2006; Kim, et al. 2010; Manganello & Blake, 2010; Nazione et. al, 2013). A notable absence in studies on news coverage of other principal NCDs (such as cardiovascular diseases, diabetes and chronic respiratory diseases) implies an urgent assessment of their coverage in the news is required.

The findings of this review demonstrated that content analysis is a popular method to analyse newspaper content. Each content analysis in this review employed quantitative content analysis, but only four provided in-depth or qualitative content analysis. Most quantitative content analyses produced descriptive accounts of NCD coverage, which may comprise the identification of themes or frequency of the topic of interest, such as risk factors and type of disease. For studies that employed qualitative content analysis, research design involved quantitative calculation of NCD news content, yet offered further in-depth analysis. Such analysis uncovers underlying latent messages that may not be captured by quantitative analysis (Elo & Kyngäs, 2008; Yan Zhang & Wildemuth, 2005). Qualitative content analysis may provide underlying ideas, assumptions and implicit meanings in the context of a text that quantitative analysis is unable to capture (Braun & Clarke, 2006; Neuman, 2003). Therefore, future content analysis of NCDs should employ an in-depth qualitative analysis approach, to offer a better understanding of NCD news content.

Another significant finding is that the use of theory and conceptual frameworks is still limited in guiding analysis of health news content. This finding is similar to previous health communication reviews, which found more than half of the studies in the field are a-theoretical (Freimuth et al., 2006; Kim, et al., 2010; Nazione et al., 2013). However, a literature review by Manganello et al. (2010) found a different result, where more than half of the content analyses on health issues mentioned at least one theory. This contrary result might arise from the

inclusion of studies that mentioned theory without further explaining how it underpinned the analysis. If this current review had employed such a strategy, more studies could have been regarded as ‘theoretical’. Nonetheless, since this review emphasised how theory guides the study, limited studies fit with the theoretical classification of this review. Since theory is an essential tool in conducting research, the limited number of studies using theory may not contribute to the development of the health communication field. As the review found that many studies employed quantitative analysis and most of them are not guided by theory, this finding may imply that the results of these studies are rather descriptive and mostly related to the media representation study. Due to lack of theoretical underpinning, it is difficult to relate the finding with the production or reception of media. As previously discussed in Chapter 3, news content is a product of social interactions of news producers with internal and external influences. The presentation of news content can influence the audience’s thinking on a subject. Therefore, to obtain a comprehensive understanding of an issue in the news media, it is essential to design a news analysis with a theoretical underpinning, which is able to relate to either the news production or news reception process.

The mapping of the country of newspapers analysed revealed that most of the content analyses were concentrated in HICs, such as the US, the UK, Australia and Canada. Only two studies used samples of newspapers from upper MICs (Malaysia and China). A similar finding is reported in a study describing health communication research in the *Journal of Health Communication* (Freimuth et al., 2006), which found only 2% of research was conducted in developing countries. This gap may be because of substantial research capacity in the field of health communication in HICs in comparison with LMICs (Wakefield, et al., 2010). This finding, however, is contrary to the initial expectation: where it is expected that rigorous research activity would occur in LMICs, where NCDs are prevalent. Therefore, it is timely and of high priority to analyse news content on NCDs in LMICs.

The literature review found a high coverage of NCDs on public health events and breast cancer, implying that multiple factors influence coverage or construction of NCD stories. First, the high coverage of public health events implied that newspapers serve the interests of policymakers and the public (F. L. Cook et al., 1983). The review identified that, over the past half-decade, many analyses of NCD news coverage have focused on tobacco control. Such findings implied that newspapers are an essential medium for introducing government health interventions and for public discussion of the intervention. This finding also opens discussion on how the media interact with policymakers in selecting and producing health news.

Second, news coverage of NCDs is influenced by the newsworthiness of an issue. The result of content analyses showed that coverage of an issue is high if it has high news value (Collin & Hughes, 2011; Higashi et al., 2013). The newsworthiness of an issue causes over-representation of certain diseases (I. H. Jones et al., 2012). The review found that breast cancer was most commonly reported in comparison with other types of cancer. The analyses revealed that this disproportionate breast cancer coverage was because of the substantial proportion of cancer events and high coverage of personal accounts on the disease (Jensen et al., 2010; Williamson et al., 2011). The review also found that media has a greater interest in diseases based on unexpectedness and magnitude effects (Collin & Hughes, 2011). For example, cardiovascular disease attracts greater press interest than type 2 diabetes, because of the prevalent perception that cardiovascular disease is an ‘immediate killer’ and more severe than type 2 diabetes (Hellyer & Haddock-Fraser, 2011). Therefore, noticeable gap in news coverage on NCDs may be because of different newsworthiness and the role of the media in each type of NCD. Future study should address the newsworthiness of each type of NCD.

The review found that most content analyses identified that newspapers emphasised individual health effects of NCDs. This representation does not provide a comprehensive understanding of NCD effects. In fact, only one study in the literature investigated NCDs’ psychosocial effects

(Henry et al., 2012). NCDs affect a patient's life holistically; not only physical aspects but the psychological, social, economic and spiritual aspects. For example, NCDs do not only limit the patient's physical activity but lead to a reduction in work productivity. Being unable to work productively can lead to diminished household earnings in addition to the burden of the disease treatment. This condition is worse for socially disadvantaged groups (Robert Beaglehole, Bonita, Horton, et al., 2011). Apart from affecting physical health and household income, NCDs may also contribute to psychosocial problems. Therefore, it is essential to further study the news coverage on NCD effects other than adverse health effects.

One of the significant findings of this review is that individual-related solutions and causes received higher news coverage than societal solutions and causes. Individual solutions and causes are straightforward since responsibility rests with the individual (Mayer, 2012). In contrast, societal causes and solutions involve more complex interactions and many stakeholders, such as government, society, the media and industry (Ries et al., 2011). Therefore, it is highly likely the press downplays the societal role in addressing NCDs. Although there is an increasing trend to consider societal solutions and causes, the proportion of individual factors and solution continue to outnumber them (Hilton et al., 2012).

The sources cited in a story also play a role in defining the issue at hand. For instance, news citing government officials as sources signal that the NCD-related issues are policy driven, while quotes from researchers and doctors suggest that readers should look to biomedicine for possible solutions (Casciotti et al., 2014). The presence of advocacy groups in news coverage will likely contribute to generating and shaping the discourse on an issue (Wakefield et al., 2012). Thus, investigating the source of information featured in the news informs on whose interest is prominent in the news media.

In contrast, the high proportion of personal accounts in NCD coverage may distort news coverage. For example, with the high concentration of single individual conditions, coverage on details of the disease is limited (Al-Nammari et al., 2013)—the widely used personal account in NCD news has downplayed other important information on NCDs. Therefore, future studies should investigate this type of presentation and discover ways to use it to improve health communication on NCDs.

The literature review also found that some studies examined NCD coverage based on type of newspaper. Different genres or types of newspapers cater to readers with different socioeconomic status (Seale et al., 2007). Therefore, comparing NCD coverage between different newspaper genres may suggest information on NCDs available to different classes of readers. Further, this may lead to understanding the knowledge gap of NCDs between high and low socioeconomic status groups. Two types of newspaper content analyses were conducted: 1) by social and economic status (tabloid, middle market and serious) and 2) by type of audience (rural vs. urban and black newspaper vs. general audience). Results of the comparison implied a knowledge gap between audiences, where the serious press offered a higher level of reporting than the tabloid press. However, most studies were conducted in HICs; therefore, it is essential to apply similar research in LMICs.

5.5. Limitations

While this literature review provides a meaningful assessment of analyses of NCD-related news, several limitations must be noted. First, although the review aimed to build a comprehensive list of keywords to run the search on the database, it is expected that there might be articles left out of the results. However, a systematic multistage process was involved throughout the selection process. Therefore, articles that were not included in this review were missed in a systematic manner. Another limitation of this study is that the review only focused

on one media outlet, newspapers. The review may have found different results if it included content analyses of other types of media. Another limitation of this review is that it did not analyse in detail the strategies employed in the literature, such as sampling method, analysis statistics used and validity. However, the review analysed content analysis in general, and is able to identify the different types of content analyses employed.

5.6. Summary

Overall, the findings of the literature review highlighted many gaps in NCD news analyses, suggesting various potential areas for future studies. First, future studies could improve by including further qualitative content analysis rather than focusing on quantitative content analysis. Although quantitative analysis provides an overall description of news analysis, qualitative analysis provides an in-depth and contextual explanation of news coverage. The literature review also suggests that future studies of NCD (or any health) news analysis should be guided by theory, to provide further insights on the findings. The low research activity on NCD news in LMICs implies an urgent call for future research to start analysing how media play a role in constructing NCDs to the public. This urgent call is especially important as NCDs are an emerging problem in the region. As the literature review found that NCD news coverage is influenced by multiple factors, it is worth examining the news construction of NCDs and how this relates to the media production study. Further, based on the social constructionist approach, health news is a product of the social interaction between news producers and internal and external influences (Shoemaker & Reese, 2014). Therefore, this research will address this gap, by investigating the health news presentation and the health news production process.

Chapter 6. Methodological Approach and Research Overview

6.1 Introduction

This chapter provides the research philosophy and methodological approach that guides the research. It also includes a reflexivity section and briefly presented the research overview.

6.2 Research Philosophy: Social Constructionism

Social constructionist epistemology informs on the methodological approach that is adopted when analysing the construction of NCDs or other health issues in the news media. Broadly, this focuses on analysing and understanding those phenomena that shape our perceptions and interactions with social actors. Central to all forms of social construction is the understanding that our social world is a human product, where “social worlds are interpretive and woven by individuals and groups” (Scott & Marshall, 2009). In the classic statement on the paradigm by Berger and Luckman (1966), ‘reality’ is an outcome of the *social interactions* of individuals within a society (Berger & Luckmann, 1966). Hence, knowledge is created and not discovered (Schwandt, 1998). Through complex interactions, individuals become active participants in the social process, and through such engagements, construct their social realities.

In this approach, the meanings concerning an object in the world, such as an event portrayed in the news media, are based on the social milieu and social interactions in a specific cultural and historical context. For example, the discourses around the war on terrorism in the news media reflect current global events and concern of today’s society. The representations of these issues may differ between media outlets to reflect differences in their organisational values and the societal norms within which they operate. For example, the representation of the “war against terror” in the NZ Herald, a centre-right newspaper published in New Zealand, would be different from that of the “Utusan Malaysia”, a government-linked newspaper in Malaysia.

Before going into a further discussion of social constructionism in the context of this study, it is necessary to view some research-relevant assumptions regarding how knowledge is viewed. The following are the assumptions of reality from the social constructionism approach (Burr, 1995) using the example of medical knowledge in Malaysia.

A critical stance towards taken-for-granted knowledge: Social constructionism insists on a critical view of what is known (taken-for-granted knowledge) about the world (Burr, 1995). This approach is critical towards traditional science, which is based on the positivism approach. Positivism is aimed at discovering the ‘truth’, while social constructionism claims that the ‘truth’ is constructed. Therefore, research based on social constructionism questions knowledge that is taken for granted such as the ‘natural’ ordering of the world, its concepts and categories.

Historical and cultural specificity: Our understanding of the world is historically and culturally specific (Burr, 1995). For example, medical knowledge about illness and disease is constructed based on historical events and political forces (Conrad & Barker, 2010). In Malaysia, the shared knowledge of medicine has gone through a transition from traditional to modern medicine based on historical events and socio-political changes. Before the introduction of Western or modern medicine, Malaysians held their own medical beliefs and practices regarding medicine and healthcare (Chee & Barraclough, 2007). When the British imperialists introduced modern medicine, the locals resisted and opposed it (Falconer, 2015). Modern medicine was only widely accepted by them in the last part of the nineteenth century when the recovery rate from tropical diseases increased and medical services became more accessible to them (Falconer, 2015; Mohd Khairie & Mustafa, 2012).

Knowledge is sustained by social processes: Social constructionists take the stance that knowledge is a product of the social process. The social process, or interaction between

members of a society, produces a shared version of reality. With regard to medical and healthcare knowledge in Malaysia, currently, a large proportion of Malaysians perceive modern medicine to be the main form of healthcare due to the social process, such as government policy. Prior to independence, the British rulers established hospitals in every state, thus increasing accessibility to modern medicine (Mohd Khairie & Mustaffa, 2012). Later, after achieving independence, the local government prioritised healthcare as one of the main policies on the national agenda, thereby making public health services more accessible in the rural areas (Chee & Barraclough, 2007).

Knowledge and social action go together: The ‘negotiated’ understandings of the world could take a wide variety of forms (Burr, 1995). Our perceptions of the world lead to different kinds of reactions and responses. For example, before the acceptance of modern medicine, the majority of locals in Malaysia perceived traditional healing as the main form of medical treatment (Ahmad, 2002). However, after the establishment of modern medicine, criticisms emerged of traditional medicine being primitive, degenerative, incompetent and underdeveloped (Raja Rina & Mohd Khanapi, 2015). Nevertheless, the use of complementary and alternative medicine remains popular in society as a proportion of locals hold their inherited cultural perception on traditional medicine (Shaharudin, Sulaiman, Emran, Shahril & Hussain, 2011; Silvanathan & Low, 2015).

6.3 Methodological Approach

As this study is informed by social constructionism, the understanding and making meaning of the research, data, and analysis are based from the effects of a range of discourses operating within society (Braun & Clarke, 2006). In the context of research into news media construction of NCDs and other health issues, this approach serves to chart and analyse the pattern and presentation of these health issues based on the sociocultural contexts, and structural condition.

Based on these assumptions and previous discussions, this study regards media content, such as news, as a form of mediated social reality. Instead of simply mirroring what is ‘out there’, the news content itself is the ‘reality’. News producers process objects or events into a narrative structure (Gunter, 2000). According to the concept of “hyperreality” by Jean Baudrillard, this version of reality through the news media becomes more valuable than the original object or event (Ryan, 2007). The social reality that is constructed by some media may provoke a different impact on the conceptualisations and experiences of individuals, and thus affect their subsequent actions in the world (Berger & Luckmann, 1966; Siu, 2009). For example, the message in the media may help to create dominant misconceptions about food and diet (Dorey & McCool, 2009).

As previously discussed in Chapter 3, news producers play an active role in interpreting and constructing meanings in the news through the agenda-building and frame-building processes (Scheufele, 2000; Zamith et al., 2012). Therefore, media content, especially news media, is a product of the social interaction between social actors such as journalists, sources of information, policymakers and audiences (Shoemaker & Reese, 2014). This broad-ranging group was discussed in Chapter 3 under the hierarchy of influences model. The news as a product of social interactions is meaningful and relatable to a specific time, culture and norms.

Combining the examples from medical knowledge in Malaysia and the construction-mediated reality through the news, this study is of the view that the meaning attached to an issue, in this case, NCDs, is shaped by social and cultural processes. Nevertheless, the constructionist approach acknowledges factors such as the biological effects of diseases, yet the meanings of the effects are emphasised by the social and cultural interactions (D. Lupton, 2012). In adopting this approach, the construction of the mediated reality of NCDs and health issues was questioned. To address this question, this study was aimed at 1) understanding the meanings

of NCDs and health issues mediated in the news media, and 2) understanding the social interactions involved in the construction of these issues in the news media.

6.4 Reflexivity

Before presenting the research overview for examining the construction of NCD news in Malaysian newspapers, I will first position myself within this research. Reflexivity in research is an acknowledgement that the researcher holds a certain position in society (May & Perry, 2014). This position is accompanied by a personal set of experiences, values, and beliefs that affect every stage of the research process (Byrne, 2004). It entails the researcher's capacity to reflect on his/her role in generating the knowledge in an attempt to understand the implications of his/her position as the researcher. However, while reflexivity is widely acknowledged, there is limited guidance as to how it is to be done. Creswell (2003) described the need to be explicit about past experiences that might shape a current research and guide the audience towards understanding the topic from the researcher's perspective. Since researchers are value-laden and cannot be neutral when it comes to the studies they conduct, it is important for them to be reflexive rather than to try and produce a literal account of the data (Mauthner & Doucet, 2003). With this aim, the following account describes some aspects of my relationship with the current research.

I am a Malay-Muslim woman from Malaysia. Having come from a multicultural society, I have been exposed to a variety of views on many social and political subjects. My generation is often described as the post-independence generation. Although we are free to speak our mind, our opinions must remain within religious and cultural boundaries. Nevertheless, living in a multicultural society, I have learnt that individuals do not share the same version of reality due to differences in values, religions and experiences.

Previously, my understanding of the world was based on positivism, as my earlier education revolved around natural science. However, I began to question the external truth of reality while doing molecular biochemistry research to investigate the effect of changes to the feeding time on the metabolic genes and proteins of rodents. It was during one of those long weekends, when I had to quantify the optical density of extracted and purified RNA from the mice and while waiting for the NanoDrop to quantify the reading (Thermo Fisher Scientific, n.d.), that I came up with a different set of views while looking at the variants in my results. What if somebody else had conducted the RNA extraction? Would the results differ from mine? Would a person with a different understanding of my whole research, and with a different set of methods, have come up with the same results as mine? If my experiments were meant to discover the truth, but the results differed from the findings of others, does it mean that all my experiments did not approach the truth? After all, research in natural science should be about discovering the truth. It was at that moment that I first questioned the positivist paradigm that I had held throughout my years of education. I ventured into the social science field after completing my honours degree in Science and Technology. With my background in biotechnology and health sciences, I initially had trouble understanding epistemologies other than positivism. However, with my multicultural background together with my hesitancy of positivism, I oriented this research towards the social constructionism approach.

My interest in this research stemmed from many points of my life. Firstly, I believe that I am susceptible to NCDs based on the medical history of my family. Secondly, in my social circle, to be medically diagnosed as predisposed to diabetes is not uncommon, but rather, is expected. Thirdly, this perception, which I believe is socially 'accepted' by many Malaysians, is not only due to the prevalence of such diseases but is also associated with the Malaysian lifestyle. Apart from other risk factors of NCDs, the interactions within my social circle indicated the

significance of the value attached to cultural food. This cultural food, however, is mostly excessive in fats, oils, salts and refined carbohydrates.

Based on these points, I became interested in studying the understanding of NCDs amongst Malaysians. My interest went beyond the medical statistics, to focus on the construction of illnesses within the Malaysian society. Since the media is one of the producers of knowledge, I am interested in studying how the media plays their role in shaping the understanding of the public with regard to NCDs and the factors that contribute to the construction of NCD issues.

6.5 Research Overview

Based on epistemological and methodological considerations, and my position in this study, Figure 8 provides the research overview which summarises the research and the adopted approaches. The studies were constructed based on the aim of this research to examine the construction of NCD issues in the news media. To address this aim, the research was divided into three different multi-method phases. This section only discusses briefly the research approach. Details of the methods and research strategies for each phase will be presented in the chapters that follow.

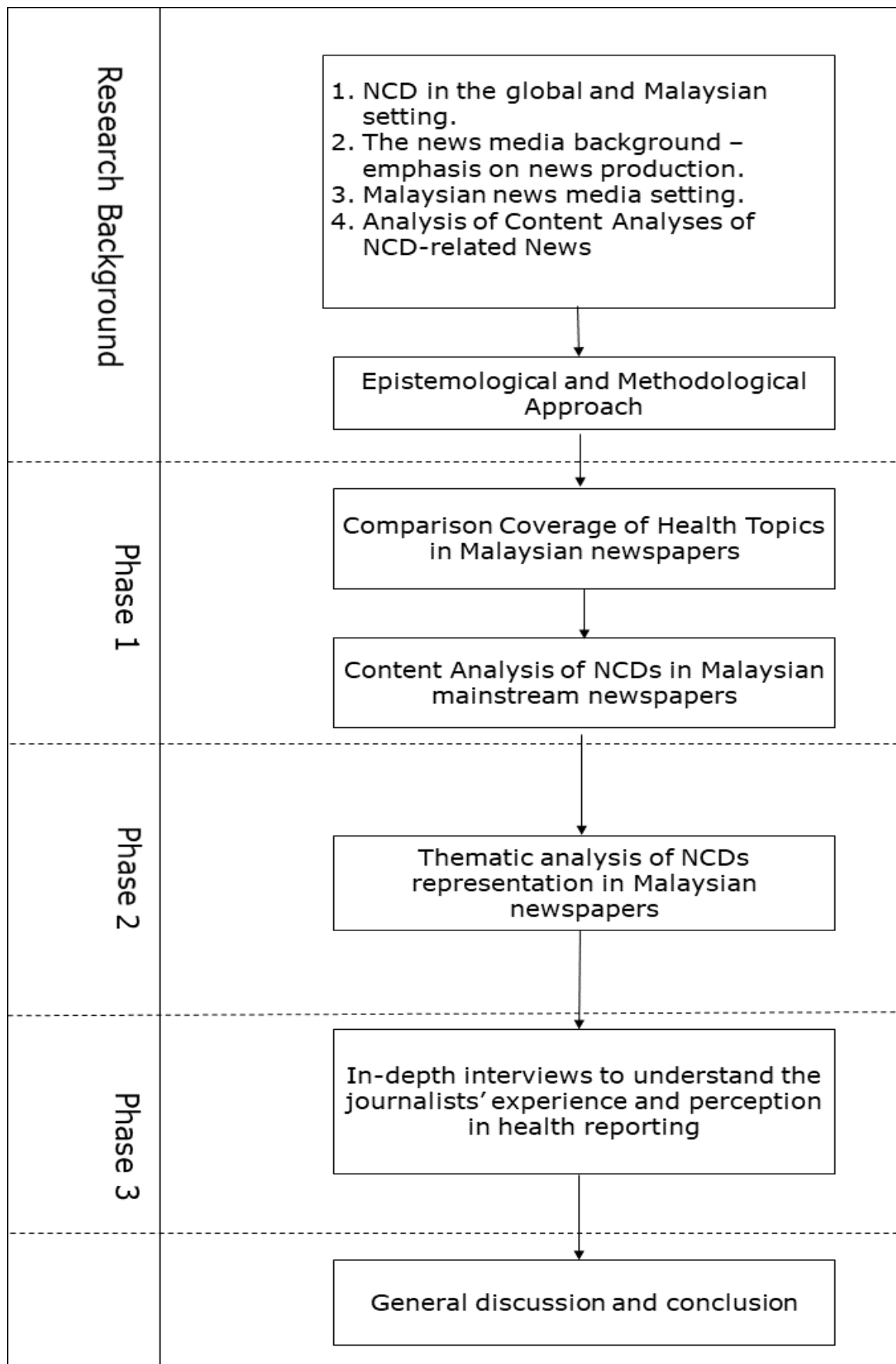


Figure 8. Research Overview

Phase 1: Analysis of news content (health and NCD-related issues)

In addressing the construction of news on NCDs, the study began by comparing the newsprint media coverage of NCDs over other health issues. A literature review of the Malaysian media revealed that there have been limited studies on the analysis of NCD-related news. The rationale for this phase was to investigate whether NCDs are salient in the news media agenda compared to other health issues. Therefore, a content analysis was conducted to categorise health articles in the news media and to quantify them.

Another content analysis was conducted to further investigate how the news media constructs NCDs. This content analysis was aimed at exploring the coverage of types of NCDs across a five-year timeframe. The rationale for this phase was to carry out a closer examination of how the different types of NCD issues are being raised and given salience in the mainstream news media representation. Both of these content analyses provided the context of the articles' production. Therefore, these studies also sought to investigate the possible influences of the construction of NCD and other health issues in the Malaysian newspapers.

Phase 2: Thematic Analysis of NCD-related articles in Malaysian newspapers

Following the examination of NCDs in the news media agenda, the research further analysed the framing of NCDs in newspapers. A thematic analysis of articles on NCDs was conducted to identify the dominant themes used in the newspapers when presenting NCD issues. The rationale for this phase was to investigate the presentation of NCD issues and to identify the influences within the construction of NCD issues in the Malaysian newspapers.

Phase 3: Exploring the influence of the construction of NCD news in Malaysian newspapers

The previous phases examined the construction of NCD issues in the newspapers. This phase further explored the factors that influence the construction of NCDs from the perspective of journalists. For that, in-depth interviews were conducted with journalists from the mainstream newspapers in Malaysia.

6.6 Summary

Based on the social constructionism approach, these studies question the ‘taken-for-granted’ knowledge. In these phases, various methods were used, and the data were organised and analysed based on the particular research method. The epistemological and methodological approaches used in this research positioned me to interpret and extract the meanings presented in the Malaysian news media on NCD issues. The meaning or ‘knowledge’ constructed in the Malaysian news media is not simply a reflection of real events in relation to NCD issues, but reflects the social values, governmental structures and priorities, economic value and other factors. Accordingly, this research is specific to Malaysia at this point in time.

Chapter 7. Content Analysis of NCDs and Other Health Issues in Malaysian Newspapers

7.1 Introduction

This chapter explores coverage of NCDs and other health issues in a sample of Malaysian newspapers. Two content analyses were conducted: the first aims to describe the range of health-related topics covered in the sample, while the second examines the coverage of types of NCDs. The analyses provide background information on NCD representations in the sample of Malaysian newspapers between 2008 and 2013.

Malaysian newspapers are regarded as primary sources of health information (Anwar et al., 2010; Pon et al., 2006). Nonetheless, there is a lack of evaluation and analysis on the health news content in Malaysian newspapers. Several studies examining public knowledge, awareness and perception of health issues came to the conclusion that newspapers need to improve their approach to presenting health information (Cheah & Su, 2012; Harny, Norwati, Noor, & Amry, 2011; Tan, Yen, & Feisul, 2012). However, their suggestions and conclusions are based on the public's level of awareness, knowledge and perception, and they did not analyse or evaluate the health stories in newspapers. This thesis fills this gap, by analysing the health content in the news media. In doing so, Content Analysis A in this phase aims to provide an overview of health topics presented in Malaysian newspapers.

Another rationale of analysing health issues in Malaysian news print media is that most research in news media has focused on political subjects. For example, many previous news analyses have explored the coverage of political events, such as the general election (Hock & Hussein, 2011; Kasmani, 2016; C.P. Kee et al., 2017; Sani, 2014) and political conflict (Yang & Ahmad Ishak, 2013). To date, only six content analyses have studied health issues in

Malaysian newspapers. Of these, only one investigated NCD issues, assessing coverage of breast cancer in one newspaper (Al-Naggar & Al-Jashamy, 2011). The remainder focused on communicable disease, health management, health crises and child abuse (Chibundu & Ishak, 2011; Mohd Mothar, Abd Aziz, & Abdul Ghalim, 2011; Sualman & Amelia Abdul Aziz, 2012; Tham & Zanuiddin, 2012, 2015). As NCDs are significantly affecting Malaysia, the lack of news media analyses further accentuates the importance of this study. To address this gap, Content Analysis A not only captures an overview of health topics in Malaysian newspapers but aims to identify the presentation of NCDs against other health topics.

An early study by Manganello and Blake (2010) demonstrated that many analyses on health messages in media did not include the theoretical framework in their study design. Further, the review of NCD news analyses in Chapter 5 also showed a similar finding. To date, previous health news analyses have used agenda-setting theory to guide their studies. From the agenda-setting perspective, the more salient the topic covered in the news, the more likely it is to be considered important by the public and policymakers (Scheufele, 2000). Most of these studies explore the prevalent featured specific health topics and discussed the possible effects of the coverage on the audience or policy makers (Dixon, Warne, Scully, Dobbinson, & Wakefield, 2014; Jung, 2013; Wei Peng & Tang, 2010b). For example, Peng and Tang (2010) found that although news coverage seems to reflect the current public health situation in China, certain diseases and risk factors were underreported, potentially leading to misperceptions of risk, stereotypes and social stigma. In contrast, the content analyses in this phase are interested in investigating the production site of the health news, guided by agenda-building theory, agenda-setting theory and the humanistic approach of content analysis.

The content analyses in this phase aim to explore which health issues are salient in the news, and then infer the factors that interplay in selecting these issues. Dimensions used to measure the saliency of an issue include attention, prominence and valence (Kioussis, 2004). Attention

and prominence refer to external characteristics of issue salience, while attention is the most common approach to measuring media salience. Salience can be defined as media awareness of objects, normally related to the volume or space dedicated to topics in the news media (Kiousis, 2004). Most of the news agenda-setting research examines the saliency of issues through the numbers of articles published on the issue. The second dimension, prominence, refers to the positioning of a story in the news media, indicating its importance. Prominence can be measured by looking at the stories' placement, size of the headline, amount of time and space and appearance in the lead. Valence can be measured through the amount of conflict in a story or the overall tone of the articles (M. McCombs, 2005).

Although these dimensions of measuring issue salience are based on agenda-setting studies, for the purpose of investigating issue salience, the first phase of this study adopts one dimension, attention. Therefore, this present study quantifies the number and proportion of news articles related to NCDs or other health issues in the sample of newspapers. First, the study identifies news related to health and quantifies this; next, the study examines which health issues were more salient than others in newspapers. The study identifies health articles in newspapers and categorises them based on the prominent health topic. Following the categorisation, the study calculates the proportion of each health topic and compares coverage. This phase aims to address the following questions:

Research Question 1: How many news articles pertain to health-related news?

Research Question 2: What are the key categories of health topics presented in major daily Malaysian newspapers?

Research Question 3: What is the percentage of health-related stories specific to NCDs compared with other health issues?

The second phase of this study involves comparing the coverage of types of NCDs. Few previous studies on health news reporting in newspapers have examined the coverage of types of NCDs, focusing either on specific diseases, risk factors or general health issues (Henry et al., 2012; Peng & Tang, 2010). Therefore, this phase aims to investigate detailed coverage of NCDs based on which type of NCD is more prevalent in Malaysian news coverage. To conduct this analysis, the NCD-related articles were categorised based on the type of NCD that it belongs to. In addition to examining the salient NCD type, this phase also explores the coverage of each NCD across a five-year timeframe. Therefore, this phase measures issue salience through the attention and prominence dimensions. This phase aims to answer the following questions:

Research Question 3: Has the quantity of NCD coverage changed over time?

Research Question 4: Which types of NCDs are frequently covered?

The two content analyses in this study used different sample studies. For clarity purposes, the method and results sections present Content Analysis A and B separately. However, this chapter presents the discussion of both analyses under the same discussion section.

7.2 Methods

Content analysis was employed as the primary method of data analysis in this study. Content analysis is used as an efficient and systematic method for tracking or mapping the frequency of ideas and opinions on content in a variety of formats, such as texts (Krippendorff, 2004). This method enables measuring and comparing categories created to interpret the characteristics of the messages (Neuendorf, 2002). According to Shoemaker and Reese (1996), content analysis can be categorised into two approaches: behaviourist and humanist. The

behaviourist approach to content analysis is concerned with the effects the content produces on the audience, while the humanist approach tries to identify how the content reflects society and the culture producing it (Shoemaker & Reese, 1996). As the main aim of this research is to examine the construction of NCDs and health issues, the content analyses in this chapter are based on the humanist approach.

The following sections present the steps followed to conduct each content analysis. The steps include sampling procedures, data collection, exclusion and inclusion criteria process, data analysis, validity (if applicable) and reliability.

7.2.1 Content Analysis A

This phase employed a cross-sectional content analysis approach to answer the research questions. Content Analysis A focuses on describing the health news by identifying the health topics that were presented in Malaysian newspapers. The first step in this process was collecting all health-related news articles. Next, the study classified the health articles based on categorisation described in the literature (McCool, Cussen, & Ameratunga, 2011). The study then calculated the frequency of health articles based on health topic.

7.2.1.1 Sampling procedures

The initial sample of news articles was drawn from five highly circulated mainstream daily newspapers: *Berita Harian*, *Utusan Malaysia*, *The Star*, *Harian Metro* and *Kosmo!*. The equivalent Sunday newspapers for each were also included in the content analysis: *BH Ahad*, *Mingguan Malaysia*, *Star Sunday*, *Metro Ahad* and *Kosmo Ahad*. The total average newspaper circulation per day in Malaysia is approximately 3.1 million, reaching 10% of the population (ABC Malaysia, 2015; Department of Statistics Malaysia, 2016). The samples only included Malay- or English-language newspapers. The rationale for selecting Malay and English newspapers include their high readership and circulation in contrast with Chinese and Tamil

newspapers (Selva, 2012). Malay newspapers recorded the highest circulation of 53.4%, followed by English newspapers (22.5%) (ABC Malaysia, 2015). Since Malay is the main and the national language, Malay newspapers' audience is not limited to Malays, but includes other ethnicities (Firdaus, 2006); English newspaper readers also come from every ethnicity, as English is Malaysia's second language (Firdaus, 2006; Niner et al., 2013). The sample of this study did not include papers in the Chinese and Tamil language, as their circulation is lower than Malay and English newspapers. In addition, these newspapers cater to readers from Chinese and Indian ethnicities, respectively. Table 6 provides details for each newspaper.

Table 6. Description of Newspapers.

Newspaper outlet	Language	Type of edition	% of total circulation	Target audience description	Type of newspaper
<i>Utusan Malaysia</i>	Malay	Weekdays	9.2	Multicultural	National
<i>Mingguan Malaysia</i>	Malay	Weekend	20.0	Multicultural	National
<i>Berita Harian</i>	Malay	Weekdays	4.9	Professionals, managers, executives and businessmen (PMEBs)	National
<i>BH Ahad</i>	Malay	Weekend	7.7	PMEBs	National
<i>Harian Metro</i>	Malay	Weekdays	17.5	Average Malaysians	Tabloid
<i>Metro Ahad</i>	Malay	Weekend	18.4	Average Malaysians	Tabloid
<i>Kosmo!</i>	Malay	Weekdays	11.2	Youths and adults	Tabloid
<i>Kosmo Ahad</i>	Malay	Weekend	11.8	Youths and adults	Tabloid
<i>The Star</i>	English	Weekdays	16.1	Mass audience including PMEBS, household decision makers and youths	Tabloid

<i>Star Sunday</i>	English	Weekend	15.7	Mass audience including PMEBS, household decision makers and youths	Tabloid
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7.2.1.2 Data collection

Hard copies of newspapers were collected from the archive collection of the Central Library of the University Malaya and the National Library of Malaysia. A total of 155 newspaper editions in the sample published from 15 June until 15 July 2013 were manually scanned to identify health-related articles. The study replicated the one-month timeframe used in a similar study that examined newspaper coverage of health issues in Matamoros, Axelsson, and Strid (2007). The study selected this timeframe (15 June until 15 July 2013) as it was a convenient and relevant sample for the researcher due to the limited resources and time (Krippendorff, 2004). The data collection was done in Malaysia in a limited timeframe and therefore, it was decided that the sample selected should be recent and both resources, Central Library of the University Malaya and the National Library of Malaysia, could provide complete data of the sample. This study used the census sample as it is considered the most sensible for research examining particular events (Riffe, Lacy, & Fico, 2008). The unit of analysis in this content analysis was individual health articles based on the definition provided by a previous study (Peng & Tang, 2010; Wang & Gantz, 2010). Similarly to Peng and Tang (2010), this study did not consider traffic injuries because of their high number and subsequent potential to skew the data. In addition, related news content typically only reports the incident, without further health information. The sample criteria excluded articles reporting deaths (with no explanation of the cause of the deaths, this type of articles mostly reports on the death of important person), accidents and natural disasters.

Newspapers in their entirety were scanned from the front page to the last. All identified health-related articles were digitally captured and saved in digital format for subsequent analysis

(.jpeg). The Sunday edition was grouped with the daily newspapers. Any article that appeared on the front page and continued in another section was considered a single article.

To refine the sample, the study applied the following exclusion criteria on the obtained articles:

- advertisement
- picture only (image without any explanation or health information)
- entertainment-type review
- articles contributed by a company for advertisement purposes
- articles with fewer than 50 words.

In the initial data collection, advertisements were included as health articles. However, when referring to guidelines for newspaper content analysis, the study eliminated advertisements as they are not considered stories (Lynch & Peer, 2002). Articles that met the exclusion criteria were eliminated. Next, the study categorised the remaining articles based on the main health topic (McCool et al., 2011). Finally, the study quantified the articles based on their frequency and percentages of each category.

7.2.1.3 Validation and reliability

For validation of the data, the study conducted two validation steps. First, the study crosschecked the obtained sample with an online database search. This step ensures that the manual search has captured all health-related articles. This online database search located articles that include NCD-related words in their content and headlines. A list of keywords related to NCDs was used to locate the articles (see Appendix 1). The keywords are based on the primary NCD diseases listed by the WHO (Alwan et al., 2010). The comprehensive keyword search was adapted from the previous study (Rock, 2005). The keywords used in this study covered both English and Malay languages. Duplicates and non-related NCD articles

were excluded from the final sample. This validation process only involved one newspaper, *Utusan Malaysia*, because of issues with accessibility for other newspapers' online databases.

Table 7. Keyword for Online Database Search.

Disease/ main topic	Malay-language newspaper	English-language newspaper
Non-communicable disease	Penyakit tidak berjangkit, NCD	Non-communicable disease, NCD, NCDs
Heart disease	Penyakit jantung, Sakit jantung, Serangan jantung, Kardiak, Kardio	Heart disease, Heart attack, Cardiac, Cardio
Cancer	Kanser, Barah	Cancer
Diabetes	Diabetes, Diabetik, Penyakit kencing manis	Diabetes, Diabetic
Chronic respiratory disease Asthma	COPD, Penyakit pernafasan Asma, Asthma	COPD, Respiratory disease Asthma

The cross-checking process (see Figure 9) resulted in a mismatch between the online database search and the manual search. Articles related to smoking found via manual search did not appear in the online database search. Therefore, the word '*rokok*' (smoking or cigarette) was added to the list of keywords, resulting in an approximately similar number of articles from both the online and manual searches. This validity step supports a previous study that compared hand and database searches in collecting newspaper articles (Roy, Faulkner, & Finlay, 2007), which found while hardcopy hand search may involve human error, the data collected are more comprehensive, specific and involve approximate reading. Nonetheless, because of time limitations, the content analyses in this study employed only one method of data collection.

To support the results obtained, another validation process was carried out comparing results with another search from a randomly selected month (10 December 2013 to 9 January 2014). NCD keywords were searched for in *Utusan Malaysia* using headlines. After conducting the keyword search in the online database and a filtration process, an approximate total of 28 articles related to NCDs were found. This number is similar to the final result obtained in the

previous validation process (30), suggesting that mid-June until mid-July 2013 (the sample period) was not an odd timeframe for health articles.

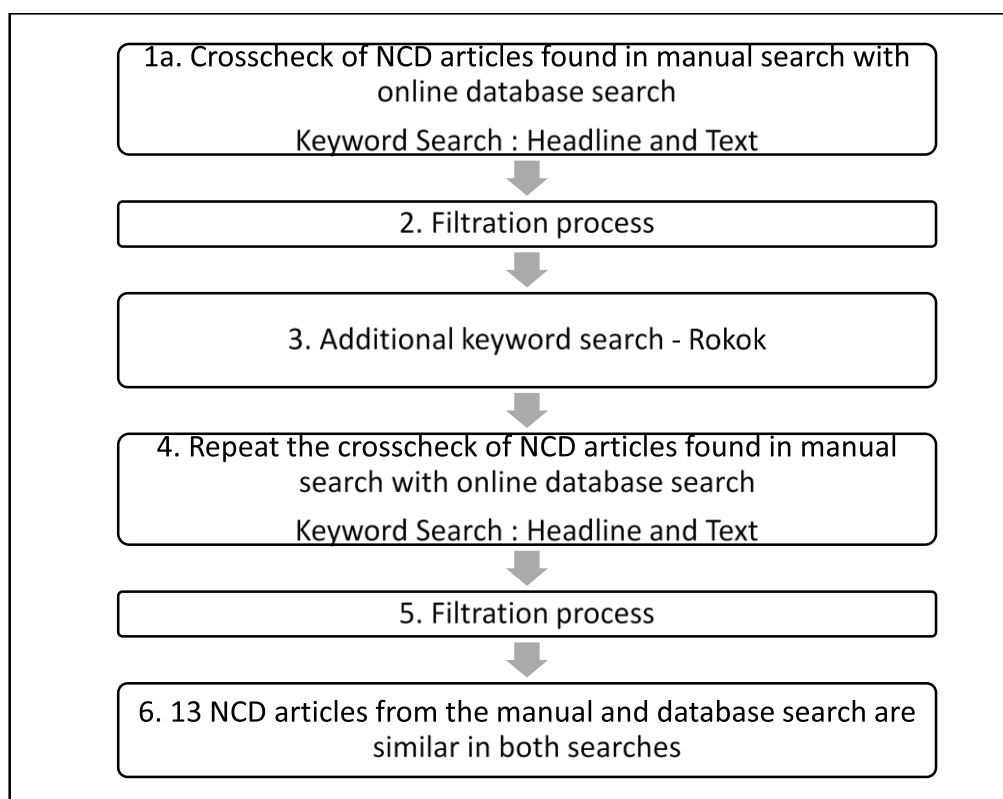


Figure 9. Validation Process for Manual Data Collection.

To assess the reliability of the health article categorisation, an independent coder coded a subset of the sample and checked the consistency of appraisals. Approximately 10% of the sample was randomly selected and tested for coding agreement. The percentage of agreement was calculated to measure intercoder reliability for the health topic categorisation (0.91).

7.2.2 Content Analysis B

7.2.2.1 Sampling procedures

To address Research Question 3 (Has the quantity of NCD coverage changed over time?) and Research Question 4 (Which types of NCDs are frequently covered?), the study conducted

another content analysis on a sample of major Malaysian daily newspapers. The primary inclusion criteria included being a top circulated newspaper able to be accessed via an online database. Four newspapers meeting the criteria—*Utusan Malaysia*, *Harian Metro*, *Berita Harian* and *New Straits Times*—were chosen for the analysis. Database Bernama Library & InfolinkService (BLIS) and News Image Bank (NIB) were used to locate articles with keywords related to NCDs in their headlines (see Table 8). Articles from *Utusan Malaysia* were acquired from BLIS, a database provided by the national news agency of Malaysia, Bernama (Bernama, 2017), while the NIB database is an online newspaper archival service published by New Straits Times Press (M) Berhad (The New Straits Times Press (Malaysia), 2017). The searches also included the equivalent Sunday newspapers. The timeframe used for this search was from 1 January 2008 until 31 December 2013, a period of five years, aiming to capture the trends in NCD news presented in Malaysian newspapers.

The sample used in Content Analysis B differs from Content Analysis A as each analysis aims to address different research question. Content Analysis A intended to identify the health topics that were presented in Malaysian newspapers, whereas Content Analysis B aimed to identify whether the quantity of NCD coverage has changed over time and to analyse the which types of NCDs are frequently covered. Therefore, the Content Analysis A analysed all of health-related articles within the selected timeframe whereas Content Analysis B focused only NCD-related articles. The sample in Content Analysis A is a census sample as it aims to include all health-related articles. However, since Content Analysis B is more specific for NCD-related articles, a keyword search on online databases was conducted. For the purpose of identifying the trends in NCD news, the timeframe for Content Analysis B covers a period of five years. The initial plan was to include any articles with NCD-related words, however, the search results yielded a high number of articles, the study then focused only on articles with NCD-related words in their headlines

The sample was generated by searching online databases for articles that included NCD-related words in their headlines. The unit of analysis for this phase is an individual news article. Similar to the formative content analysis (Content Analysis A) this study applied similar exclusion criteria to refine the sample. In addition, any article duplicated from the same keyword search and published on the same date would be eliminated. The list of keywords used in the respective newspaper is similar to the keywords used for validation process in Content Analysis A. The search was expected to include all articles that consist NCD keywords in its title. The results of the content analysis will provide the trends in NCD coverage in the newspapers over time. The frequency of NCD mentions in the newspapers can be mapped based on different diseases across the five-year time frame.

Table 8. Keyword for Online Database Search.

Disease/ Main topic	Malay-language newspaper	English-language newspaper
Non-communicable disease	Penyakit tidak berjangkit, NCD	Non-communicable disease, NCD, NCDs
Heart Disease	Penyakit jantung, Sakit jantung, Serangan jantung, Kardiak, Kardio	Heart disease, Heart attack, Cardiac, Cardio
Cancer	Kanser, Barah	Cancer
Diabetes	Diabetes, Diabetik, Penyakit kencing manis	Diabetes, Diabetic
Chronic respiratory disease	COPD, Penyakit pernafasan	COPD, Respiratory disease
Asthma	Asma, Asthma	Asthma

7.3 Results

7.3.1 Results of Content Analysis A (general health-related articles)

In total, 887 health-related articles were presented across the five major Malaysian newspapers—*The Star*, *Harian Metro*, *Bharian*, *Kosmo!* and *Utusan Malaysia*—during the study timeframe (15 June until 15 July 2013). Figure 10 summarises the results of the screening process of Content Analysis A.

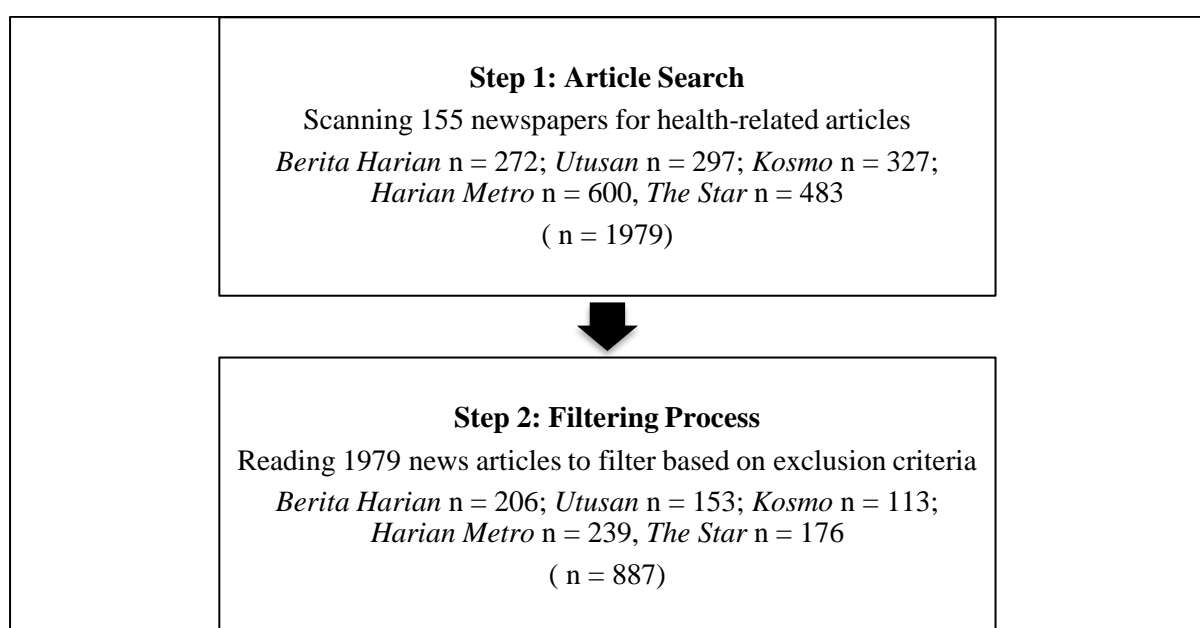


Figure 10. Screening process of news articles.

The second research question concerned the health topics covered in newspapers. The content analysis indicated that there was a wide range of health topics covered, as expected. Based on classification according to main theme, 12 health topics were identified, formulated based on a previous study (McCool et al., 2011). Four topics were identified: NCDs, communicable disease, substance abuse and general health risks. Another three topics were also included: pregnancy and childbirth to maternal and child health, food and nutrition to food, nutrition and food safety, and environment to environmental health. In addition, four new topics were

developed: cosmetics, chronic health, healthy lifestyle and sexual health. The new topics were either expanded or developed to fit the main themes into the most suitable health topic. The articles with the following stories were classified to the respective topics (see Table 9).

Some articles could interchangeably fit into a different topic, such as articles on prevention of NCDs and healthy lifestyle; here, classification depended on the main overall topic that dominated the article. Articles discussing diseases, risk factors and effects were categorised based on the cause system (Unwin, Epping-Jordan, & Bonita, 2004). Therefore, diseases were classified as either NCDs or communicable diseases.

Table 9. Topic Classification of Health-Related Articles (Not Presented in Order).

Health topic	Stories
Cosmetics	<ul style="list-style-type: none"> • Cosmetic surgery • Adverse effects of cosmetic surgery • Law and procedures related to cosmetic surgeries • Cases of fatal plastic surgery/ cosmetic surgery • Use of supplementary products for cosmetic purposes
Environmental health	<ul style="list-style-type: none"> • Air pollution issues • Awareness and prevention related to environmental health • Risk to environmental health • Effects on the economy/social activity • Politics – leader’s opinion • International relationship
NCD	<ul style="list-style-type: none"> • Heart diseases, diabetes, cancer, OCPD, asthma • Stories on NCD patients • NCD prevention and risk factors • Research on NCDs • Eczema • Kidney failure • Stomach ulcers • Mental health problems
Communicable disease	<ul style="list-style-type: none"> • Dengue • Prevalence of HIV • Risk factors and prevention of communicable disease
Healthy lifestyle	<ul style="list-style-type: none"> • Sleeping and weight gain • Exercising

	<ul style="list-style-type: none"> • Health events promoting healthy lifestyle
Sexual health	<ul style="list-style-type: none"> • Menopause • Treatment for erectile dysfunction • Anything related to sexual organ/infection
Maternal and child health	<ul style="list-style-type: none"> • Endometriosis • Pregnancy • Child health • Breastfeeding • Children psychology • Children disease
Food, nutrition and food security	<ul style="list-style-type: none"> • Benefits of food and specific nutrients • Food safety and infectious disease • Hygiene of food premises
Substance abuse	<ul style="list-style-type: none"> • Excessive consumption of alcohol • Drug abuse
General health risks	<ul style="list-style-type: none"> • Wearing heels • Drowning

Coverage of environmental health was the greatest, representing 24.6% (218 articles) of the sample (see Figure 11). Articles about NCDs were the second most commonly reported, at 22.4% (199 articles). No specific dominant issues of NCDs were published, despite a wide range of NCD issues being covered during the study timeframe. Communicable diseases was the third most-covered health topic at 10.6% (94 articles). Cosmetic medicine, general medicine and medical technology and general health risks were less frequently covered in the newspapers reviewed in this study. A difference was observed in the numbers of articles covering environmental health and NCDs compared with other health topics.

The content analysis also provided the frequency of health articles present in each newspaper according to the topic. *Harian Metro*, a tabloid newspaper with the highest circulation, covered the highest number of health articles, while *Kosmo!*, another tabloid, reported the lowest number of health articles (see Table 10).

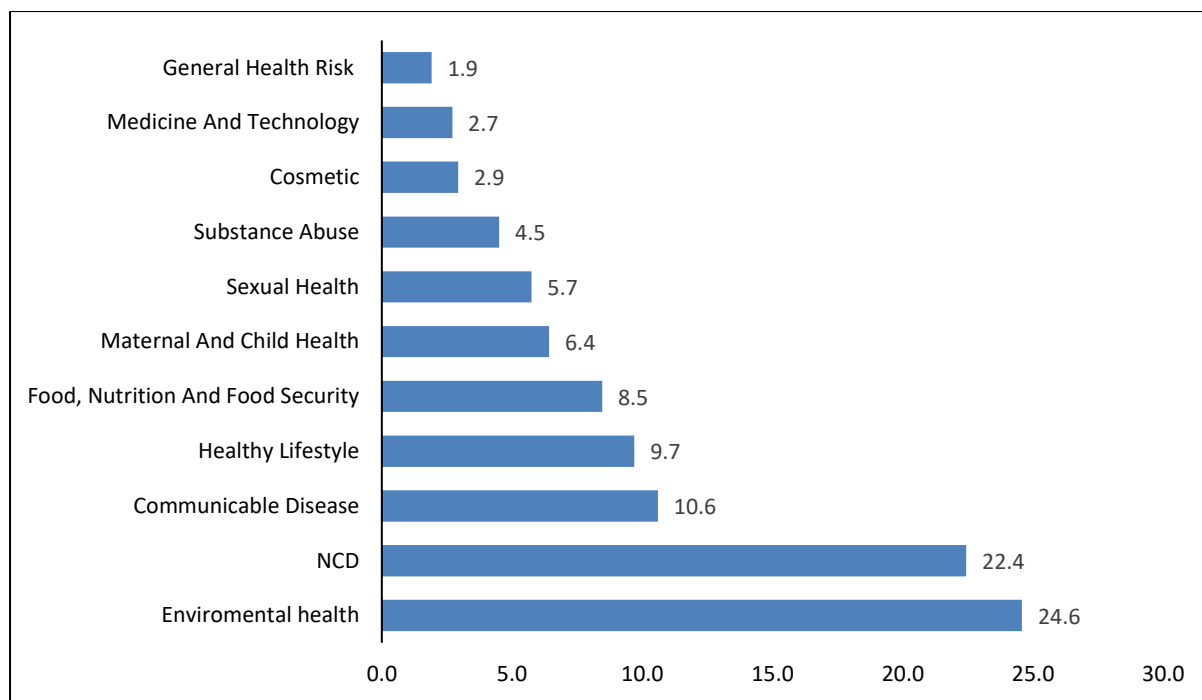


Figure 11. Percentage of health topic.

Table 10. Health Topics According to Newspapers.

	<i>The Star</i>	<i>Harian Metro</i>	<i>Bharian</i>	<i>Kosmo</i>	<i>Utusan</i>	Total
Environmental health	58	41	41	27	51	218
NCDs	36	64	42	22	35	199
Communicable disease	13	14	46	9	12	94
Healthy lifestyle	8	35	26	13	4	86
Food, nutrition and food security	14	24	14	15	8	75
Maternal and child health	13	11	13	7	13	57
Sexual health	7	35	6	2	1	51
Substance abuse	5	6	6	3	20	40
Cosmetic	10	5	2	4	5	26
Medicine and technology	9	0	6	7	2	24
General health risks	3	4	4	4	2	17
Total	176	239	206	113	153	887

7.3.2 Results of Content Analysis B (NCD articles)

Figure 12 presents the total number of news articles from four Malaysian newspapers between 2008 and 2013 that contain the NCD keywords in the headline. Overall, there was an increasing trend in NCD coverage over the study timeframe. However, this increasing trend is not representative for all NCDs. The figure shows a high coverage of cancer in the newsprint media through the five-year timeframe; however, the trend was not consistently increasing, as the total frequency of cancer-related articles was stagnant in the first two years and dropped in 2010. However, looking at the overall five-year coverage, articles related to cancer grew.

The results of the content analysis also showed an obvious difference between coverage of cancer and other NCDs. For instance, although diabetes was the second most-covered NCD, the proportion of articles related to diabetes was only approximately 20–30% of the total of cancer-related articles every year. The third most reported NCD, heart disease, represented only approximately 10% of total cancer-related articles. This difference is even more apparent when comparing cancer with articles related to asthma and COPD, as their average frequency is less than 10 articles per year.

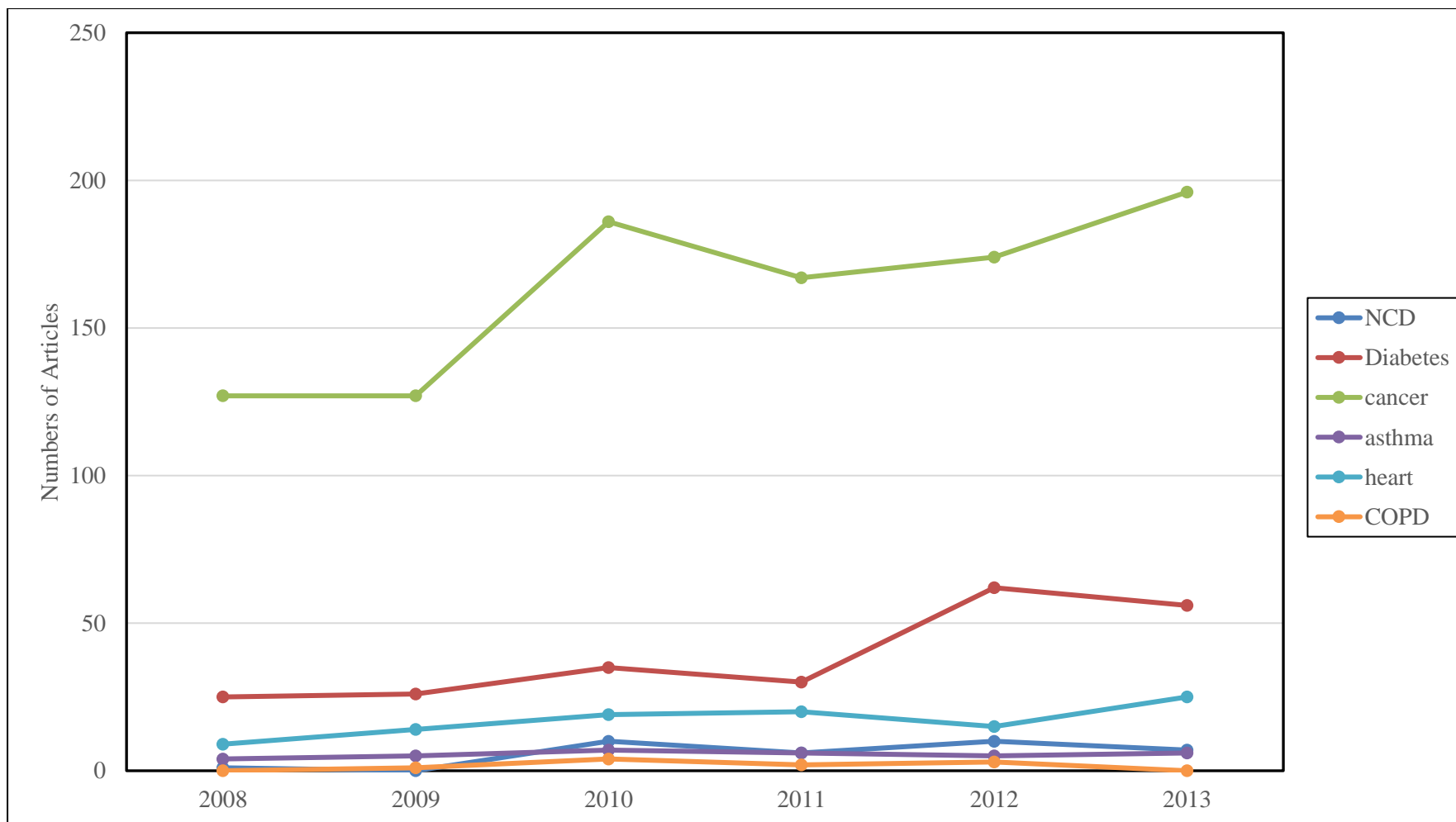


Figure 12. Coverage of types of NCDs between 2008–2013.

7.4 Discussion

This chapter explores the presentation of NCDs and other health issues through the frequency of health topics and the trends in NCDs coverage in five major Malaysian newspapers. The results obtained will be discussed based on 1) the results of the content analysis, and 2) the inferences of the influences on NCDs and health news construction based on the results .

Results of Content Analysis A showed that environmental health received the highest coverage during the study period. During the study timeframe, countries such as Malaysia, Singapore and Indonesia were badly affected by environmental haze (Abdul, 2013; Forsyth, 2014; Tan, 2013). The phenomenon was caused by the agriculture–forest fires in Indonesia (Tim Forsyth, 2014). Effects were not only visible in the air, but in daily life in terms of health and business (Forsyth, 2014). The Malaysian Ministry of Education closed thousands of schools during the haze problem (“Haze forces closure of 385 schools in Johor,” 2013; Tan, 2013), and all major newspapers in Malaysia were covering the problem daily. They covered the topic from many angles, including hospital admissions, government intervention in health precautions and the effect of haze on individuals’ health. In addition, the reports on this phenomenon often used government officials to provide the latest information and breaking news, such as instructions regarding school closures.

As agenda-building theory postulates that many factors influence issues saliency in the news media; the high coverage of haze demonstrated that journalistic routines such as sourcing practices and journalistic news values, influence the news agenda- building (Len-rios et al., 2009; Nisbet, 2008; Tanner & Friedman, 2010; Wallington et al., 2010b). The possible rationale of citing the government officials in haze news is that, the journalists perceived them as important official sources for breaking news (A. Tanner & Friedman, 2010). On another hand, the high coverage of haze stories is aligned with journalistic news values, in particular,

‘timeliness’, ‘human interest’, ‘magnitude’, ‘bad news’ and ‘proximity’ (Galtung & Ruge, 1965; Harcup & O’Neill, 2001; S. T. Lee, 2014). News producers constructed stories on haze more intensely during its occurrence, implying that coverage of haze had more news values than other health topics.

The results from Content Analysis A found that NCDs were the second most-covered broad health topic presented during the study timeframe. In contrast to environmental health coverage, which was high because of the haze, there were no specific newsworthy events related to NCDs during the study frame. Therefore, high coverage of NCDs indicates that news producers regarded NCDs as an important issue in the news agenda. As NCDs accounted for more than 72% of deaths in Malaysia (WHO, 2014c), the high coverage of NCDs in newspapers aligned with the significant NCD challenges facing Malaysia at that time, and currently. The coverage indicated that the Malaysian news media were pressing the issues because of the impact of NCDs on the Malaysian public. This finding is similar to that of Peng and Tang (2010), which identified that prevalence of newspaper reporting seemed to reflect the actual health situation. This high coverage of NCDs may also imply that NCD stories satisfy two of the journalistic news values, ‘timeliness’ and ‘magnitude’ of the issue (Harcup & O’Neill, 2001). As this study was limited to quantitative analysis, it did not provide details of the articles, nor of which type of NCDs received attention in Malaysian newspapers.

The findings in Content Analysis B demonstrate that Malaysian newspapers tended to over-represent cancer in comparison with other types of NCDs, or at least under-represent news on other NCDs comparatively, during the five-year timeframe. Since there is no previous analysis investigating and comparing the news coverage of NCD types, this finding is rather unique. In fact, previous studies are limited to specific types of NCDs; for example, previous studies have specifically examined and compared coverage of cancers in the news, identifying breast cancer as over-represented (Henry et al., 2012; Jensen et al., 2010), while this current finding

demonstrated that cancer is more likely to be featured in the news than other NCD topics, having a high coverage trend through the five years.

This finding may also indicate that news media regarded cancer as an item on the news essential agenda. One possible explanation for this high saliency of cancer in newspapers is that sources of cancer stories are cancer advocates, who are highly active and invested in health promotion events for the disease. Further, there are opportunities for them to organise cancer-related promotional events as there are more special day awareness days dedicated to cancer types in comparison with other NCDs. For example, in Malaysia, 14 November is dedicated to World Diabetes Day (Malaysian Diabetes Educator Society (MDES), 2017), while the whole of November is Lung Cancer Awareness Month and October is Breast Cancer Awareness Month (S. Aziz, 2017; Cancer Research Malaysia, 2015). A similar rationale was used in explaining the over-representation of breast cancer in content analyses of cancer news, where it was explained as arising because of highly invested public health efforts by the breast cancer-related organisation (Jensen et al., 2010; Slater, Long, Bettinghaus, & Reineke, 2008). One of the implications using advocates as the source of information is that, they may contribute to generating and shaping the discourse of the issue (Wakefield et al., 2012). In this case, the agenda on cancer news may be dominated by the cancer advocates group.

Other than high numbers of reports on health events related to cancer, cancer may receive high coverage in comparison with other NCDs as it has high news value (human interest, surprise, bad news) compared with other NCDs (Hoel, Howard, & Gifford, 1997; Jensen et al., 2010). News media often present cancer as mysterious, by highlighting that it can grow without awareness, with no specific causes and seem inevitable (Clarke & Everest, 2006). This presentation may associate cancer with fear and uncertainty for the audience. In contrast to cancer, other NCDs such as heart-related diseases were not considered 'glamorous' (Collin & Hughes, 2011; Hoel et al., 1997). As the risk factors for heart diseases and diabetes are mostly

associated with poor lifestyle choices, such as an unhealthy diet and lack of physical activity, patients were not considered innocent or unusual victims (Collin & Hughes, 2011; Seale, 2003). Considering these factors may detract from human interest, journalists focus on publishing cancer stories rather than stories of other NCDs.

7.5 Study Limitations

Several limitations of this study are worth noting. First, the time frame of Content Analysis A is limited to one month, based on that of a previous study (Matamoros et al., 2007). It may be argued that the results are only valid for a particular timeframe. However, the sample was obtained through a manual-search approach, involving reading pages and pages of every issue of the five mainstream newspapers to identify articles that met the search criteria. Although this process was messy and time-consuming, it was essential to locate all health articles. There is a variety of health topics in Malaysian newspapers, and identification of a sample through an online database search may have involved a highly complicated word search string. By using this method, the researcher had proximity to the data and identified all health-related articles. This hand-search method also provided the context of the articles, such as the position of the articles in the newspapers (Roy et al., 2007). Nonetheless, because of the high number of articles yielded by the search, the study focused on the number of articles. Second, Content Analysis B only provided trends in NCD-related articles through the five years. A more detailed analysis would provide more nuanced information on the NCD articles. Nonetheless, the results of Content Analysis B provide an overview comparison between NCDs in the study timeframe.

7.6 Summary

Traditional news media outlets, such as newspapers, are widely considered a source of current and reliable health information (Anwar et al., 2010; Pon et al., 2006; Yassin & Seong, 1995; Zainal, Quek, & Biswajit, 2005). However, no studies have explored NCDs and health news

reporting in Malaysian newspapers. Therefore, the analyses in this chapter examined the coverage of health issues and NCDs in Malaysian mainstream newspapers, guided by the agenda-building theory. By using content analysis, the first study identified that NCDs are an important agenda item in the Malaysian newspapers. The second study showed that there is a discrepancy in the presentation of cancer versus other NCD-related stories as cancer received the highest attention in comparison to other NCDs. The results of the analyses also show that journalists select cancer and NCDs as these stories are newsworthy.

Chapter 8. Examining the Presentation of NCDs in Malaysian Newspapers

8.1. Introduction

The primary aim of this chapter is to examine the presentation of NCD issues in Malaysian newspapers. This chapter presents two types of analysis to achieve this aim. The first used content analysis which focuses on examining the main topic of each NCD-related article, while the second, a thematic analysis, identifies the themes and patterns of meaning across the NCD-related articles.

The analyses in this chapter were underpinned by framing theory. Framing is a means of presenting an issue in the media from a particular perspective, for example, by emphasising certain elements of the story and excluding or repressing other aspects (Boesman, Haenens & Gorp, 2016; Entman, 1993; Scheufele, 1999) (see details in Section 3.2.3). By analysing the news content on which news producers applied framing, the study aims to identify which perspectives or frames that have been used in the news media to present NCD issues. Based on the identified NCD news presentation, inferences could also be made on the context in which the frames were applied (Krippendorff, 2004). These inferences are based on the humanistic approach as described in Chapters 3 and 7 (see Sections 3.3 and 7.2), the presentation of the subject in the news reflects the sociocultural interactions and processes that lead to its production (Shoemaker & Reese, 1996). However, it is important to note that the final news content is less transparent in indicating the context of its construction (Brüggemann, 2014).

The literature review in Chapter 5 identified that newspapers often emphasised on individual-related solutions and causes than societal solutions and causes of NCDs. This finding is similar to previous framing studies of health news, which showed a consistent tendency towards

presenting health issues through individual rather than societal frames (Chau et al., 2017; De Brún et al., 2012; Hamad, Pomeranz, Siddiqi, & Basu, 2015; Hilton et al., 2012; Jeong, Gilmore, Bleakley, & Jordan, 2014; Stefanik-Sidener, 2013) (See 3.2.3.1 for further explanation on individual and societal frames). This has been a general pattern in the health news stories across health topics, including general diseases (Peng & Tang, 2010, obesity (De Brún et al., 2012; Hamad et al., 2015; Hilton et al., 2012; Kim et al., 2014) and diabetes (Stefanik-Sidener, 2013).

There is a body of literature examining the presentation of health stories in the news media by investigating and mostly identified the presentation of health stories through the individual or societal frame. In this study, the presentation of health news in Malaysian media setting was examined without limiting to these two frames. This study specifically assesses NCD stories, as previous studies have examined either very general or specific diseases (Al-Naggar & Al-Jashamy, 2011; Chibundu & Ishak, 2011; Mohd Mothar et al., 2011; Sualman & Amelia Abdul Aziz, 2012; Tham & Zanuddin, 2012, 2015). Assessing NCDs issues in Malaysian news media is timely and essential given that NCDs are critical public health issues in the country. This study further contributes to the body of health news framing literature by providing a different setting, the Malaysian media landscape. The difference noted here being the influence of a semi-authoritarian political system and preponderance towards ‘Asian-values’ and development journalism.

Based on previous studies (Gamson & Modigliani, 1989; Kitzinger, 2007), framing analysis involves in overviewing interpretative frame packages. Each package is an integrated structure of 1) a core frame, 2) framing devices and 3) reasoning devices (Van Gorp & Vercruyse, 2012). Instead of limiting the news analysis based on the structures, this study used thematic analysis to identify the presentation of NCDs in the Malaysian newspapers. Thematic analysis is a flexible qualitative analysis that identifies, analyses and reports overarching concepts or

statement within a data set (Braun & Clarke, 2006). The advantages of thematic analysis are that it is a flexible and useful tool that provides a rich and detailed, yet complex, account of the data (Braun & Clarke, 2006; Vaismoradi, Turunen, & Bondas, 2013). It is a data-driven method and is not shaped by an existing theory (Braun & Clarke, 2006, 2012).

Although the study used framing as the underpinned theory, the study identified the significant patterns of meaning or themes presented in the NCD articles. The identified themes may be the causes, solutions and actors highlighted in the NCD articles. Instead of adhering to the criteria of frame interpretative package, the usage of thematic analysis may identify themes beyond these criteria. However, the identified themes may fit with the component of frame package such as reasoning devices. As a result, the identified themes may be related to the established frames in the previous framing analysis studies (as mentioned in 3.2.3.1).

The study aims to address the following research questions:

Research Question 1: What were the main topics of NCD articles identified in the sample?
(examined through content analysis)

Research Question 2: What were the themes used in presenting the NCD issues in the sample?
(identified through thematic analysis)

8.2. Methods

This section outlines the strategies used in selecting data sources, sampling and analysing the sample.

- Two analyses are conducted in this study (Content analysis and thematic analysis).
- Both analyses used the same data sample, but with a different purpose.
- The content analysis aims to identify the main topic of each article and group them.
- The thematic analysis aims to determine themes used in presenting NCD issues.

- In presenting the findings, there is a specific section for content analysis; however, some of the results of the content analysis may be used in presenting the findings of the thematic analysis.
- The discussion section covers both analyses.

8.2.1 Data Sources, Sampling and Analysis

The sample for this study was the Malaysian mainstream newsprint media. The study applied the following criteria in selecting newspapers to be included in this sample: 1) high circulation of the printed edition (for both the weekend and weekday editions), and 2) accessible via an online database. Three newspapers outlets (*Utusan Malaysia*, *Harian Metro* and *Berita Harian*) met both criteria. All three are Malay-language newspapers. *Harian Metro* is a tabloid newspaper, while both *Utusan Malaysia* and *Berita Harian* are national newspapers (Niner et al., 2013; Utusan Group, 2014). Details of these newspapers such as the target audience and percentage of total circulation can be found in Table 6 in Chapter 7. Both weekday and weekend editions were included in the data sample. For practicality reason, this study referred to the newspapers based on the names used for their weekday editions.

Table 11. Circulation Figures for Newspapers in Malaysia (Printed), January–December 2014.

Newspaper Outlet	Jan 14 to Jun 14	Jul 14 to Dec 14	Type of Edition
<i>Utusan Malaysia</i>	163,101	166,503	Weekdays
<i>Mingguan Malaysia</i>	357,059	353,647	Weekend
<i>Berita Harian</i>	86,488	109,088	Weekdays
<i>BH Ahad</i>	137,363	132,933	Weekend
<i>Harian Metro</i>	312,656	266,403	Weekdays
<i>Metro Ahad</i>	327,285	276,885	Weekend

Source: ABC Malaysia, 2014; ABC Malaysia, 2015.

To collect the data, the databases of the Bernama Library & Infolink Service (BLIS) and News Image Bank (NIB) were accessed, as they offer a comprehensive archiving service. Articles from *Utusan Malaysia* were acquired from BLIS, a database provided by the national news agency of Malaysia, Bernama (Bernama, 2017). The NIB database is an online newspaper archival service published by the New Straits Times Press (M) Berhad, which owns *Berita Harian*, *Harian Metro* and the *New Straits Times* (The New Straits Times Press (Malaysia), 2017). The NIB database was used to locate articles from *Berita Harian* and *Harian Metro*.

8.2.2 Sampling

The study employed relevance sampling, a method that specifically selects a sample based on the research question (Krippendorff, 2004). For example, as this study was aimed at examining the presentation of NCD-related issues in Malaysian newspapers, the sample included articles that were relevant to NCDs. A multistage process was conducted to achieve the sample. First, any articles with keywords related to NCDs in their headlines and content were located (see Table 8). This strategy was different from the search strategy conducted in the Content Analysis B in Chapter 7, where the focus was on articles that consisted of the NCD keywords in their headlines. The keywords used for the search were related to the principal NCDs listed by WHO (Alwan et al., 2010); namely, cancer, diabetes, cardiovascular diseases, COPD and asthma. The comprehensive keyword search was adapted and modified from previous studies (Hellyer & Haddock-Fraser, 2011a; Rock, 2005).

Although Content Analysis B (see Section 7.2.2) involved a keyword search for content analysis, this study updated the keywords list with some improvements. An initial search was conducted to ensure that the keywords located NCD-related articles. The keyword search was modified to include words such as ‘merokok’ (smoking) to include articles that mentioned smoking as a risk factor for NCDs. For cardiovascular diseases, an additional keyword, ‘strok’

(stroke), was added to the search as it is also one of the main contributors to NCD morbidity and mortality (Abajobir et al., 2017). The initial search results showed that most of the heart disease-related news included the word ‘stroke’ in their articles. For the NCD category, instead of only using the phrase ‘penyakit tidak berjangkit’ (non-communicable disease), ‘penyakit tak berjangkit’ was also added to the keyword search. The words ‘tidak’ and ‘tak’ have a similar meaning in Malay, which when translated into English means ‘non’. Further, the initial search results showed that certain articles termed NCDs ‘penyakit tak berjangkit’ and not ‘penyakit tidak berjangkit’. Since the search result for chronic obstructive pulmonary disease (COPD) or ‘penyakit sekatan pulmonari kronik’ was almost zero, it was decided to add the keyword ‘pernafasan’ (respiratory) to the keyword search. Based on the initial search, the keyword ‘COPD’ appeared in Malaysian news articles and was therefore used in this category. The search used the keywords ‘asthma’ and ‘asma’ to locate articles related to asthma, as these words are used interchangeably in Malaysian newspapers.

Table 12. Updated Keywords for Online Database Search.

Disease/Main topic	Malay-language newspapers
Non-communicable disease	Penyakit tidak berjangkit, NCD, Penyakit tak berjangkit
Heart disease	Jantung, Strok, Kardiak, Kardio
Cancer	Kanser, Barah
Diabetes	Diabetes, Diabetik, Penyakit kencing manis
Chronic respiratory disease	COPD, Pernafasan,
Asthma	Asma, Asthma
Smoking	Merokok

Initially, this study intended to use the same sample from Content Analysis B (from 2008 to 2013). However, as this study aims to include all articles with the NCD-related keyword in the headlines and the content, (the sample of Content Analysis B only includes articles with NCD

keyword in the headlines), a new keyword search should be conducted on this timeframe. It is important to note that during this new keyword search, the NIB database has introduced Article Retrieval Fee which would cost approximately from one dollar to twenty dollars per article (“FAQ,” n.d.). Therefore, due to pragmatic and economic reasons, instead of including all of the NCD-related articles from 2008 to 2013, a new sampling was decided for this analysis.

Since the study could not obtain all NCD-related articles from 2008 to 2013, it was decided that this thematic analysis shall be a continuation of the content analyses in Chapter 7, where the timeline for Content Analysis A was June–July 2013, and Content Analysis B was between 2008 to 2013. Therefore, systematic random sampling was used to select the timeframe for the study. This is a typical method of sampling for the media, where every *n*th unit in the total population of data is selected for analysis (Krippendorff, 2004; Macnamara, 2005). The ‘*n*th’ unit in this research was three, which was generated via www.random.org. Although only five months were selected for the study based on this sampling method (October 2013, January 2014, April 2014, July 2014 and October 2014), the sample was sufficient as the results were based on the use of multiple NCD keywords for the database searches. The primary aim of this analysis was not to obtain a representative sample but to do an in-depth examination of the construction of NCDs in the media (Macnamara, 2005).

The units of analysis for this search phase were the individual news articles. Database searches yielded 3,623 articles. Duplicate articles were identified and removed. To further refine the sample, the study applied inclusion and exclusion criteria. The main inclusion criteria were 1) keywords must be present at least twice in the article and 2) there must be at least two sentences related to NCDs in the article. Table 13 provides further details about the elimination criteria. After refining the results using these criteria, a total of 727 articles were eligible for thematic analysis. The details of each newspaper based on each month are provided in Tables 14 – 16. Due to limitations of time, feasibility and efficiency, the study used a stratified random

sampling method to reduce the sample of news articles and, at the same time, reflect the proportion for each month (Jordan & Manganello, 2008). To that end, one third (1/3) of articles from each month were randomly selected and retained for the thematic analysis (see Figure 13). MAXQDA 12 software was used to analyse the articles (MAXQDA Standard 12, 2018).

Table 13. Exclusion Criteria to Eliminate Non-Related NCD Articles.

Criteria	Details of Elimination Criteria
COD (cause of death)	<ul style="list-style-type: none"> • Only concerns COD • No further explanation of the disease • If the article mentions the death of a person with an explanation of the disease, the article is included
Reports on NCD patients	<ul style="list-style-type: none"> • Reports on personnel who suffer from NCDs without any further explanation of the disease
Passing mention	<ul style="list-style-type: none"> • If the article only mentions the keyword once but the rest of the article does not relate to NCDs • If the article mentions cures for NCDs (i.e., some of the food in a restaurant can reduce the risk of NCDs), but the rest of the article reports on a newly launched restaurant • The whole article talks about experience but only mentions NCDs once – in relation to family and friends – with no further explanation
Metaphor	<ul style="list-style-type: none"> • The keywords were used as metaphors

Table 14. Total Articles for *Utusan Malaysia*.

Month	<i>Utusan Malaysia</i>	Post Eliminating Duplicates	Post Filtering Process
Oct-13	265	175	64
Jan-14	149	113	38
Apr-14	209	164	51
Jul-14	155	122	42
Oct-14	227	161	79
Total	1,005	735	274

Table 15. Total Articles for *Harian Metro*.

Month	<i>Harian Metro</i>	Post Eliminating Duplicates	Post Filtering Process
Oct-13	367	251	75
Jan-14	276	206	34
Apr-14	329	225	43
Jul-14	254	185	38
Oct-14	306	225	66
Total	1,532	1,092	256

Table 16. Total Articles for *Berita Harian*.

Month	<i>Berita Harian</i>	Post Eliminating Duplicates	Post Filtering Process
Oct-13	261	176	57
Jan-14	226	173	42
Apr-14	230	168	33
Jul-14	156	125	26
Oct-14	213	159	39
Total	1,086	801	197

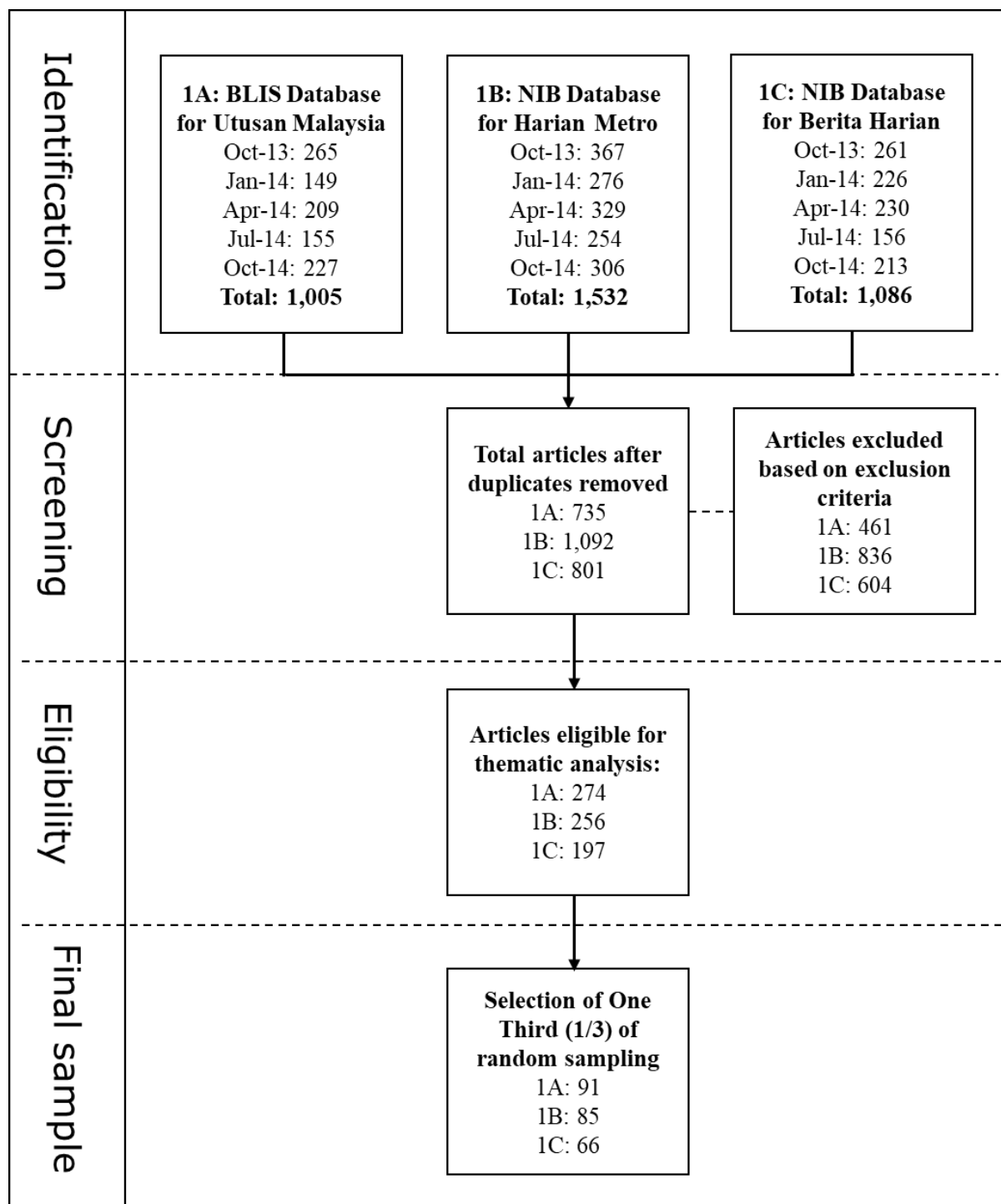


Figure 13. The process of sampling and screening for thematic analysis data.

8.2.3 Data Analysis Strategy

Analyses in this chapter involve content analysis and thematic analysis. Content analysis is a research method that involves systematic categorisation, analysis and description of the news text (Croucher & Cronn-Mills, 2015). This research method also involves making replicable and valid inferences from the data about their context with the aim to provide new knowledge, insights and guide (Elo & Kyngäs, 2008; Krippendorff, 1989). In Chapter 5, the review of NCD news analyses demonstrated that most of the studies employed content analysis. Although content analysis allows a large sample to be analysed and quantified, it lacks a nuanced analysis of the news presentation (Patterson et al., 2015). Several studies related to health news acknowledged the need to use qualitative evaluation of health news content in future studies (Gollust & Lantz, 2009; Hilton et al., 2012; Park & Reber, 2010). For that reason, the thematic analysis, a method to analyse textual data using a qualitative approach, employed in this study complements this need (Marks & Yardley, 2004). Thematic analysis is a flexible and useful tool that provides a rich and detailed, yet complex, account of the data (Braun & Clarke, 2006; Vaismoradi, Turunen, & Bondas, 2013).

An inductive thematic analysis was used as the primary method for analysing the articles. The thematic analysis identifies, analyses and reports patterns (themes) within a dataset (Braun & Clarke, 2006). It is a data-driven method and is not shaped by an existing theory (Braun & Clarke, 2006, 2012). For this type of thematic analysis, coding categories are derived inductively from the raw data. Although an inductive analysis is usually appropriate for studies that intend to develop a theory (Zhang & Wildemuth, 2009), this approach was used because of the previously limited knowledge on the media presentation of NCDs in developing countries (Elo & Kyngäs, 2008). An inductive thematic analysis progresses from a specific identified code to a broader theme (which combines several specific identified codes), and

therefore, in this thematic analysis, the units of analysis were coded and later classified into broader themes (Elo & Kyngäs, 2008).

This chapter employed the thematic analysis approach to address the gap in quantitative content analysis, which was limited to only descriptive and quantitative categorisations of news content. This qualitative approach can emphasise the social meanings within a specific context. Therefore, it is useful for explaining meanings from the views of individuals on events and processes in their lives within their social world (Braun & Clarke, 2006). With this strength, it has a unique richness and potential for revealing complexities. The thematic analysis of the news content based on its specific time, place and sociocultural influences emphasised that news producers are pressing NCD issues in Malaysian newspapers.

8.2.3.1 Content Analysis – Identifying the main topic in NCD-related articles

This analysis aims to identify the main topic of the article and involves grouping the articles based on their topic. This analysis does not aim to make any claims about differences in the frequencies of the main topic observed. Instead, it aims to provide an overview of the type of main topics that present NCD articles.

Before generating the list of the main topics, the articles were read thoroughly to obtain a sense of their overall focus. During this reading and familiarisation process, any articles that fitted the exclusion criteria were eliminated. The unit of analysis was the individual article. In the coding process, the main topics were not mutually exclusive, as it might have been difficult for some articles to be coded into a single code. For example, an article that reports on a health event may include a patient's story, health awareness message and health event information. To decide to which the main topic the article belongs, it is based on the proportion of the paragraph number that discusses the personal stories, the health awareness message and health event information. If paragraphs with a health awareness contribute to most of the text of the

article, then the article was coded under the topic of health awareness. Once the articles were coded, the list of codes was reviewed, and interrelated codes were merged into the broader topic. For example, articles that were coded as policy and public health service were merged and grouped as authorities' responsibility.

8.2.3.2 Thematic Analysis – Identifying themes used in presenting NCD issues

This analysis was aimed at identifying the themes used in presenting the NCD issues. This thematic analysis was an iterative process that involved rereading and coding the articles, generating the themes and reviewing those themes. The analysis follows the six phases of the inductive thematic analysis procedure: 1) familiarisation with the data, 2) coding the articles, 3) generating the themes, 4) reviewing the themes, 5) defining and naming the themes and 6) reporting the analysis (Braun & Clarke, 2006).

To become familiar with the data, the articles were read more than twice. During this familiarisation process, further articles were identified that matched the exclusion criteria, and thus, were eliminated from the sample. This familiarisation step was also essential to identify the unit of analysis for the study. For this analysis, the smallest unit of analysis was a sentence. This also meant that a unit of analysis could be more than a sentence. However, a unit of analysis could consist of more than a unit of meaning, as a sentence could include several meanings. The largest unit of analysis was a paragraph, where most paragraphs in the sample consisted of two to five sentences.

For the next phase, 20% of the articles were randomly selected for the development of the initial codes (Schreier, 2012). According to Schreier, the initial coding should achieve a balance between variability and practicality. However, since this is only an initial coding, which may require modification later, it is suggested that only 10% and 20% of the data are included in this process. The news articles were read sentence by sentence, and a meaningful

unit of analysis in the presentation of NCDs was coded to become a unit of meaning. When all 20% of the data had been initially coded and collated, a long list of different codes had been generated. For this phase, the codes were re-analysed at a broader level. Different codes with similar potential themes were sorted together, and the relationships between codes, between themes and between different levels of themes were generated.

This process of generating lists of codes and themes was guided by the following questions: How did the newspapers present NCDs? What characteristics of NCDs were emphasised? Who were the primary sources quoted or mentioned in the NCD stories? Finally, the rest of the sample was coded based on the lists of codes and themes for the news content.

In the final stage of the data analysis, some codes were developed as main themes, and some were designated as sub-themes. This phase involved checking whether the themes worked for the coded extracts and the entire dataset. During this phase, the codes were renamed to fit the new themes. The themes were defined continuously during this phase to refine the themes and match them with the overall story (Braun & Clarke, 2006), to ensure that clear and relatable definitions were assigned to the themes.

8.2.4 Reliability

Inter-coder reliability was tested in both analyses to check the consistency of the coding process. A subset of 10% of the sample was coded by an independent second coder. The articles were then tested for coding agreement, but no correlation analysis was conducted. When there were differences in the coding appraisals, both coders discussed the differences and, in the end, agreed on a standard code description.

8.3 Findings

The study analysed a total of 210 NCD-related articles from three Malaysian newspaper outlets in five selected months between October 2013 and October 2014. Initially, there were 242 articles selected for thematic analysis, however, during the analysis, 32 articles were found to fit with the elimination criteria. The final sample for the analyses were 210 articles. The study consisted of two analyses: 1) Content analysis, which identified the main topics of NCD-related articles, and 2) Thematic analysis, which examined the themes used in presenting NCD issues.

8.3.1 Content Analysis: Main Topics of NCD-Related Articles

The driving question of this analysis was to identify the main topics of the articles, which provided a context for the results of the thematic analysis. The content analysis identified the following main topics: 1) Health Awareness, 2) Patients' Stories, 3) Health Events, 4) Authorities' Responsibilities, 5) Medical Advancements and 6) Support for NCD Patients. Table 17 summarises the findings, while Table 18 defines each topic.

Table 17. Main topics of NCD articles.

Main topics	Number of articles	Percentage (%)
Health Awareness	66	31.4
Patients' Stories	64	30.5
Health Events	35	16.7
Authorities' Responsibilities	22	10.5
Medical Advancements	13	6.2
Support for NCD Patients	10	4.8
Total	210	100.0

Table 18. Definitions of the main topics of NCDs articles.

Main Topics	Definition
Health Awareness	Articles presenting factual health information about NCDs and tips and recommendations for NCD prevention
Patients' Stories	Articles presenting stories about patients who suffer from NCDs
Health Events	News on health awareness programmes related to NCDs and fundraising activities for NCD patients or organisations
Authorities' Responsibilities	Articles promoting government initiatives to prevent or treat NCDs
Medical Advancements	Articles presenting the latest technology and R&D for treating or preventing NCDs
Support for NCD Patients	Articles presenting aid provided by stakeholders to NCD patients

The results showed that sampled articles commonly presented NCDs through the topic of health awareness. This type of article was mostly aimed at promoting health information and increasing health awareness of readers. Often written as feature articles, these articles included more health information than articles with health events as their main topic. They did not report on any specific news, other than presenting health information. The health information was either on a specific NCD, such as cancer or stroke, or healthy lifestyle tips. These articles usually included scientific health information, such as the pathophysiology and medical treatment of the diseases, and factual health information, such as statistics on the diseases or risk factors, quotes from health professionals, symptoms and prevention information. These articles quoted medical health personnel as their source of information or quoting scientific findings to support their reports.

Stories on NCD patients comprised the second most prominent main topic. The sampled articles preferred to present NCD issues through the stories of NCD patients, such as stories on patients who had overcome the disease, patients who were seeking donations to cover medical

expenses and updates on the condition of patients. Interestingly, the sampled articles presented these stories either as feature-type or news-type articles.

Health events were the third most common topic to feature in the sampled articles. Most of these were reported as news-type articles. They were mainly on health events, such as health promotional programmes, fundraising events for NCD advocates and the launch of health campaigns or health seminars related to NCDs. This kind of article usually disseminates health messages through the speeches of prominent figures either organising or attending the health programmes, including people with authority such as ministers, the Director-General of Health and corporate or organisation leaders.

The fourth topic was the authorities' responsibilities. Articles drawing on this topic mostly reported on management strategies that the authorities, such as the government or local authorities, undertake to deal with and prevent NCD issues, healthcare services and the latest policies for managing NCD issues. The articles positively portray the government or local authorities as an important stakeholder in managing NCD problems. Similar to the news on health events, the articles under this topic included a quotation from people in high positions of authority or individuals with impressive credentials such as ministers. The second least prominent topic used for presenting NCD articles was medical advancements. This topic revolved around the latest technology and R&D available for the treatment and prevention of NCDs. The final topic was support for NCD patients. Articles with this topic focused on NCD patients who were receiving help from organisations or individuals, in the form of either financial or social support.

8.3.2 Thematic Analysis: Dominant Themes Used in Constructing NCD-Related Articles in Print News Media

This analysis aimed to address the research question regarding the themes used in constructing NCD issues. Using inductive thematic analysis, it was found that two dominant themes were used in the sampled articles to portray NCD issues: 1) NCDs as an individual issue (Figure 14) and 2) positive portrayal of various stakeholders in managing NCDs (Figure 15).

8.3.2.1 NCD as an Individual Issue

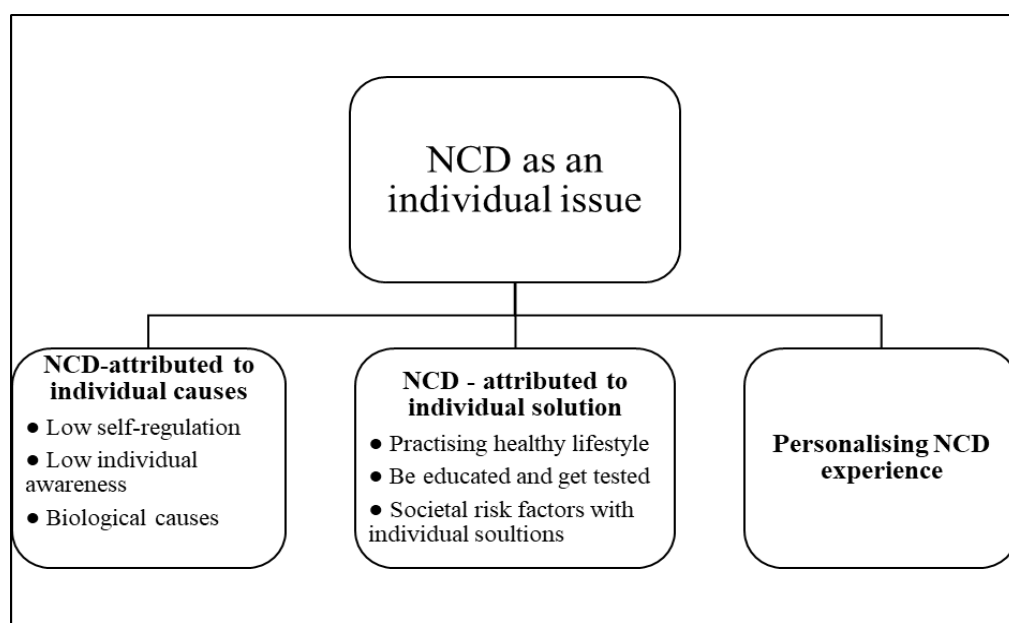


Figure 14. theme 1: NCDs as an individual issue.

The sampled articles consistently portrayed NCDs as an individual problem. There are three subthemes in this dominant theme, where two of the subthemes (NCD-attributed to individual causes and individual solutions) were related as they both discuss on the individual responsibility for causing and preventing NCDs. Another subtheme presented a different approach, whereby it discusses how NCD issues were presented from the patients' perspective and thus, representing NCD issues as an individual problem.

Articles that discussed NCD issues frequently presented NCDs as being the responsibility of individuals. Although NCDs are a multifactorial disease, articles emphasised the causes and solutions for the disease at the individual level. The analysis identified limited discussions on the societal determinants and solutions for NCDs. Although there were articles that mentioned the interplay between societal and individual factors that contribute to the occurrence of NCDs, these mostly highlighted individual factors, and settled for solutions at the individual level.

8.3.2.1.1 NCDs attributed to individual causes

Overall, it was apparent that within the reviewed sample, risk factors for individuals were presented as the leading cause of NCDs. Specifically, the salient risk factors of individuals most frequently mentioned in the sampled articles were 1) low self-regulation, 2) low awareness and 3) biological causes. Low self-regulation and low individual awareness were often presented in articles that focused on health awareness and health events. In many cases, they included quotes from prominent figures such as people with impressive credentials, people with authority or health professionals. Biological causes were often mentioned in articles whose theme was health awareness or patients' stories.

Low self-regulation

The sampled articles pointed to low self-regulation among Malaysians as the main 'culprit' leading to NCDs. Low self-regulation in this context refers to poor lifestyle choices such as unhealthy diet practices, physical inactivity and smoking. It was notable that in these articles, excessive consumption of alcohol was scarcely mentioned compared with an unhealthy diet, physical inactivity and smoking.

In the list of low self-regulation behaviour, coverage of unhealthy diet in the sampled articles was the most prevalent. The articles characterised the poor diet selection of individuals as an imbalanced diet, referring to the '*intake of food with high sugar, cholesterol, oil and trans-fat*' (*Berita Harian*, 7 January 2014), and the '*consumption of too much fried foods*' (*Utusan*

Malaysia, 31 October 2017). They also described an unhealthy diet as an incomplete diet such as the ‘*trend of not consuming breakfast*’ (*Berita Harian*, 3 October 2013). Interestingly, when presenting ‘unhealthy habits’, the articles also portrayed these as the standard practice among Malaysians. Nevertheless, the articles tended to place the blame on individuals. For example:

... the rise in various diseases is due to the obstinacy of the public to adopt a balanced diet... the cause of the diseases is usually due to [poor] diet, and this problem can be controlled if they are highly disciplined in taking care of their health... We are ‘rich’ in fatty and high-calorie food. (Berita Harian, 25 January 2014)

This excerpt is extracted from a feature article with title *Kuat makan mudah sakit* (‘Hearty eater falls sick easily’) in *Berita Harian*, a newspaper with a target audience of professionals, managers, executives and businessmen (PMEBs). This type of message is often found in feature articles discussing health and lifestyle. In the excerpt, the repetitive message blaming individuals reinforced the concept that it is the absolute fault of the individual for choosing an unhealthy diet. The excerpt also indicated that it is entirely the responsibility of individuals to take care of their health by choosing a healthy diet. Although the usage of the word ‘we’ implied that the selection of ‘unhealthy’ food was omnipresent, the overall individual blaming message was prominent. This pattern of presentation was almost consistent for this type of individual risk factor, with articles acknowledging the imbalance in the diet of Malaysians without further clarifying the reasons behind unhealthy habits.

Low awareness of NCDs among individuals

Another individual driver of NCDs frequently presented in the sampled articles was the low awareness of diseases among individuals. This low awareness may have contributed to the low motivation to meet the desirable standards of maintaining a healthy lifestyle. This portrayal of causes of NCDs (low awareness) was common, especially in feature articles with organising themes of health awareness or health events, which portrayed poor diet selection and physical

inactivity as arising from a low level of awareness. The following excerpt equates a low level of awareness with being ‘close-minded’:

.... A woman who likes to provide excuses for not exercising [is] “close-minded”. She then ‘allows’ her state of health to decline without taking any action. The biggest barrier is actually oneself; if there’s a will, there’s a way. (Utusan Malaysia, 1 April 2014)

The above excerpt is taken from an article that promoted the health programme *Jom Senam 2014* (Let’s Exercise 2014). This statement is quoted from the head of a political party branch (UMNO woman head branch) in Kuala Lumpur. It is typical of quotes from individuals with credentials, spreading the message of blame for low individual awareness of NCDs. According to the excerpt, it is up to the individual to overcome low motivation and awareness by exercising. Some articles went even further, associating low awareness with NCD mortality. For example, this following excerpt is taken from a news report on a health programme on colon cancer, attended by the Deputy Minister of Health:

According to the Deputy Minister of Health, the increase in the mortality rate among cancer patients is due to the failure in seeking early treatment... About 60% of colon cancer cases are detected in the final stage due to a lack of awareness of the importance of cancer screening and early detection tests. (Berita Harian, 14 April 2014)

Although low individual awareness of NCDs may be considered part of individual risk factors for NCDs, some articles presented it as the outcome of interplay between individual and societal factors. This is reflected in articles with a health awareness or health event topic. For example:

Many patients have yet [to] be registered as members [of a cancer association], especially those living in small towns and rural areas, due to a lack of exposure and shyness. Other factors that make them reluctant to do so may be due to a lack of confidence and the failure to receive support from the husband, family and people around them. (Harian Metro, 7 October 2014)

According to Rohani [Minister of Women, Family and Community Development], most of the women in this country still have a low awareness of breast cancer, including those who assume that they are not at risk since no family member suffers from the disease. Most of them are also embarrassed to go to the hospital for a screening test, thereby resulting in failure to detect the disease early. (Utusan Malaysia, 29 April 2014)

Both excerpts are quotes from people with impressive credentials—the first is from the Deputy Minister of Health and the second is from the Minister of Women, Family and Community Development. Both quotes were released during cancer awareness promotional programmes. Although these excerpts discussed low awareness with regard to cancer from different viewpoints (being a member of a cancer organisation and being screened for cancer), they both discussed how individual and societal factors contribute to an individual's low awareness. These excerpts highlight how a combination of individual factors, such as attitude (being shy) and limited understanding of cancer risk factor (assumption that cancer is only genetically inherited), and social factors, such as limited exposure to cancer awareness programmes because of demographical factors and acceptance by social circles, lead to low cancer awareness.

Biological causes

The analysis also discovered that sampled articles constructed NCDs as individual issues by highlighting biological causes, including age, sex, genetics and other existing health

conditions. Interestingly, the NCD stories that mentioned these factors presented them as risk factors that are ‘beyond individual control’. This presentation was contrary to the behavioural risk factors and low awareness, where the sampled articles placed the blame on the individual. The following extract is a common example from articles with the prominent theme of patients’ stories. Most of these articles presented the patients’ difficulties and challenges because of the illness. By the end of the articles, there was a donation plea to ease the patients’ burden.

We [on behalf of herself and her siblings] accept this ‘test’ [referring to diabetes] even though it feels like an ‘inheritance’ that we had to receive from our late mother [referring to their mother’s cause of death, diabetes]. Concerned individuals who would like to provide assistance to the family can contact Rosli at 019-2502869. (Utusan Malaysia, 7 October 2014)

The excerpt is a quote from a diabetes patient demonstrating that the family’s health condition was solely due to their genes, without holding any other behavioural risk factors accountable. The patients also mentioned having accepted their health condition, even though they perceived it as a test. The study found that this ‘acceptance’ reaction was pervasively mentioned throughout patients’ stories, especially for diseases caused by factors that were ‘beyond individual control’ such as genetic factors. Hence, the articles were not constructed to put the blame on the individual. This presentation was apparent in articles with the topic of patients’ stories, especially for the purpose of fundraising, and NCD survivor stories. However, if this risk factor was mentioned in articles with the organising theme of health awareness, the articles mostly promoted early health screening such as mammography.

8.3.2.1.2 NCDs attributed to individual solutions

Practising a healthy lifestyle

Since the sampled articles constructed the unhealthy lifestyle of individuals as the main risk factor for NCDs, they, in turn, presented practising a healthy lifestyle as the answer to this problem. Articles stressed that it was the responsibility of individuals to adopt a healthy diet

and to be physically active. In the sampled articles, dietary change was a common discourse for the prevention and management of NCDs. The articles called on the audience to follow a balanced diet, such as ‘*avoid sweet food and drink ... reduce sugar in their cooking*’ (*Utusan Malaysia*, 21 January 2014) and ‘*avoid food with a high intake of fat ... reduce salt in your cooking*’ (*Harian Metro*, 14 January 2014). In promoting physical activity, the sampled articles often presented exercise as a fun, doable and collective activity. For example, ‘*This recreational activity [running] is the easiest way for the community to practise a good routine*’ (*Utusan Malaysia*, 13 October 2014). Messages were frequently presented in the form of daily practical tips in articles with the topic of health awareness. Sometimes, they were parts of speeches by prominent figures or people with impressive credentials, such as politicians, programme organisers and medical professionals, in articles with a health programme topic. For example, the following extract emphasises the responsibility for maintaining a healthy lifestyle as lying with the individual. This excerpt is a quote by the Chairman of the Heart Foundation of Malaysia, Datuk (honorific title in Malaysia) Sambhi, in a report on a health promotional event:

Sambhisaid the task of finding ways to treat heart disease does not fall on the government or any health organisation, especially with the high costs involved. Instead, it is everyone’s responsibility to ensure that they are free from the disease. (Harian Metro, 1 October 2013)

Be educated and get tested

As previously discussed, the articles frequently highlighted low individual awareness as a contributor to the prevalence of NCDs. To resolve this problem, they attributed the responsibility for increasing awareness to individuals. Although some articles mentioned the management of NCDs through the collective action of various stakeholders, they still emphasised individual responsibility. Throughout the analysis, articles consistently called for

individuals to be well-informed about NCDs and to take the initiative for regular health check ups. This message was repetitively conveyed in articles with the topic of health awareness and health events. For example:

She [the president of Malaysian Society of Hypertension, Dr. Chia Yook Chin] also advised individuals with hypertension to establish routines in taking medication and always update their doctors on their health condition status ... Hypertension patients are advised to reduce salt intake in food as it is one of the main risk factors of the health condition. (Metro Ahad, 13 October 2013)

The above excerpt was taken from an article with a title of *Bahayapenyedap* (Dangers in seasonings). This article presented hypertension issues due to the high usage of seasonings in the Malaysian diet. The article targeted a general audience as well as hypertension patients. Not only are patients expected to be responsible for managing their disease, they are also expected to practise a healthy lifestyle, which includes regular check-ups and a healthy diet.

Societal risk factors with individual solutions

Although there was a persistent pattern of attributing the causes and solutions (e.g., management) of NCDs to the individual, articles occasionally recognised the societal influence on the prevalence of NCDs. The central discourse on the societal driver revolved around the influence of sociocultural preferences for a poor diet. Articles frequently reported on the general Malaysian dietary pattern as being not as healthy as that of other nations. For example:

The diet of Malaysians is different from the rest of the world. Our diet is imbalanced. We prefer to start our day with oily, fatty and high-calorie meals such as 'fat rice', fried noodles and others. (Berita Harian, 9 April 2014)

The above excerpt is extracted from a feature article titled *Pemakanan tidak seimbang punca segala penyakit* (Imbalanced diet is the root cause of all disease). The topic of this article is

health awareness. It is argued in the article that an unhealthy diet is a common practice in the Malaysian lifestyle. The association of an unhealthy diet with sociocultural factors is likely to be higher during festive seasons. Being a multicultural nation, Malaysians celebrate all the main festive holidays. Feasting on Malaysian delicacies is one of the usual activities during such celebrations. For example, Aidilfitri is a celebration for Muslims in the country after the fasting month. Since Malay Muslims form a majority, Aidilfitri is one of the biggest annual celebrations.

It is known that during the Aidilfitri celebration, a variety of delicious dishes will be served on the table. Also, during this season, we will surely enjoy various foods that captivate the taste buds. After a month of abstinence from hunger and thirst, of course, the desire to enjoy the mouth-watering dishes is arousing. Therefore, during the month of Syawal, we should put more effort into controlling our food intake to avoid having an overweight problem. (Utusan Malaysia, 26 July 2014)

The excerpt above is taken from an article with the topic of health awareness, published around the celebration of Aidilfitri. During festive seasons such as Aidilfitri, there were many articles highlighting the importance of selecting healthy food during the festive season. In the excerpt above, festive celebrations are constructed as an ‘unhealthy’ environment for a good diet. Nevertheless, it is evident that the sampled articles reinforced the idea that it is the responsibility of individuals to control their food intake. This presentation was dominant throughout the analysis, which implied that individuals living in an environment that could be described as ‘obesogenic’ should exercising self-control to reduce the NCD risks presented during ‘feasting’ seasons (Ries, Rachul, & Caulfield, 2011).

8.3.2.1.3 Personalising the NCD experience

The sampled articles portrayed NCDs as being predominantly an individual's problem, often by presenting them through the experiences of individuals. This was achieved through the use of narrative and emotive presentations in stories that focused on the personal experiences of either patients or their families in coping with the disease. There were two common types of NCD patients who received coverage in the news media: celebrities and ordinary individuals. Ordinary individuals, however, were mainly either young patients (teenagers or children), people with a low socioeconomic background, young parents or old people. The typical presentations carried the topics of patients' stories, health awareness and support for NCD patients. With that, each story had a different aim. For example, stories that were embedded in articles with a health awareness topic were mostly aimed at promoting an awareness of NCDs. By using the patients' perspective, the news articles constructed their stories using emotive and narrative approaches. The narrative approach sometimes employed a chronological story with an identifiable and familiar structure (storyline) to provide information about the disease, patients, conflicts and resolutions (Hinyard & Kreuter, 2007). For example:

*...she [the cancer patient] began to wonder when there was a sudden swelling the size of a golf ball under her chin...only went to see a doctor when the swelling increased...
“Only after undergoing a dental treatment session, the doctor advised me to see an ear, nose, and throat (ENT) specialist. After a scan, the doctor confirmed I had oral cancer... the doctor advised me to seek further treatment. For six months I underwent the treatment ...I had surgery on my neck to remove the gland, chemotherapy twice and twenty-three rounds of radiation treatment...” After numerous treatments, she is now fully recovered, and doctors confirmed that the cancer that attacked her is no longer violent and active. (Berita Harian, 31 October 2013)*

The above excerpt is extracted from an article title *Nekadlawankanser* (Determined to fight cancer). This article presented the journey of a patient fighting cancer. The article also provided cancer treatment information and promoted an organisation involved in cancer research. Such presentation of NCD issues is common in promoting health awareness, where patients' stories appeared frequently, and they presented a reliable means of promoting awareness and imparting knowledge. Other than emphasising the management of the disease, the stories also positively portrayed patients' emotional strength in enduring and overcoming the disease. This type of presentation was common in accounts from NCD survivors. Emotive presentations were pervasive throughout these stories. For example:

"I was sad to see my mother crying because of my disease. Therefore, I gathered my strength to continue living as I still have many responsibilities that I need to fulfil to my parent." (*Harian Metro*, 7 January 2014)

This excerpt is extracted from an article titled *Dua kali di ambangmaut* (Twice at the verge of death). Similar to the previous excerpt, this article presented patients' stories in fighting cancer. Instead of succumbing to the disease, the articles highlighted the high motivation and strong will of the patients to fight the disease. In some articles, the term 'redha' or 'acceptance' is used to describe the reaction of patients on learning of their disease. For example: *"I "accepted" what had happened"* (*Metro Ahad*, 12 October 2014) and *"The doctor projected a three-year treatment, but I "accept" it"* (*Harian Metro*, 10 January 2014). 'Redha' or a state of 'acceptance' is an important value in Islam. The fact that it was consistently highlighted in the patients' stories indicated that the articles portrayed it as one of the best ways for an individual to cope with an illness.

Patients' stories appeared to be an important mechanism for raising funds for the care of an individual or a treatment service (again, individualising NCDs). The articles often

demonstrated the struggle that patients had to go through, especially those who came from a low socioeconomic background. For instance:

...her husband was diagnosed with lung cancer in November last year during a health check-up due to continuous coughing... “Since he was diagnosed with lung cancer, my husband, who has been the breadwinner in the family since 1979, was not able to continue working as a taxi driver.... He has limited physical ability, and others need to manage his daily routine such as feeding him five times a day using a tube and assisting him in wearing diapers.” (Harian Metro, 1 July 2014)

Similar to previous excerpts, this article presented patient stories in facing cancer. Most articles with a similar presentation frequently presented patients’ struggle by highlighting their economic, social and healthcare challenges. In this type of article, the cancer problem is portrayed as an individual issue, which could be resolved through financial assistance at the individual level, often ending with a donation plea through public fundraising, or reporting that patients received donations from stakeholders such as politicians, advocates and NGOs.

8.3.2.2 Positive Portrayal of Various Stakeholders in Managing NCDs

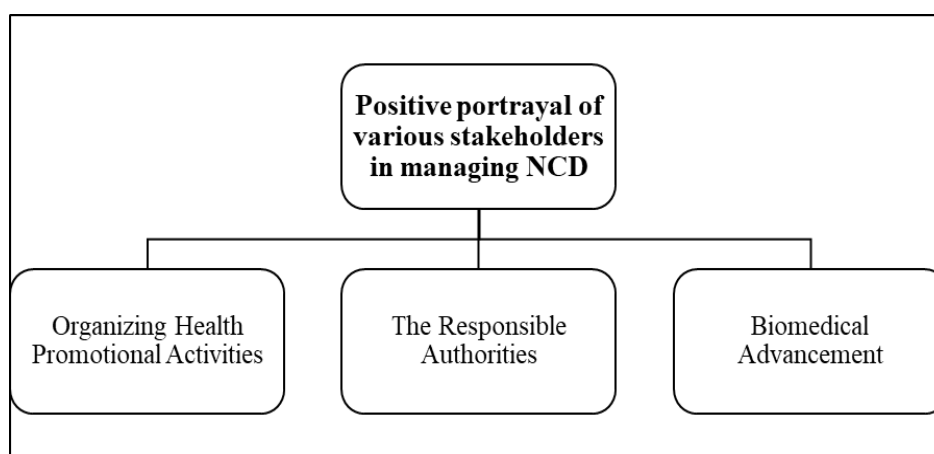


Figure 15. Theme 2: Positive portrayal of various stakeholders in managing NCDs.

The second dominant theme observed in the presentation of NCD issues in the sampled articles was the portrayal of how other stakeholders take part in addressing the problem. Although the sampled articles predominantly placed the responsibility for the causes and solutions on individuals, they positively portrayed how committed various stakeholders were in exercising their responsibility to manage and prevent NCDs. The stakeholders demonstrated their dedication by organising health programmes, formulating rules and regulations related to NCDs and making advances in biomedical technology.

8.3.2.2.1 Organising health promotional activities

Health promotional activities are essential in addressing NCD issues. Based on the analysis of the topics in the NCD articles, articles often presented NCDs within the health events topic. These articles presented various stakeholders as actively taking part in the organisation or funding of these health promotional events, including government agencies, NCD advocates, private companies and corporations and private hospitals, organising various activities, ranging from charitable, recreational (e.g., fun runs and marathons), fundraising, and free health-screening activities to informational activities (open days and seminars). Some of these activities were conducted in conjunction with special awareness days, such as International Diabetes Awareness Day and Breast Cancer Awareness Month. The articles often reported these events as the latest events in the format of news articles or news stories, and frequently mentioned how these activities received a positive response through the high number of attendees or significant amount of funds raised. An example of such a program is given below:

Avon [a cosmetics company], the National Population and Development Board [a government agency] and Mydin Hypermarket organized a road tour of “Kiss Goodbye to Breast Cancer Program” aimed at promoting awareness among women on the importance of breast cancer screening at an early stage and to educate them on a breast self-exam...within four days the organizers managed to provide health screening services to 2,800 women in 24 locations. (Harian Metro, 29 October, 2014)

The above excerpt is extracted from an article with a title of *Jelajah cegah barah payudara* (Road tour to prevent breast cancer). This article reported and promoted health programmes that aimed to elevate cancer awareness. The article also outlined the past and upcoming events of the road tour. Through this news report, the article promoted public participation in the future events such as a charity drive, free mammographs and a lucky draw. This article also demonstrated the collaboration of many stakeholders such as a government agency, the department stores and the cosmetic companies in organising and investing in health promotional programmes. The portrayal of stakeholders as active organisers of health promotional activities demonstrates that they were exercising their duty to society by providing platforms for the management of NCDs. Nevertheless, it is interesting to note that one prevalent message sent through this type of article is that it is ultimately up to the individual to choose to participate in the programmes. Such message is often quoted from individuals with credential including special guests or the organisers of the event. For example:

This running event aims to promote awareness of keeping the heart healthy, especially among the youngsters ... Exercising is important to maintain our health, and everyone should be responsible to participate in events like this. (Utusan Malaysia, 13 October 2014)

The excerpt above is cited from the head of the organiser of the running event, the Managing Director of KPJ Hospital (a private hospital) in conjunction with World Heart Day. Such quotes are not unique to this article but commonly found in articles highlighting the involvement of various stakeholders in managing NCD issues through health promotional activities.

Other than promoting public awareness, this frequent presentation of the activities of stakeholders in managing NCDs resulted in increasing their public visibility. Some of the stakeholders conducted these activities as part of their corporate social responsibility (CSR). For example, there are health programmes run by multinational companies (MNC) involved in

the food and beverage business. This form of engagement with the public through ‘responsible’ activities can enhance the image of the MNCs. However, their involvement in health promotional activities is in contrast to their products, some of which are high in sugar and calories. This engagement may boost their company profile as a supporter of healthy living, thus sending a positive message of their brand. Some MNCs even use the approach to promote their brand as being nutritious and essential for a healthy diet. For example:

*Nestle (Malaysia) Ltd. organized ‘Nestle, more goodness, more value’ for six weeks...
“Through this campaign, we aim to encourage the public to be committed in their daily life by practising a healthy diet and getting essential daily nutrients by using Nestle products”. (Harian Metro, 4 April 2014)*

This excerpt is extracted from the article titled *Segeraubahtabiatpemakanan* (Change eating habits immediately), which mainly presented programmes organised by Nestle to address NCD problems through maintaining a healthy diet with Nestle products.

8.3.2.2.2 Responsible authorities

The sampled articles predominantly presented the government or local authorities as being in the driver’s seat in managing NCDs. The articles credited the government as a responsible institution based on their strategies for dealing with NCDs, ranging from providing healthcare services for the treatment of NCDs to introducing steps for the prevention of NCDs. The articles often covered the public health service with regard to NCDs, such as the types of services provided and the budget allocated for health services. For example, ‘*The state government of Kelantan [name of a state], allocated 2 million Malaysian Ringgit [currency] for civil servants to receive treatment for various chronic diseases*’ (Utusan Malaysia, 3 July 2014). This excerpt was taken from an article that reported the latest initiative of the state government in funding healthcare services. Other than health services, another presentation of the government being

responsible in addressing NCD issues is via the portrayal of government agencies as active in organising and sponsoring health promotional programmes. For example, *'The Department of Community Development (Kemas), Kelantan branch, is targeting 50,000 people from the state to participate in the Healthy Community Program'* (Utusan Malaysia, 28 July 2014).

The sampled articles reported NCD interventions that the Malaysian government adopted or announced during the study timeframe, including new policies, rules and regulations that aimed to limit individual NCD risk factors such as smoking and an unhealthy diet. They were 1) removal of the sugar subsidy and 2) a smoking ban in the R&R (rest and recuperation) areas along highways (Audrey, 2014; Suganya, 2013). The sampled articles portrayed the government initiatives positively by providing positive responses from multiple stakeholders. For example:

This step is timely as the current statistics of diabetes rate in this country is increasing. Even though the subsidy removal caused increment of the sugar price, indirectly, it educates the consumer to control and reduce sugar intake in their food and beverages. (Utusan Malaysia, 27 October 2013)

This excerpt is an extract from an article with title *Setuju subsidi gula dimansuhkan* (Agrees with the sugar subsidy abolishment), quoted from the President of the Malaysian Consumer Protection and Welfare Board. His statement further endorsed government action by providing the rationale related to reducing NCD statistics.

8.3.2.2.3 Biomedical advancements

The presentation in the sampled articles of biomedical advancements was part of the positive portrayal of various stakeholders in managing NCDs. The collaboration of multi-stakeholders investing in research and development (R&D) in the biomedical field indicated that they are committed to advancing technology for the treatment and prevention of many health conditions

(including NCDs) in Malaysia. Further, the positive coverage promoted awareness of the local R&D environment. For example:

“In Malaysia, UPM became the first public university to conduct this study in collaboration with institutions of higher learning (IPT),” said Swee Kong. The research was funded by the Ministry of Science, Technology and Innovation, UPM and the latest National Cancer Council, and also accomplished UPM researchers, including Prof Datin Paduka Dr Aini Ideris, Prof Datin Paduka Dr Khatijah Mohd Yusoff, Prof Dr Abdul Rahman Omar and Dr Tan Sheau Wei. (Berita Harian, 9 January 2014)

The articles repeatedly emphasised that the most recent technology was able to improve on the current treatment, thus giving hope to NCD patients. This was often presented in articles with the theme of medical advancements. The articles were often embedded with scientific details relevant to the technology. For example:

The radioisotopes or radioactive material that we generate through the current technology is limited to detecting and treating some types of cancers such as breast and liver cancer. In addition, the high cost of RM7,000 per injection was not included in the cost of treatment. So, with this cyclotron centre that will be developed in the future, we can provide more extensive medical facilities and reduce the people’s burden by producing more efficient radioisotopes. (Utusan Malaysia, 13 April, 2014)

This extract demonstrates that with the latest technology, more efficient cancer detection and treatment can be achieved. Based on the research analysis, articles tended to emphasise the benefits of new technology, omitting its shortcomings.

8.4 Discussion

The analyses in this chapter examined the presentation of NCD issues in the sampled articles of Malaysian newspapers in five randomly selected months over a period of one year. Two

research questions are posed in this study: 1) What were the main topics identified in the NCD articles? 2) What were the themes used in presenting NCD issues?

In addressing the first question, the content analysis demonstrated that the sampled articles presented NCD issues through a range of overall topics, including health awareness, patients' stories and health events. The common use of the health awareness topics may indicate that newspapers are important medium in promoting health awareness. The frequent use of health events and patients' stories may be inferred that the journalists' presentation of NCDs is influenced by established journalistic routines. One of the journalistic routines is to report stories that are newsworthy. Two of the news values identified by Harcup and O'Neill (2001) are timeliness and human interest. Therefore, presenting NCDs through health events meets the criterion of timeliness while presenting NCDs through patients' stories meets the criterion of human interest.

For the second research question, the inductive thematic analysis identified two dominant themes: 1) 'NCD issues are individual issues' and 2) 'Positive portrayal of various stakeholders in addressing NCDs'. The prevalent use of the individual theme for NCD causes and solutions is consistent with the literature examining framing of health news (Chau et al., 2017; De Brún et al., 2012; Hamad et al., 2015; Hilton et al., 2012; Jeong, Gilmore, Bleakley, & Jordan, 2014; Stefanik-Sidener, 2013), which identified that the news media tend to cover health issues through an individual frame or theme. The emphasis on an individual theme of NCD causes and solutions is considered problematic as it fails to capture the complex and multifactorial nature of NCDs (Hawkins & Linvill, 2010; Jensen et al., 2010). Although from a health promotion perspective, this presentation can have a positive influence on the health of individuals, it may not be effective, especially for those who are socially disadvantaged. People with fewer resources have less capacity to modify their lifestyle in response to media information (Gollust & Lantz, 2009).

There are a few possible reasons that explain the frequent individual presentation of health issues in the news. First, based on the findings, most of the messages on individual risk factors and solutions for NCDs were quotes from prominent figures such as people with impressive credentials, people with authority or health professionals. These quotes indicated that journalists often referred to sources for NCD stories, implying that there is a routine of relying on established sources in producing NCD stories. This assumption is based on a study that examined news presentation of e-cigarettes (Kim, Thrasher, Kang, Cho, & Kim, 2017), which found that the most cited sources for e-cigarette news coverage were lawmakers and government officials, supporting the idea that news media tend to rely on established routine sources for (Kim et al., 2017; Shoemaker & Reese, 1996). This practice also suggests that the journalists framed NCD stories (as individual issues) based on the frame provided by the sources (Vliegenthart, 2012b).

Another possible explanation for the frequent individual presentation of NCD issues is that, these prominent figures, such as high-ranked government officials, indicate that the views they expressed represent the stance of Malaysian government on the issues. The use of this type of source also legitimates the government policy decision (Mohd Don & Lee, 2014). In a government-political-party controlled media, the newspapers function as the mouthpiece of the Malaysian government's agenda (Shriver, 2003; Tapsell, 2013; Watson, 1998). For that, the emphasis on the behavioural individual risk factors and solution and the pervasive of individual blaming message demonstrates that the Malaysian government extensively places the responsibility of preventing and managing NCDs on individuals. This message also resonates that the government is absolved of the blame, thus the government does not need to take further actions beyond educating the public to make healthier and better choices, rather than creating more healthy choices available (Conrad, Mackie, & Mehrotra, 2010; Gounder & Ameer, 2018). Such stance is somewhat simplistic as NCDs causation pathway is rather complicated, which

includes individual behavioural and as well as environmental risk factors. It also indicates that the government only focuses on the individual responsibility, leaving out environmental factors, such as poverty, inequality and unemployment, in the discourse of NCDs.

The frequent portrayal of risk factors and solutions with regard to individuals also indicated infrequent mention of causes and solutions at societal levels (Chau et al., 2017; De Brún et al., 2012; Stefanik-Sidener, 2013). Although there was an attempt to show an interplay between the environmental and individual risk factors, such as sociocultural influences, on the diet of individuals, there was a persistent tendency to revert to the discourse attributing the blame and solution to individuals. For example, noting that an unhealthy diet is common in Malaysia, without clarifying how sociocultural factors affect individuals' choice. The lack of an in-depth discussion on how sociocultural factors exacerbate low self-regulation, for example, a poor dietary choice, indicates that newspapers downplay the complexity of the risk factors for NCDs. For news producers, this preference for presenting health issues from an individual perspective is considered approachable and amenable in contrast to sociocultural factors or solutions that are somewhat complex (Mayer, 2012). The framing of health issues from sociocultural factors may provoke negative stereotypes, counterproductive emotional responses and distractions from the message (Niederdeppe, Bu, Borah, Kindig & Robert, 2008). For example, in the context of Malaysia, despite the central role played by food in satisfying a biological need, food is conceptualised as part of the national identity (Idrus, 2015; Lee, 2017; Perry, 2017), regarded as a 'unifying factor', bringing together people from different religious and cultural backgrounds to enjoy similar food at the same place, especially for celebration purposes (Lee, 2017; Perry, 2017). However, this 'unifying factor' consists of meals that are mostly high in calories. For instance, the top choices of Malaysians for breakfast are mostly meals that are high in calories and fat: *nasi lemak* (rice cooked in coconut milk, served with condiments), *roti canai* (a type of pastry cooked in vegetable oil and served with

gravy) and fried noodles (Lipoeto, Geok Lin & Angeles-Agdeppa, 2013; Maw, Rajoo, Mon, Nur Mas Mirra & Paula Reubavathi, 2012). Therefore, to contest that national identity as part of the risk factors for NCDs and to change the standard cultural practice require complex and multiple avenues.

The analysis also found that sampled articles employed a narrative approach and used exemplars in presenting patients' stories on NCDs. Although there are two common aims from this type of NCD presentation, fundraising and promoting health awareness, both aims can be perceived as means to individualise NCD issues. First, for the articles with the themes of health awareness and health events, patients' experiences were embedded to engage with the readers, to promote health awareness and behavioural change (Hinyard & Kreuter, 2007). Journalists selected narratives and exemplars to inform, connect and grab the readers' attention (Hinnant, Len-Ríos & Young, 2013). To date, the narrative approach has, to a certain extent, proven efficient in health communication (Shen, Sheer, & Li, 2015), and, as the narrative is the basic mode of human interaction and knowledge acquisition, this approach has been widely used for motivating and supporting behavioural change (Hinnant et al., 2013; Hinyard & Kreuter, 2007). For example, a study found that the use of exemplars and the narrative approach had a positive effect on engagement, thereby resulting in a greater intention to cease smoking (Kim, Bigman, Leader, Lerman, & Cappella, 2012). The engagement of the audience with the patients' narratives occurred through involvement with and immersion into the patients' storylines, and thus, similarities in the patients' experiences were perceived, and feelings of empathy aroused towards the patients (Kim et al., 2012).

As this approach may evoke empathy in the audience, the sampled articles used this approach for articles that aimed to raise funds for the patients. This type of article may represent the role of the news media in helping the underprivileged ('exercising their social responsibility'). Unlike the presentation of other individual risk factors that were embedded with a blaming

tone, the articles portrayed patients suffering from NCDs because of biological causes as 'pitiful' through the emotive and narrative approach. The fact that such articles targeted public donations implied that the articles indirectly individualised the NCD solution. The articles further presented the solution of the NCD problem through a micro-level approach: donations at individual level, the patient, to ease their burden.

Nevertheless, this type of article missed the opportunity to approach NCD issues from a societal perspective. Looking closely at the background of the patients who received coverage in the news, most shared a similar pattern. They mostly came from a socially disadvantaged group, such as those with a low socioeconomic status. With this homogenous background pattern, the sampled articles could have highlighted how and why the prevalence of NCDs was high among this group. People from a low socioeconomic group are vulnerable to behavioural risk factors, and thus, the resulting NCDs deteriorate the pre-existing socioeconomic status (Alwan et al., 2010). In Malaysia, previous studies have demonstrated a correlation between low socioeconomic status and a poor dietary pattern (Garba, Rampal, Hejar & Salmiah, 2014; Yen, Tan & Feisul, 2015). Having a low capability to access healthier food choices and limited access to health information are examples of socioeconomic barriers that may contribute to behavioural risk factors within this group (Gollust & Lantz, 2009). NCDs also severely affect this group because of what has been described as the domino effect (Beaglehole et al., 2011). The diseases do not only affect their health but also their physical abilities, thereby affecting their sources of income. The articles should have presented this problem as a call to the government to address this issue at the national or structural level. Nonetheless, this presentation of NCDs through personal experience also reinforces the government's stance, which distances their responsibility in addressing NCDs at macro-level factors. A call for a review of the current health system is highly needed to reduce and address this problem, rather than relying on public empathy for fundraising.

It is important to note that the presentation of NCDs as an individual issue in the sampled articles covers subthemes of NCDs attributed to individual causes and solutions, as well as personalises the NCD experience. Some of the subthemes may be contrary to each other, for example, the biological causes are presented as beyond individual control, whereas the low self-regulation and low self-awareness are presented as behavioural deviance, with high onset-controllability (Gounder & Ameer, 2018). However, the reason of grouping these subthemes together is that they highlight the fact that NCDs is a health problem at an individual level. For low self-regulation and low self-awareness, they both blame the individual responsibility and resolve for individual solutions, such as healthy lifestyle, and somewhat require the individuals to be responsible on their own education and awareness. In the meantime, the presentation of the biological causes often presented from the perspective of exemplar, patient's stories, where the solutions presented by the articles for their problem are at individual level, fundraising for the patient.

The study also found that the articles frequently endorsed the government's initiatives in managing NCDs. This presentation did not only elevate the government's image but promoted the available preventative strategies, thus increasing health awareness. The news media endorsement implies that they function as propagation agents of the government, a common practice among Malaysian journalists (Shriver, 2003; Tapsell, 2013; Watson, 1998). The consistent positive portrayal of the government as a responsible institution also demonstrated that newspapers in Malaysia are less critical towards the government. It is important to note that the positive portrayal only covers reporting of the government initiatives in addressing NCDs issues through organising health awareness programs, enforcing rules and regulations related to NCD risk factors and the advancement of biomedical research. All of these initiatives, however, do not highlight the lack of government strategies in addressing environmental risk factors that are related to macro-level structure such as unequal economic

distribution. This practice of being less critical towards the government is parallel to the current type of journalism that Malaysian media adopted, in other words, the Asian and Malay values and development journalism prevalent in Malaysia. Development journalism proposes that news media producers should support government policies to become a 'developed' society (Waisbord, 2009), whereas both Asian and Malay values emphasise on conflict avoidance (Awang et al., 2013 & Wong, 2004). As a result, news producers in Malaysia operate under a heavily government-controlled media environment, which results in less critical and investigative journalism practised (Adibah, Khairie, & Su, 2017). Therefore, this finding demonstrates that construction of NCD stories is heavily influenced by the government.

Other than elevating the government's image, the news media also positively portrayed other stakeholders, such as players in the food industry, NGOs and private hospitals, in addressing NCDs. By presenting the health promotional programmes organised by them, the news media implied that these stakeholders have been fulfilling their duty as part of the society. Similar to the government strategies, these health programmes employ a population-level approach, yet they focus on individuals and are aimed at preventing NCDs by creating awareness and improving education. However, these are mostly one-off solutions and are not sustainable over an extended period of time. The stakeholders benefit from the positive portrayal as an endorsement of their organisation's profile in the news media. Positive coverage of this involvement in health programmes also demonstrates that news media functions to report on current affairs following journalistic values based on the timeliness news value. Another explanation on this positive coverage is that the reporting on the involvement of these stakeholders might be due to the information subsidy, given by the PR of the stakeholders. The events and press release are considered as cheap and important information for the journalists as the events provide a story, with the attendance of highly credential figures (Carlson, 2009; Zoch & Molleda, 2006). Previous study has shown that the Malaysian journalists positively

perceived their relationship with the PR practitioners (Mohamed Ariffin, 2016). Furthermore, it can be inferred that the positive portrayal of the stakeholders is that, they are important advertisers for the newspapers and have a close relationship with the political authorities (Mohamed Ariffin & Md Sidin, 2011). The positive portrayal of these stakeholders also demonstrates that the news media does not provide a critical reporting on the stakeholders. For example, the involvement of MNCs in the processed food industry in health programmes is somewhat contestable as their products are ‘unhealthy commodities’, and leading risk factors for NCDs (Stuckler, McKee, Ebrahim, & Basu, 2012). Processed food industry involvement in health promotional activities, as part of their corporate social responsibility (CSR), functions to build their brand and ‘align themselves with respected organisations and events in an effort to transfer their positive image attributes to their own brands’ (Richards, Thomas, Randle, & Pettigrew, 2015).

8.5 Limitations

This study sought to determine the presentation of NCD issues in newspapers in Malaysia. While three different newspapers were used in this study, all three were Malay-language newspapers. Consequently, the study cannot make any generalisations based on these homogenous newspapers as they are not representative of all the print news media in Malaysia. Although the primary aim of this study was not to find a representative presentation of Malaysian newspapers, it would be useful to include newspapers of other languages (Chinese and Indian) to capture the dominant discourse on NCDs in the future. Nevertheless, the current study provided the presentation of NCDs in Malay-language newspapers. Although the current study targeted Malay readers, who represent the highest readership of newspapers in the country, the Malay language, which is the national language, can be understood by the other ethnic groups, hence capturing the dominant message sent to the majority of Malaysians.

Another limitation of the study is that the news articles were obtained via online databases, which do not include details such as the placement of the article on the newspaper page, the space it occupied, or the graphics used. Examination of these details may provide another dimension of framing, presentation (Ghanem, 1997). Nonetheless, the current study has identified two dimensions of framing: the topic of the news item and cognitive attributes (Ghanem, 1997).

8.6 Summary

Frame-building theory is concerned with the process of framing issues in the media, and the social and cultural interactions within news organisations and extra media forces (Gans, 1979; Scheufele, 1999; Shoemaker & Reese, 1996). This study was conducted to examine various frame used in the construction of NCD issues in Malaysian print news. The findings, obtained through an inductive thematic analysis, offered a nuanced understanding that Malaysian newspapers frame NCDs as an issue concerning individuals (given the reports on individual risk factors and solutions), and offer a positive portrayal of the initiatives of the government and other stakeholders in NCDs. News articles reviewed for this study presented an emphasis on individual framing whilst downplaying societal framing. The limited explanation on social determinants of NCDs showed that journalists are merely reporting NCD issues in keeping with their journalistic routines, without presenting a more critical analysis of the public health system, commercial drivers to the risk factors for NCDs or lying responsibility with the various stakeholders. In other words, this analysis reveals that the news producers are tasked with informing the audience of what to do by echoing news sources, without having any critical views on the determinant of the issue. It also indicates that newspapers are profoundly influenced by their sources, especially the government, other stakeholders and professionals with impressive credentials.

The results of this study can help informing health practitioners and news sources such as the government and the NGOs, regarding the preferred type of framing in the news media. It also informs them the identified repressed issues in relation to NCDs, in this context, societal causes and solutions of NCDs. With this information, the health practitioners and other stakeholders can bring these issues into public and media discourses. Nevertheless, as news production is a complicated process, another study on understanding this process from the point of view of journalists would help to further illuminate the news production process of NCD issues.

Chapter 9. Understanding the Construction of Health News in Malaysian Newspapers – From the Perspective of Journalists

9.1 Introduction

Following the examination of construction of news on NCDs through analyses of news content, this study examined the construction of news on NCDs from the perspective of journalists. In-depth interviews were conducted with journalists working in Malaysian newspapers to investigate the role of the news-making process on health news in Malaysia. The study aims to address the research question: What are the influences of the news construction of NCDs and other health issues in Malaysian newspapers? This study investigates the influences subjected to health news reporting practices, especially on NCD stories. The study addresses the research question by examining the socio-cultural influences through the perspective of journalists. The rationale for investigating journalists' perception of news production is based on assumption that journalism is subject a range of influences, and that these may shape news reporting (Shoemaker & Reese, 1996, 2014). The extent of coverage and types of presentation of health related issues are understood to influence people's health related cognitions, attitudes and behaviour (López-Guimerà, Levine, Sánchez-Carracedo, & Fauquet, 2010; Williamson et al., 2011). By examining journalists' perceptions of the construction of health stories in the news, factors that lead to current presentation of NCDs and health issues in the news are identified and explained. This understanding may help to explain how they operate, within a web of industry related constraints, as well as their own individual attributes for health news production.

Scholars have explored journalists' practices and views in the health news construction process (Hooker et al., 2012; Larsson et al., 2003; Viswanath et al., 2008; Wallington et al., 2010b),

and demonstrated that pressures from inside and outside of the news organisation determine news content and journalist decisions (Shoemaker & Reese, 1996, 2014). However, these studies share a homogenous setting, as most were conducted in the US, where journalists work within a democratic political system (Hinnant et al., 2016). Further, different cultural and social contexts shape different health reporting practices. This study addresses this gap by investigating health reporting practices from within Malaysian media landscape, where the media environment is highly regulated by the government. Moreover, it is suggested that the Malaysian media follow development and Asian- and Malaysian-values journalism (see Section 4.2.2) (Waisbord, 2009; Wong, 2004).

It is important to note that most of the health journalism literature studies were conducted in the US, in the context of a democratic political system and in a Liberal Model media system (Hallin & Mancini, 2004; Hinnant et al., 2016). A different setting, such as the local political system, historical context and type of journalism practised, may result in differences in how journalists operate and how other factors influence their reporting practices. For example, surveys conducted on Malaysian journalists identified that most of them perceived themselves as disseminators and interpreters rather than adversarial or mobilisers (Tamam & Abdullah, 2015; Tamam et al., 2012). This perception is associated with the highly regulated journalism environment arising from the development and Asian-values journalism that Malaysian media practices (Waisbord, 2009; Wong, 2004). A study conducted in a democratic political setting showed that health journalists disassociated themselves from being the disseminator (Hinnant et al., 2016). Based on Shoemaker and Reese's (1996, 2014) model, the social system plays an important role in shaping the direction and values of institutions and members within it. Consequently, different practices in health reporting may be observed. Therefore, this current study illuminates how news reporting practices are conducted in the setting of the Malaysia media landscape.

Further, there are limited studies on health journalism practices in the Malaysian media. Previous studies on news production in Malaysia mostly focus on general journalism leaving a gap in the study of health journalism (Latif, 2015; Mohamed Ariffin & Ahmad Ishak, 2010; Mohamed Ariffin, Md Sidin, & Isha, 2011; Othman, Mat Nayan, Tiung, Nayan, & Tung, 2013; Rahim, 2013). A study examining the news production processes in Malaysian broadcasts media identified that organisational structure and government control highly influence the processes (Latif, 2015). Therefore, this study aims to fill the gap regarding health journalism in the Malaysian media by examining the journalists' perspective on health news construction practices.

9.2 Method

9.2.1 Study design

This phase employed semi-structured, in-depth interviews with key informants (Denzin & Lincoln, 2011). Such interviews are useful, where the key informants are well-positioned to provide information about the organisation and social interaction of the interest group (Parsons, 2008). In this study, the key informants were media practitioners (editors or journalists) who were engaged in the news-making process for their news organisations.

The aim of the interviews was to provide an in-depth understanding of the real-life social actors, an explanation on the lived cultural experience, the articulation of multiple views, and the perception of the social activity (J. Johnson, 2001). Therefore, the interviews were conducted to gain insights into the social interactions, personal strategies and broader structural process that take place in newsrooms. The interviews provided a rich source of data because the information provided was first hand, and revealed the world of the participants, as well as their emotions and thoughts about the subject under discussion (Lindlof & Taylor, 2011; Seidman, 2006).

9.3.2 Sample

The study sought journalists from mainstream newspapers in Malaysia, which included the English and Malay-language newspapers. The study did not include newspapers in other languages owing to the lack of capacity to conduct or translate the interviews in languages other than Malay and English. The study to examine the construction of news on NCDs in Malaysian newspapers was limited to only the newspaper journalists so as to be consistent throughout the research. Also, the study sought the print journalists as their news content was often selected for the broadcast and online news media (Leask et al., 2010).

Potential interviewees were identified via the following process: 1) the contact details of the writers of any articles related to NCDs and other health issues in Malaysian newspapers were obtained; 2) the newspaper editors were directly approached and their assistance was sought to nominate journalists who had written or edited health-related articles, including ideally, those on the subject of NCDs. No other criteria were applied to the sample. The journalists were then invited by email to take part in an in-depth interview for the study. Once the editors or the journalists expressed interest in taking part in the study, the participant information sheet and consent form were sent by email.

9.3.3 Data collection

Each interview began with a summary of the study and the informed consent protocol. Due to logistical restrictions, most of the interviewees only provided verbal consent. The interviews were arranged according to the schedules of the key informants. Although initially, the interviews were to be conducted via Skype, due to logistics, most of the interviewees opted to be interviewed over the phone (synchronous); one interview was conducted via email (asynchronous), and one via WhatsApp Messenger. Thus, two types of online interviews were conducted, synchronous, real-time interviews (video call, phone call, instant messaging) and

asynchronous, non-real-time interviews (email) (B. Golding, 2014). Due to the location of the interviewees, the interviews took place in a few states in Malaysia, including Kuala Lumpur, Negeri Sembilan, Selangor and Putrajaya.

The interviews were semi-structured and based on an interview guide or schedule (see Appendix 3) (Mason, 2011). The main reason for selecting a semi-structured interview approach was the flexibility of the structure, which allows interviewers to include new lines of questioning as the topics emerge. The interview guide for the semi-structured interview only functioned to guide the topics to be covered or potential questions that the researcher could ask (Dimond, 2015). The interview guide was developed and modified based on previous studies related to the examination of health reporting, journalism practices and experiences (El-Jardali et al., 2015; Friedman et al., 2014; Henderson et al., 2014; Hinnant et al., 2016; Hooker et al., 2012; Leask et al., 2010). This guide was also loosely based on the hierarchy of influences model on news content (Stephen D. Reese & Shoemaker, 2016; Shoemaker & Reese, 1996, 2014). The outline of the interview guide as follows (see Appendix 3 for a complete interview guide):

- General questions on journalists' background.
- The current practices of health news reporting in Malaysian newspapers.
- The journalist's perception of their role as health communicator.
- Factors that influence the construction of news related to NCDs.
- The use of evidence or sources in health journalism.

The interview guide was pilot-tested with a reporter from a Malay newspaper. The purpose of the pilot test was to assess the comprehension of the interview guide as well as to assess the appropriateness and the length of the interview. An independent reviewer evaluated the transcript of the pilot interview and determined the appropriateness of the interview guide. Due

to the high value of the pilot interview, the study included the pilot interview as part of the sample.

The interviews were conducted by a single interviewer (the researcher) between March and April 2017. The study interviewed the participants in their settings for 30 to 90 minutes. All the interviews were either audio or visual recordings and were transcribed verbatim. The interviews were conducted in both English and Malay. The study protocol and procedures were approved by the University of Auckland Human Participants Ethics Committee (UAHPEC) (see Appendix. 4-7).

9.3.4 Data Analysis

The audio and visual recordings of the interviews were transcribed using the MAXQDA software. The study employed an inductive thematic analysis procedure, outlined by Braun and Clarke (2006). The transcription was the first step of immersion and familiarisation with the data. The initial coding began with the two interviews. The study reviewed these codes iteratively and developed appropriate themes from the codes. An independent reviewer reviewed the themes and codes, and highly agreed with the codes and themes used. The researcher continued the thematic analysis process on the rest of the sample. During the coding process, the list of the current themes was reviewed iteratively. The coding process continued until saturation point was reached. Fourteen journalists were invited to participate in the interview; a sample size that was considered sufficient to achieve data saturation. Saturation refers to the point when no new or relevant information emerges from the data (Given, 2008). Previous studies demonstrated that saturation often occurs around 12 participants in homogenous groups (Guest, MacQueen, & Namey, 2012; Latham, 2013). Homogenous refers to a particular position in the organisation. In this study, it referred to the position of the

journalists in the news media organisation (Guest et al., 2012). Therefore, the current sample was considered sufficient to reach data saturation.

9.3 Results

9.3.1 Characteristics of the Sample

A total of 14 interviews were conducted with journalists who had at least written one health articles in Malaysian newspapers. Table 19 summarises the demographic features of the journalists. The sample comprised journalists with different years of experience. The majority of the respondents were females. All of the respondents had received tertiary education, with 85% of them studying communications-related degrees. Only two of the respondents had received formal education in health, and they both worked for the same newspaper.

Table 19. Characteristics of the Sample

Characteristics of Study Sample (N = 14)	N	(%)
<i>Education</i>		
Diploma	1	7.1
Bachelor's degree	11	78.6
Master's degree	2	14.3
<i>Years in journalism</i>		
1–10	4	28.6
6–10	4	28.6
11–15	3	21.4
20++	3	21.4
<i>Number of newspaper outlets worked with</i>		
One	12	78.6
More than one	2	14.3
<i>Type of health articles published</i>		
News	4	28.6
Feature	10	71.4

Gender

Female	11	78.6
Male	3	21.4

At the time of the interviews, most of the journalists were working at the features desk, with only four working at the news desk. The tasks required for working at these desks were different. The news desk required journalists to publish hard news covering current events on a daily basis. For those respondents who were working in the features section, their articles were published weekly. The features section in many Malaysian newspapers cover a range of topics under the lifestyle theme, such as health, women, youths, travel, information and technology, fashion and beauty. The respondents in this study mostly wrote health-related feature articles. Out of the four respondents who were working at the news desk, only two focused on writing health news. Many of the interviewees stated that they had worked at the news desk in an earlier career before filling their current position.

An analysis of the interviews identified two major themes that influenced the production of health stories: 1) the journalist as a storyteller (Figure 16), and 2) the influence of health-reporting practices (Figure 17). The following sections discuss each dominant theme in detail, together with the subthemes within theme.

9.3.2 Theme 1: Journalist—The Storyteller

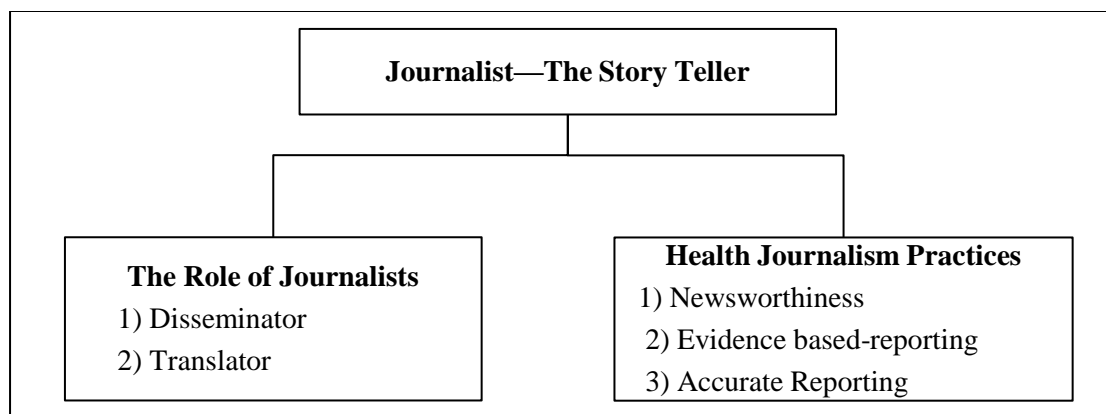


Figure 16. Theme 1 - Journalist - The Story Teller

The dominant theme “The journalists as a storyteller” is based on the journalists’ perception of their role (the role of journalists) and the common practices in health news (health journalism practices). The analysis showed that the journalists perceived that they play two essential roles in the public health realm: as a disseminator and a translator of health information to their audiences. In constructing health stories, they emphasise the importance of ‘evidence-based’ journalism, accurate reporting and the newsworthiness of health stories.

9.3.2.1 The role of the journalist

One of the most significant themes identified in the interviews was the perceptions of journalists with regard to their role as a disseminator and/or translator.

9.3.2.1.1 Disseminator

The interviews revealed that the journalists perceived that their primary role was to disseminate health information and consequently, increase the readers’ awareness of health issues. For them, the pathway towards increasing health awareness among their audience was driven by the intention to increase their knowledge regarding health issues – through the dissemination of current, accurate and relevant information. By targeting the readers’ knowledge, the journalists who were interviewed believed that they could change the readers’ beliefs and attitudes regarding their own health. Subsequently, this change in knowledge, prompted by health stories in the media, would be directly or indirectly translated into improved health practices. Therefore, the journalists viewed their function as a disseminator as the starting point for increasing the health awareness amongst their readership. The following statement illustrates a common perception among journalists of their role as disseminators in producing health stories:

In selecting news that is related to health ..., we tend to write ...the ones that can bring health awareness to them. ... Like diabetes, people need to know what causes [it], what are the effects? ... How many people have died due to diabetes? What is the disease? ... So, the public will be triggered to think, 'Oh, this thing is harmful. We need to be aware and get [a] check-up'. (Journalist 7)

To achieve the objective of elevating the health awareness of readers, this journalist included health details such as the severity of the disease and people's susceptibility. He perceived that by reading the information, the readers would have the intention to take control of their health condition. This statement also indicated that the journalist assumed that his audience was lacking in health knowledge. This perception revealed a fundamental belief in the importance of knowledge as a prerequisite to behavioural change, and that a change in the behaviour of individuals is possible if people possessed the 'right' information.

The journalists also explained that they function as facilitator through information that they disseminate to the public. The journalists perceived that by including information on available solutions such as preventive actions and treatments, they are helping the public. They understood that the media is one of the primary references of the public for information regarding the latest and current health treatment facilities available. They viewed this type of information as particularly valuable for readers with existing health conditions, as it could give them new hope and options for overcoming their problems. The journalists perceived that they facilitated these readers by enabling the information to reach their target audience:

We also talk about things like where can patients who have had a stroke go to and what it is that they need to do. I find that a lot of Malaysians are not aware of the treatment. ... There are places for physiotherapy or occupational health therapy, and rehab centres that they can go to... instead of being left immobile at home... they can do things for themselves and not lie on the bed and get bedsores. (Journalist 2)

This journalist believed that the information provided could bridge the gap in the readers' knowledge regarding available solutions to their health issues. Their role as a facilitator emphasised the importance of knowledge in empowering the public to take appropriate decisions and make behavioural changes. Further, the audience could be helped to be aware and take charge of their health when they were provided information about about disease prevention.

Also, the journalists believed that they could mediate between the concerns or information from health professionals and the government and the public. The government and health professionals have always intended to promote health awareness in society. By working closely with these stakeholders, the journalists perceived that they were the principal agents in securing health as an issue on the public agenda.

We want to help the government in creating awareness among the people regarding existing diseases or new diseases or diseases that have been prevalent for a long time. (Journalist 1)

We are like the representatives for doctors. For example, doctors sometimes have their campaigns. ... Like events on smoking cessation ... sometimes they do not have a platform for the public to read about their campaign, so we, as the writers, could use the newspapers as a platform [for the doctors]. (Journalist 3)

These statements showed that the journalists saw themselves as facilitators for the agenda of the government and health practitioners. These two social institutions have limited channels for the dissemination of their health information. For example, the health professionals' main interaction with society is through interpersonal interactions with their patients. This type of interaction limits the dissemination of their message to a wider audience. The journalists, on the other hand, believed they could promulgate the agenda to the public, giving them a powerful position in society as their articles could reach a wider audience in a short period of time. Again,

their role as a disseminator was the initial process of functioning as the facilitator for the agenda of the government and health professionals.

The journalists associated the disseminator role with social responsibility. They understood the power of their position in the media to increase awareness of health issues and facilitate the spread of useful health information. For them, being a media practitioner gave them a sense of responsibility to impart useful information to the readers. The following statement illustrates this:

As reporters, our main duty is to disseminate information, any information. ... If we have info, not only must we have the info, we must prepare the information for the public. ... This is not CSR, but this is our responsibility. The Ministry is not asking us to [publish, about H1N1, but we, ourselves, should inform the people about it.
(Journalist 6)

In the statement above, the journalist expressed his obligation to dispense information that would benefit society as a whole. The information that journalists receive from credible sources should be disseminated if it is considered to be valuable to the readers. During the interview, this journalist gave another example of creating awareness on a current local health issue, the infectious H1N1 disease. This journalist perceived her role as instrumental in imparting key information about H1N1, independent of external institutions, including the government.

Although the journalists perceived that their functions were to elevate health awareness in society, their perceptions regarding how effectively they actually exerted an influence over their readers were mixed. The journalists who perceived that they had a positive impact on society mostly measured their effectiveness through publication-related indicators and feedback from their readers. According to the journalists who worked in the health section of their newspapers, their weekly articles were always popular, and they often received direct or

indirect feedback from their readers through phone calls, emails and comments on social media.

For example:

Like what my boss always says, N4, the health section, has the highest demand. ... How do I know it is a section that is in demand? Every week, when we publish on certain topics, we get many advertisers, medicinal and drug advertisers, wanting to be a part of our health section. Moreover, I also receive emails, notifications like, 'Oh, I have this disease', and feedback from the public. That is how we know it is in demand; we know that people read it. So, there will always be emails like, 'Oh, my child has this disease'. So, they would thank us for writing the feature articles as they then know which doctor to look for, where and all that. (Journalist 14)

Every time I write an article, I will look at the posting on Facebook. There will be some people who share my article. (Journalist 9)

One journalist was under the impression that the magnitude of interest shown by the advertiser such as medicinal and drug companies was an indicator of the readers' demand. She further deduced that high demand equals high readership. In this context, the high readership could have implied that their section was well-received compared to other sections. On the other hand, some respondents voiced their concerns regarding the effectiveness of their articles on the readers. Interestingly, most of the experienced journalists had uncertainties in this area:

I have covered so many angles, tried from A to Z, tried all the different methods to communicate the messages. However, in the end, I don't even know whether the messages made a difference? As writers, we also don't know what the impact is, ... whether our writing has spoken to Malaysians. That one is very difficult to tell. Because from my Facebook, as I said, they do not click on health stories. However, they will click on political stories, on food, you know. (Journalist 2)

This reporter's uncertainty reflected a lack of robust and valid measurements that could prove the effectiveness of their health messages. Although the journalist had used various approaches in presenting her health messages, it remained unknown whether they were effective in

changing the readers' health and behaviour. She felt the discussions on social media indicated that the public was more interested in topics that related to controversies and indulgences, such as politics and food.

The more experienced journalists also perceived that health awareness among Malaysians is still low:

What we are hoping is that more people [become] aware, but honestly speaking, after all these years, not many people read about health stories. So basically, whenever we go on assignment, people still ask the same questions. ... For example, obesity, we have been writing about obesity, everybody will talk about obesity ... however, nobody follows. (Journalist 12)

This experienced journalist concluded that even though they had disseminated health information to the public and effectively put it on the public agenda, it may not change health practices. Also, she perceived that health news did not get as much attention as expected, as some of the issues had been covered countless times. This pessimistic view may have been rooted in her perception regarding the current lifestyle and the difficulties of changing beliefs:

... the mindset change is very difficult. Because people always think that healthy food is not nice, and they feel like life is short, they just eat whatever they want. So that mindset is very difficult to challenge even [though] we have tried to write a lot. (Journalist 2)

The fact is that over the past couple of decades, the incidence [of obesity] has gone up quite alarmingly all across the world, and definitely, in Malaysia. Moreover, it is probably a result of our lifestyle. I mean, that is what I gather from my reports, and people are not willing to change [their] ways. I mean, granted, it is very difficult. (Journalist 5)

These two senior journalists acknowledged two main challenges in raising health awareness in Malaysia: social risk factors and individual beliefs. Journalist 2 also felt that her work had eventually come to a dead end as she believed that her work does not make any impact, based

on the increasing prevalence of NCDs. Although not many respondents mentioned this issue, this perception of journalists should be taken into account.

9.3.2.1.2 Translator

To increase the health awareness of readers, the information that is disseminated by journalists must be understandable to readers at every level. With the abundance of jargon in the medical and health fields, the journalists agreed that they were responsible for simplifying the complicated health information. The journalists considered that they played the role of a translator in the construction of health information. Without this translation role, the media would not be able to effectively communicate health information to readers. For example, they asked health practitioners, their primary source of information, to refrain from using complicated and scientific words in their explanations:

If you want to deliver news, your writing cannot be too serious. You should find the right method. That is why when we interview doctors we tell them, 'Doctor, please use simple language. I do not want your medical jargon' ... if we cannot understand it, how can the readers understand it? You cannot expect all your readers to be from the executive group. The main point is, the message is delivered [to the readers]. What's the point of you writing based on your own feelings but people cannot understand it?
(Journalist 6)

The translation process requires reporters to have a full comprehension of the issue they are representing. For them, if they do not fully comprehend the issue, they will not be able to construct understandable health stories for their readers. As many of the journalists did not have a medical and health background, this process was a challenge for them. One of the strategies for overcoming this challenge was to obtain a direct explanation from the source itself. Journalist 6 explained that she conducted forthright interviews with health professionals so as to present accurate health information. Several of the journalists mentioned that they needed to study the issue first in order to write the articles authoritatively.

‘Translating’ health information is not limited to simplifying medical and scientific jargon. It also refers to simplifying complicated processes and figures into information that can be easily read. To increase the readability of their articles, some of the journalists used graphics to present complex information visually, as well as percentages and summaries of lengthy information. Journalist 8 said:

Another thing is to use figures; we convert figures to a percentage. Because people are like ... when you say, ‘230,000 people are affected’, people will be like, ‘What?’ However, when you say, ‘70% of the Malaysian population’, you give them a very general figure. You play with the percentage... I love using graphics to go along [with] my article. When I say graphics, [I] mean like [a] pie chart or infographics to highlight the key point in the stories. (Journalist 8)

As health and medical information often contain statistics and complicated procedures, many of the journalists used graphics and statistics when constructing health articles. They rationalised the use of these elements by putting themselves in the shoes of the readers. They considered that a simpler presentation of formation could capture the readers’ attention as well as help the readers to understand the information.

Another way of functioning as a translator was to present the information in the most straightforward way, such as by selecting a recognised and familiar term when explaining the health information:

Maybe for us, the word ‘diabetes’ is common because we know it means ‘sweet urine’ [another term for diabetes in Malaysia]. However, if our target audience is like housewives who live in rural areas, they might not know what ‘diabetes’ is. So, we still have to use the term ‘sweet urine’. Because we must know, not everyone knows what diabetes is. ... We have to know and use the common and proper Malay word, which everyone can understand. (Journalist 14)

Journalist 14 emphasised the importance of using a familiar word in the local context to convey the information more effectively. She explained that health stories must be constructed to suit their readers' background. In this context, 'housewives' refer to women with a low educational level, and those from 'rural areas' are associated with people from a low socio-economic group. Therefore, this journalist translated the health information so that it could be understood by people with a limited background in science, especially those who came from the low-income group. In other words, the journalists perceived that the target audience shaped the construction of their health stories.

In the interviews, most of the journalists described their primary target audience as the general public. However, there is a difference between the target audience for Malay and English newspapers. Journalists from the Malay newspapers mostly categorise their readers as coming from the middle- and lower-income groups; the English newspapers target those in the upper- and middle-income levels. Since the journalists perceived that the target audience shaped the construction of health stories, this difference in target audiences could lead to different types and quality of information presented in these newspapers.

9.3.2.2 Health Journalism Practices

Other than defining their role, another significant theme identified by "Journalist – The Story Teller" was the practices of journalists in producing health stories. There were three significant discussions concerning health journalism practices: 1) selecting stories based on their newsworthiness or news value, 2) practising evidence-based reporting, and 3) reporting accurate information (Figure 16). The following sections discuss each of these subthemes in detail.

9.3.2.2.1 News Value

As there are many options for the content of health articles, journalists first need to identify the issues that they will report on. The journalists mostly agreed that a story needs to be newsworthy to be published in the newspapers, particularly with regard to timeliness, newness and human interest. According to the journalists, the primary news value was timeliness, covering the latest trend or occurrence in the local context. The journalists at both the news and features desks prioritised the coverage of current health-related events. They needed to keep up to date with the latest developments, as their aim was to be the first medium of information.

If there's a trend going on, that ... people should be aware of, such as diseases and all that, we also cover that. There are outbreaks as well, and we also need to inform people and let them be aware of what's happening. (Journalist 2.

The news section functions as the primary source of the latest information for readers, reporting stories such as the most recent government reports on health studies or the increasing incidence of a disease. However, since articles in the news section are subject to a specific word count, the amount of health information that can be embedded in these articles is limited. It is then the task of the journalists at the features desk to provide detailed information through their weekly health feature section:

We usually cover current issues. If, let's say, a disease is the talk of the town, the media will keep publishing stories [related to the disease]. ... So, we will expand on the 'hot' issues. Usually, in the news section, there are only about 8 to 10 paragraphs, [so] we cannot provide details of the issue. The news is more straightforward, like information on statistics and all. However, for the feature, the journalist would see, 'Ok, this story is suitable, we can expand it. We can write more about it'. ... For example, if that month or that week is a specific awareness period, it has value. ... People will still look forward to it. 'What is this about? What are the symptoms? What are the solutions? How and which doctor can I refer [to]?' So, the information that they do not know, they can find it in the feature articles. That is the newsworthiness. If it is a current issue, it is in demand. ... If you prepare an article

about it but you publish it next month, and the issues have been resolved, people will no longer want to read about it. (Journalist 9)

Timeliness refers to not only the latest trends and present health issues, but also the most recent health-related events. This type of coverage was the second most common health story selected by the journalists. The journalists explained that they usually received invitations to events from public relations agencies, NGOs and the public. Events related to special awareness days, health promotional activities or product launches which are published continuously in their features section:

The awareness month (month allocated for awareness of a specific disease) is helpful. Usually, there will be many events. When there are many events, we will not be running out of ideas. We will always have materials due to the numbers of events. (Journalist 9)

Thus, such events can help journalists by providing them with the material for health stories. Aside from reporting on the event, journalists will add further details on the specific disease. Also, event organisers usually invite many prominent people, such as health professionals and patients, to attend. Therefore, by attending this type of event, journalists need not do a great deal of extra work to find their sources of information. The event can become the source of an idea for a feature article as well as a platform that connects journalists to the health professionals and the patients.

Newness was another essential news value for the journalists. According to Journalist 2, they needed to cover ‘breaking news, something that is new, fresh and updated’ (Journalist 2). Newness is seen as being different from timeliness: the emphasis in timely news is on covering the latest current affairs, while newness, in this context, refers to topics or angles that have not been covered before or recently. When there are no latest issues or events related to health, journalists are required to do their research and come up with new health stories:

If we write on an issue that we [have] often covered before, the boss will reject it. He would ask us to find other topics. 'Find something that is rare. What is the current one?' So, we would look and read up a blog, foreign and all. For example, with heart disease, the number of Malaysians who suffer from a heart attack is high, but the awareness is still low. However, if we cover stories on heart disease weekly, the boss will reject it. (Journalist 14)

To ensure newness, some of the journalists mentioned that they would review their previous publications to ensure that they presented topics that they had covered before from a different angle. The journalists often referred to other media or sources to find new ideas. Newness is important to ensure that readers do not become bored with the same health stories. However, this has become a challenge for journalists covering prevalent diseases, such as non-communicable diseases, which have been explored many times in the newspapers. Journalist 1 described how they needed to find a new angle when constructing stories on these long-standing issues:

We will review what we have done in the past so that we will not touch that matter. Take cancer, for example. There are various types of cancer. ... Let's say, there are 100 types of cancer. So, if we have covered 50, then it means that we will not do those 50 again. We focus on the remaining 50. Unless we have a new angle that is interesting. For example, take breast cancer. Suddenly, we hear that researchers at UPM [University Putra Malaysia - a name of a local university] have discovered that the mangosteen can delay the growth of cancer cells. Even though we have covered the disease and have often written about it, but once there is new finding on the disease, we will proceed [to write about] it because it is something new and we want people to learn what they can about it. (Journalist 1)

As journalists are most interested in covering information that they think is new, the latest discoveries in biomedicine are highly appealing to them. They found that this type of news is more likely to attract readers (enhance credibility), as well as breaking exciting news to public especially the current patients.

Although timeliness and newness had essential news value for these journalists, they still needed to find ways to write stories about diseases that they had covered before to serve as reminders and to reinforce the knowledge of readers, especially when there is no current health related event or latest outbreak. This comment acknowledged that although some health issues, such as diabetes, are well known, they need to remain on the news agenda to ensure that they do not ‘disappear’ from the public domain.

Like now, there is a health campaign for a healthy lifestyle. We need to support it by highlighting the campaign to the public because sometimes they tend to forget some diseases. Certain diseases are like a trend. Like diabetes, sometimes people remember it, but sometimes they forget. (Journalist 11)

Repeatedly covering these health conditions was a challenge for the experienced journalists, who said they felt exhausted covering the chronic diseases, such as diabetes and heart disease repeatedly. Since they had been covering these topics for such a long time and from almost every possible angle, some of them felt they had come to a ‘dead end’:

How much can you write about diabetes? How much can you write about a heart attack? So, sometimes, you hit a wall, and you don’t know whatelse to write. (Journalist 12)

This paradox of trying to find a new angle for a health issue that has been covered extensively, while appreciating the need to ‘remind’ readers about this issue, has led some journalists to feel as though they have come to a ‘dead end’. This perception is compounded when journalists are unable to gauge the impact of their writing on readers.

For many of the journalists, the tactic of presenting patients’ stories increased the newsworthiness of their articles and could attract the readers’ attention. They agreed that this was an effective way to deliver a health story:

My editor and I noticed that we have to include the patient's story. People love this kind of story. [A] patient's story will make the health story interesting and newsworthy. ... People would take her as an inspiration. For example, the patient has ovarian cancer stage 4, so they will want to know how she survives, how she stays positive, how she encourages others. (Journalist 14)

According to this journalist and editor, the readers found patients' stories to be more interesting than facts. Since the article would present the disease from the perspective of the patients, it was thought that the readers would be more engaged with this type of coverage. Moreover, the patients' stories would not only encompass the narrative part of the health condition, but would also include the background of the patients, the effects of the disease and the motivation that drove them to deal with the health problem. Such presentations can evoke the readers' emotions, making the stories more relevant to the readers.

9.3.2.2.2 Evidence-based Journalism

Most of the journalists practised evidence-based journalism in constructing their health stories. This practice is essential to them because as their main role is to disseminate health information, they have to make sure that the facts they provide are valid and genuine. They recognised that this practice is different from those used for other types of stories in the newspapers, such as entertainment. They emphasised two processes for ensuring the validity of the information: conducting research on the topics and getting the information from credible sources.

Before constructing their health stories, journalists either have a specific topic in mind or they need to find a topic to write about. In both cases, their first task is to conduct a research, and find for and read materials from various sources. Some of the journalists mentioned that even though they knew the topic or had covered the issue before, they still needed to update their knowledge, usually through Internet searching. Many of the journalists, especially those who had worked for more than 20 years, said the Internet had helped tremendously with this task:

The Internet is the most awesome invention ever. ... I mean for health and science especially, you must always research before you write on something. Especially for features, because you have more space to write, so you are able to put in more background information. ... I use the Internet a lot to do basic background kind of research. So, of course, I always have to make sure that I go through a website that is reputable. (Journalist 5)

The websites they use are not only local websites; in fact, most of their information comes from websites affiliated with foreign countries. They would then use this information to construct articles in the local context, using further information from websites affiliated with the government agencies.

As Journalist 5 mentioned, they use only ‘reputable websites’ as their primary source of information. This reputability criterion is essential for other sources of information as well, such as the person and type of information that they gathered. Any person referred to by them needs to be considered as an expert in his or her field. Some credible sources to which the journalists usually refer to are health professionals, high-level government personnel and official government statements. Most of the journalists depend on health professionals as their primary source of information. In the interviews, the majority of them said that information from health professionals, especially medical specialists, could increase the credibility of their articles. For example:

Source plays an important role in the [health] stories. Let’s say, we talk about a disease. If we do not include a citation or a statement from a doctor or an expert, the story is considered as ‘loose’ or not ‘strong’ enough to be published because the article did not have a significant figure or an expert who talked about the disease. (Journalist 13)

Some of the journalists also mentioned that any information that these experts provide is considered as ‘verified facts’. Due to the evidence-based practice, the journalists usually had more leeway in producing their health stories:

... the good thing is because we based many things on facts. Even if the authorities do not like it... they have to acknowledge that we had written the truth. (Journalist 2)

Because the information in their health articles is factual and health issues are considered to be universal matters that affect and concern the public, the journalists did not report receiving any negative feedback on their writing. This was perceived to be different from other types of stories that may be considered as being controversial, such as stories reporting on politics and racial issues.

9.3.2.2.3 Accurate Information

Another crucial health-reporting practice mentioned by the journalists was the pressure to provide *accurate* information in their health articles. To ensure the information was accurate, they would undertake validation strategies, such as cross-checking with the health professionals that they had interviewed, before publishing the articles. According to the journalists, the Health Ministry monitored health articles in the press, and some of them had received warnings for using words and information that the Ministry deemed to be inaccurate. Several journalists reported that it was necessary for them to exercise caution when phrasing their articles. For example:

Let's say, if I were going to write about the mangosteen, I can only write that 'the mangosteen can help to cure...' I cannot simply write 'the mangosteen can cure cancer' ... because it implies that the mangosteen can surely cure cancer. (Journalist 1)

This example of writing a news story covering new research on the potential cancer-fighting benefits of the mangosteen illustrates the caution that has to be exercised to avoid overstating the benefits of the mangosteen, and inadvertently misleading readers. For example, this journalist could not use the word 'cure' in describing the benefits of the mangosteen, as this

could mislead readers by giving an assurance that eating the fruit can cure the disease. Adding the word ‘help’ worked to tone down the description of the possible effects of the mangosteen.

Further, since the Health Ministry scrutinises health stories in the newspapers, the health reporting needs to be based on valid information and journalists cannot sensationalise their health stories. Even if they do ‘spin’ the story to attract readers, it has to be based on the facts and must still be accurate. As described by one of the journalists:

Like even when I want to spin, and my editor wants to spin, we must ... be careful. ... Though we want to attract the readers, we do not write things wrongly. ... You have to stick to the facts. (Journalist 2)

9.3.3 Theme 2: Influence of Health-reporting Practices

Throughout the interviews, the journalists mentioned both the significant challenges and the support that they encountered when constructing health stories, which influenced the news-gathering process and the content of their health stories. The three main influences were: 1) their own media organisations, 2) the government, and 3) health professionals. The next section describes the interactions of the journalists within their press organisations and with external forces (the government and health professionals), followed by a discussion of the challenges and support they face when dealing with the other main stakeholders, the government and health professionals. The results of this analysis positioned journalists in the broader, complex governance structure. Figure 17 outlines the subthemes of this dominant theme, influence of health-reporting practices.

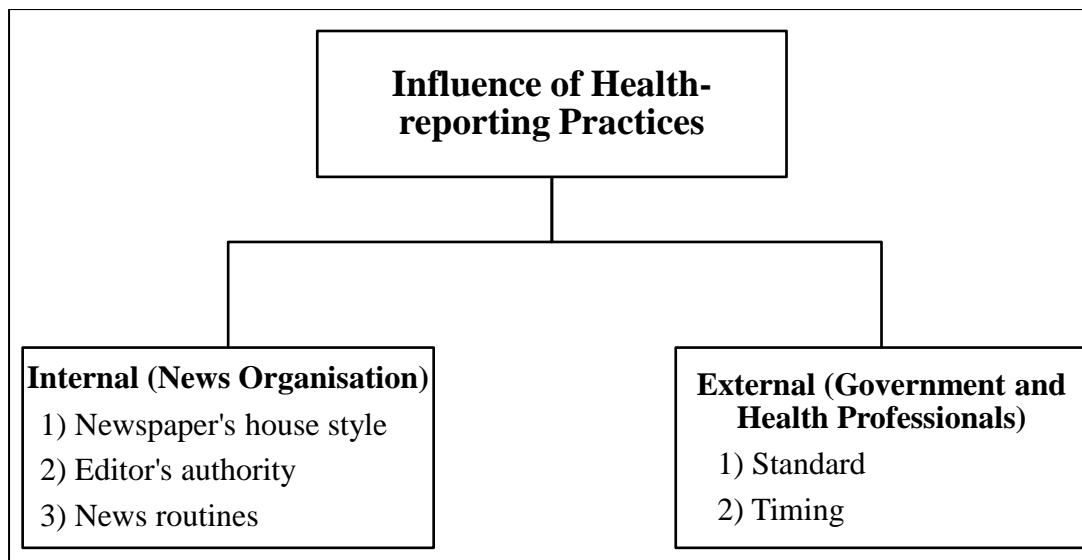


Figure 17. Theme 2: Influence of Health-reporting Practices

9.3.3.1 Internal Factors

The influence of a news organisation in constructing health stories in the interviews refers to how the organisational structure and values, and the newsroom routines shape the content of health articles. When working for a media organisation, journalists must operate within the organisational structure of their newsroom, the rules and the established routines of the news organisation. Although journalists enjoy a degree of freedom in constructing their health stories, they still have to comply with their editors' requirements, preferences and pressure to sell copies. Almost half the journalists who were interviewed described their editor as the gatekeeper who had the final say about whether their work would be published in the newspaper. For the news desk, the 'editor of the day' would decide, towards the end of each day, which articles would be published in the next day's edition. As for the features desk, the editor for the features section of the newspaper would monitor their health articles and determine whether they would be accepted. Some journalists considered their editor to be a major challenge, as their work mostly depended on the editor's judgement and values. According to Journalist 4:

One of the taboos in Malay newspapers is anything related to the genital parts...issues like breast cancer, prostate, are big no-nos. Even if I write about it, I still need to be very careful with my selection of words and pictures. Recently, I wrote about the dangers of silicone injections on male genitals, but our chief editor rejected it as it was not appropriate to be published. He thought the article had elements of 'porn'. (Journalist 4)

This excerpt illustrates how the editor's decision led to the denial of certain health issues. The journalist mentioned that the editor's decision was likely to be based on the need to comply with local social values and norms.

Since most of the work of journalists is dependent on their editor's judgement, reporters need to operate according to their editor's decisions within tight news turnarounds and standard processing routines. For example, since the publication of newspapers is periodical, they must work within a timeline:

Let's say, during the meeting, when we showed the topic that we had worked on, the editor refused to accept and wanted something else. Since our deadline is on Thursday, and let's say the meeting is on Tuesday or Wednesday, so how do you think I can get a doctor on the same day? We must submit our work before the deadline. So that would drive us crazy. We would have to make many phone calls like crazy just to get the topic that our boss wanted. (Journalist 14)

The excerpt demonstrates a working environment with a double burden. The journalist explained that in producing health articles, she had to be able to multitask within a restricted time period. In this case, she had to re-do all her work to fit the demands of the editor, including doing research and finding related sources within a short period of time.

The newspapers' house styles and objectives can also influence in shaping the health stories. Each Malaysian newspaper has a different target audience. For example, some newspapers target the low- and middle-income strata; while other newspapers mainly target the

policymakers (for the list of newspapers and their target audience, see to Table 5 in Chapter 5).

Therefore, journalists need to construct their health articles according to their newspapers' target audience. For example:

In N5, our primary audience is the policymakers - the government, the politicians. ... We would frame...our articles in such a way as to influence these stakeholders...to act on and address ... the issues. We do not want to be merely reporting. (Journalist 8)

Our target market readers are people aged between 18 to 45 years from the low- and middle-income groups. In targeting these readers, you cannot be too serious. ... For N4, we do sensational crime stories and others. That is our identity, ... our DNA, a bit sensational. (Journalist 6)

These two contradictory statements from journalists from different newspapers showed that their newspapers' house styles and target audiences dictated the way they constructed their articles. For N5, the journalists employed analytical and mobilising information approaches to capture the attention of policymakers. As for N4, the journalists recognised sensationalism as a way to attract the attention of the low- and middle-income people.

9.3.3.2 External Factors: The Government and Health Professionals

When discussing external influences, the journalists mentioned two critical stakeholders: the government and health professionals. The relationship between the media and these external institutions could be described as symbiotic. For media practitioners, the government and the health professionals function as the providers of the latest and most credible health information.

According to the journalists, the health professional was the most common source of information for their health articles. Apart from conducting their research through reading, gathering information from health professionals was considered an essential routine in constructing health stories. As Journalist 14 noted, 'We cannot have a health article without quoting any doctors'. Not having a statement from a health professional reduces the chances

of their writing being accepted and published. Further, the credentials of the health professionals could increase the credibility of their articles. As the relationship is symbiotic, it benefits the health practitioners as well. Being quoted in health articles enhances their profile and the reputation of their institution.

In the interviews, the most mentioned health professional was the medical specialist. In fact. Whenever the journalists mentioned the word ‘doctor’, they were referring to an expert in a specific medical field. According to them, they could not merely interview any doctor, such as a junior doctor:

Only those who are experts can answer [our questions]. If they are a general medical practitioner, they cannot give a statement. They have grades, don't they? So, we have to interview based on the grade. (Journalist 6)

In Malaysia, public professionals are graded according to their educational background, work achievements and experience. This statement indicates that journalists select only health professionals with a high level of expertise and authority as their sources of information to ensure that the information is credible and valid. Also, they use statements from experts in other medical fields, such as medical academics, dieticians and psychologists.

As with the relationship between journalists and health professionals, the relationship between journalists and the government can also be considered to be symbiotic. For journalists, the government is a major source of the latest updates on public health information; for the government, the media can help them to reach and disseminate information to a wider mass. In the interviews, the journalists often referred to high-ranking personnel in government agencies, especially in the Health Ministry, to comment on the latest health issues causing public concern:

Typically, when there are major cases, we should firstly obtain statements from the relevant parties. For example, for major cases ... [a] statement must come from the State Health Director or the Health Minister. (Journalist 7)

9.3.3.2.1 Timing

When dealing with the government and health professionals, one of the challenges that affect the news-gathering process is the issue of timing. As noted earlier, journalists work in an uncertain and time-constrained environment; news journalists have to publish articles on a daily basis, while features journalists have less than a week to construct their articles. Therefore, it is important for them to gain access to their sources and the information as soon as possible. However, the routines of the government and the health professionals do not match this requirement. The journalists pointed out the difficulty in dealing with health professionals as they are constantly in demand. Similarly, attempts to engage with the Malaysian government also involve many time consuming bureaucratic processes. One of the most common problems that the journalists had when dealing with the government arose when they wanted to interview health professionals from public hospitals. Many of the journalists shared the essence of this statement:

If we want to deal with government doctors, it is quite difficult. To get access to them, we have to contact the PR[public relation] officer; we have to write a permission letter, we have to wait for the approval. Whereas if we are writing for the newspapers, it is ad hoc. It does need to be done asap, right? So that is why we prefer to interview the doctors from private hospitals because it is quicker. (Journalist 3)

One of the possible reasons for these complicated processes is that the government is highly meticulous with the information that they release to the media. Indirectly, this shows that the government takes many precautions to maintain their image and reputation in the news media. In solving this problem, journalists resort to sources from private hospitals, which seem to involve less red tape. Further, private hospitals are always eager for any exposure from the

media to boost their branding. Some of the journalists in the interviews said they never considered getting information from health professionals who worked in government hospitals to avoid delays and complicated red tape.

Another way to solve this problem is to build a good rapport with the sources. An established relationship can expedite the news-gathering process and avoid bureaucratic procedures. As mentioned below:

Once you build rapport, you build good contact with the doctors, with your sources, they will get comfortable with you... Things are moving a bit faster now. (Journalist 7)

Most of the journalists who had been working on health topics for an extended period and had stayed in contact with their sources have managed to build a good relationship with their essential sources. For that, novice journalists may encounter complicated procedures to gain access to the sources before they build rapport with them.

9.3.3.2.2 Standards

Each institution has their regulations and standards for their operational practices in producing high-quality work. The interviews revealed that the different standards of media practitioners and other stakeholders might affect the news reporting process.

For example, the core business of the news media is to provide their readers with the latest information. However, the journalists often shared their frustration when covering health stories which rely purely on statistical data. According to some journalists, most of the health statistics provided by the MOH are out-dated:

The figures came from the Ministry of Health... The survey is only conducted ... every five years... the latest survey was done in 2005 and 2011. My boss would reject this figure, as it is too old. When I asked the Minister of Health, 'Why [are the statistical figures so old]?', he replied, 'To conduct a survey is not easy; it is very costly and time-consuming'. (Journalist 6)

For media practitioners, presenting out-dated statistical health information is not helpful for them when they are trying to produce a health article of a high standard. Nevertheless, the Ministry of Health is unable to keep up with the standards of the news media as it is limited by the cost and time. Although most of the journalists echoed this problem, only one experienced journalist used a different strategy to overcome this issue. She took the initiative and used statistical information that was accessed directly from the local hospital.

Another problem with standard or regulation is that, the health news reporting should follow the rules that enacted on the health professionals. In Malaysia, the health professionals are bound by acts and regulations outlined by the government. For them to be interviewed by the news media, both parties are required to obtain approval from the health professionals' superior. The statements that they release to the news media will be monitored by the Health Ministry and the Malaysian Medical Council as to ensure that the health professionals follow the regulations. For example, there is a certain limitation on information that health professionals can release regarding their services in the health articles. Whenever the journalists quoted the health professionals, especially from private hospitals, the articles must not be presented as an advertisement of their service. According to the journalists:

They are bound by Health Ministry rules; we cannot write about this thing as an advertisement. ... I think that is a challenge because we must first make sure that our story is not slanted towards the doctor. Let's say that this hospital provides this service for blah blah, we cannot write about that ... because we are trying to make sure that we do not cross the line. Otherwise, we will get a letter from the Health Ministry. (Journalist 12)

The above statement demonstrates how government regulations for medical professionals not only affect the medical professionals' practice but also indirectly affect the presentation of health stories in the news media. In fact, according to the journalists, although no detailed guidelines were given by the government to the journalists, they still needed to be careful to

follow the rules and regulation when preparing their stories. One of the possible reasons for the monitoring is to ensure that information published in the news is reliable.

The journalists also pointed out that the issue of standards may also occur between the journalists and health professionals. For example, some journalists indicated that doctors tended to hold a rigid stance in relation to how health articles were written. Some shared that the doctors perceived that the information they shared was purely factual and should be presented in a straightforward form. The health professionals emphasised presenting the information from a medical perspective, which was in contrast with the journalist's role as a translator. For example:

.. when it comes to news reporting, we want the readers' [attention] ... I am not saying we should sensationalise ... but sometimes doctors might be particular, and say, 'Just report straightforward directly'. So, it will be dry; people do not want to read the encyclopaedia. (Journalist 8)

The reporter believed that readers are not attracted to a straightforward and factual presentation of health stories. For them, presenting overly complex health information could hinder the effectiveness of their message to the public. This clash of standards between journalists and health professionals may cause tension in their relationship. However, some of the journalists understood that the doctors' concerns came from the fear of misrepresentation and of misleading information being given to the public. Some of these journalists resolved this issue by sharing their articles with the sources prior to publishing them.

9.4 Discussion

Newspapers remain the primary source of news and health information for Malaysians (Anwar et al., 2010; Ju et al., 2010; Rezal Hamzah, Mirza Wati Mohammad, Yusof Abdullah, & Hadi Ayub, 2015). The current study examines the influences on health news construction via examining journalists' role conception, health reporting practices and other internal and

external factors in the Malaysian media setting. The analysis of interviews with key informants revealed the challenges faced by journalists, which often requires maintaining a balance between their ‘duty’, respecting the demands of the media organisation and other stakeholders, and their desire to ‘inform and enlighten’.

9.4.1 Role of Journalists

The findings of the analysis showed that journalists conceptualise their primary role as disseminators of health information. The disseminator role in interviews is mostly associated with the journalist as an enabler of the information flowing from the source to the masses. For them, the information must be new and timely, with regard to current issues, to attract the attention of the public and to maintain the health stories as the public agenda. Their conceptualisation of the disseminator role is similar to the definition provided in Weaver et al. (2007) (as cited in Tandoc, Hellmueller & Vos, 2013, p.2): “getting information to the public quickly and avoiding unverifiable facts”. Further, the finding is consistent with a study conducted on Malaysian and Australian journalists, in which it was also found that the majority of respondents considered themselves primarily as disseminators (R. Forsyth et al., 2012; Tamam & Abdullah, 2015). The study conducted in Malaysia found that journalists supported the idea of working as disseminators because of the highly regulated media environment (Tamam & Abdullah, 2015). However, in this study, the journalists mostly conceptualised their role as disseminators, with the expectation that the information that they provide will bring changes in the knowledge and awareness of the audience and, consequently, mobilise them. Although both studies were conducted in the same setting, the rationales of journalists’ role conception differed. In addition, the journalists perceived themselves as educators based on their disseminator role. This perception is similar to a study conducted on health journalists in Australia, who saw their primary responsibility as educating the lay public about health issues (R. Forsyth et al., 2012).

The facilitating function in this was slightly different to the definition provided by Christians et al. (2009), in which the facilitating role is defined as enhancing public participation in society by offering access and promoting public debate. Only part of this concept was demonstrated in the interviews, with journalists believing that they provided information on solutions or treatments to the audience but not mentioning promoting public debate. A possible explanation for why Malaysian health journalists did not promote public debate is that health journalism in Malaysia follows development and Asian-values journalism, which emphasises national unity and avoiding conflict (Waisbord, 2009; Wong, 2004). There is a possibility that journalists steer away from promoting public debate to avoid confrontation that threatens stability or questions authority (Massey & Chang, 2002; Wong, 2004).

In the present study, the journalists who were interviewed displayed a strong sense of social responsibility. Amend and Secko (2012) identified the journalist's role as one with a high social responsibility, consistent with other studies finding that journalists view their duty as a public responsibility (Collings & Kemp, 2010; A. M. Wilson et al., 2014). This responsibility potentially arises from journalists belief that readers may make important decisions based on the information that they provide (Mayrhuber, Niederkrotenthaler, & Kutalek, 2017). From another perspective, the strong sense of social responsibility may be because of the development journalism that Malaysian journalism adopts (Ramano, 2005; Xu, 2009). One of the journalists' functions in development journalism is to empower the public. In this context, providing information may be perceived as public empowerment in health practices and knowledge. Most of the journalists emphasised their important role in promoting individual behaviour change. Many held a firm belief in the powerful influence of knowledge in changing the health behaviour and beliefs of their audience. The mechanism of that effect, from reading a health story in the newspaper to taking up a health promoting behaviour, however, was not explained. Nonetheless, this belief is the main reason why they see their role as a disseminator

as a contribution to addressing health issues. This perception is rather simplistic, as most did not mention other factors that lead to health problems.

In discussing the translator role, the journalists explained how the translator role complements the disseminator role. The translation process is essential in constructing health stories to ensure that the information can be understood by the audience. Although they are working in a restrictive environment, the journalists still view themselves as responsible for providing understandable and culturally appropriate health information (Friedman et al., 2014; Len-rios, Hinnant, et al., 2009). The journalists who were interviewed in this study felt that they were responsible for simplifying information. To fulfil their duty, it was necessary to study the topic, find credible sources of information and translate that information for the audience. This translator role positions journalists between their sources and the public by bridging the complex health and medical information to suit the level of literacy of the audience, based on their demographical background. Similar to previous studies (Friedman et al., 2014; Len-rios, Hinnant, et al., 2009), which found that the background of the audience is taken into consideration in the construction of health stories. Although initially, the journalists prepared and classified their writing for a general audience, the majority emphasised that it was necessary for the information to be appropriate for ordinary people (Len-rios et al., 2009; Young et al., 2011).

One of the findings of the study was that there are several differences between the target audiences for the Malay and English newspapers. The Malay newspapers target low- and middle-income readers, while the English newspapers target middle- and high-income brackets. The construction of the content of the health stories is, therefore, likely to be shaped by the demographical background of the readers, which may lead to differences in the topics covered, and the quality and angle of the health stories (Hinnant, Len-Ríos, & Oh, 2012; Shoemaker & Reese, 2014). Since higher income is correlated with higher health literacy

(Hamzah, Suandi, & Ishak, 2016; Nor Afiah et al., 2011), these journalists take greater efforts to prepare and ensure the integrity of the information presented compared with those working on newspapers targeting the lower-income group. This further increases the knowledge divide between the socioeconomic groups, especially with regard to health information (Ishikawa, Nishiuchi, Hayashi, & Viswanath, 2012).

The previous review demonstrated a clash of suggestions for improving the translator role of journalists by either providing training in the health field or developing a specialisation in health journalism based on years of experience (Amend & Secko, 2012). The findings of this study suggest that both approaches can help journalists to implement their role efficiently. Interviewees who had a background in medicine or health or were more experienced were more critical in the preparation of health stories and the resulting reception from the audience. Experienced journalists integrated the current global public health problem with difficulties in changing the health practices of the audience. While most of the novice journalists were optimistic about the effect of their writing, a few of the experienced journalists were more sceptical about the extent of their influence on their audience. This scepticism also led to burnout as they had exhaustively covered every angle of the health stories. For the journalists with no health background, training could help them to be less dependent on and more critical of sources, rather than just reporting and translating the information from the sources.

The discussion of the translator role also revealed that the sources, such as health professionals, are lacking in communication skills. A problem also occurs when the sources want the health and medical information to be disseminated to the public in its original scientific and medical expression. This further slows down the construction of health stories as journalists need longer to comprehend the information (Hinnant et al., 2016). This communication issue may arise from the concern of health professionals that the translation process will lead to oversimplified or misleading information. To overcome this problem, they need to play an active role in

explaining a complex idea in simple terms (Waddell et al., 2005), and also consider the fact that the end receivers of the information have varying levels of health literacy. As both the media and health professionals have the same concerns regarding the depth, accuracy and social impact of health reporting (Leask et al., 2010), this step can speed up the work of journalists. Preparing sources, such as fact sheets and visual aids, can also ease the news gathering and construction processes (Leask et al., 2010).

9.4.2 Health Journalism Practices

The results of the analysis identified three primary common health journalism practices during the construction: selection based on news values of health stories, evidence-based practices and accurate reporting. Journalists selected health stories that contained the news values of timeliness, newness and human stories, and ideally, a combination of all three. This is consistent with studies on health journalism in terms of newsworthiness criteria (Amend & Secko, 2012; Hodgetts et al., 2008; Hooker et al., 2012; Viswanath et al., 2008). Timely stories can be instrumental as an initiator or reinforcer of the public health agenda. This news value was parallel to the conception of the role of the journalist as a disseminator, where journalists are required to dispatch information to the public promptly. The need for promptness is in part driven by the competitive nature of the news media, with the credit going to agencies or outlets that break a story first. Similarly, the analysis identified health-related programmes as timely health stories, as most of the events coincided with the current awareness month or week. The interviews revealed that the journalists perceived these events as information subsidies, as the events were pre-packaged with information and sources (Zoch & Molleda, 2006), benefitting journalists as they provide information on the issues with little cost in terms of time and money. Apart from timeliness, ‘newness’ or novelty has been identified as having significant news value (Leask et al., 2010). As the health and, in particular, biomedical fields are evolving

continuously, stories on the latest technological advancements are considered to have high news value. The newness value also fits the role of the journalist as a facilitator; to facilitate the audience accessing the latest solutions to health issues. On another note, this study also captured an account of the novelty value; the challenge faced by journalists in continually coming up with a new angle or stories for long-standing issues such as NCDs, while at the same time maintaining these issues on the public agenda. According to Deuze (2005), a dominant journalistic model is one that consists of a set of practices that often contradict each other. This paradox of finding a new angle or story while meeting the demand of sustaining chronic health issues on the public agenda has led journalists, especially experienced ones, to boredom and wariness. This situation is further exacerbated when experienced journalists are under the impression that their writing has uncertain impact on readers – whether the stories interest their audience or prompt an intention to change.

Further, some experienced journalists were under the impression that general health literacy was relatively low based on increasing NCD prevalence. Subsequently, they felt like they were not making any changes in the public's health behaviour. These views were predominantly shared among experienced journalists, in line with their long experience and their duty to continuously cover the same stories over and over again. This view was held by a minority of the novice journalists. Most of the novice journalists emphasised changes in individuals and believed that their writing could mobilise their audience. It is important to note that most of the interviewees focused on individual behavioural changes in addressing NCD problems but not other external factors. The lack of discussion on how the need to maintain economic growth, investment in the food and beverage industry and the promotion of a middle-class lifestyle are driving the NCD epidemic sweeping across Malaysia and other upper middle-income countries demonstrates that journalists do not see this problem as systemic, but rather individual.

Media routines refer to the constraints that journalists have to work within. Two important constraints mentioned in the interviews included restricted time and limited space for health news. Previous studies focused on the construction process in news articles without including the production of feature articles. Since news articles are mostly produced daily, journalists have a limited time to work on the stories, and limited space and words are allocated for the stories. In this study, similar restrictions were mentioned by the journalists. However, they explained how feature articles could address this problem. Feature articles are designed to contain in-depth coverage of health issues from multiple angles; the length of the articles is extended and the complexity or depth is enhanced. Accordingly, feature articles are often entitled to a weekly allocation and do not compete in the same way with other news items (Tanikawa, 2017).

Another criterion for the newsworthiness of health articles is the embedding of patients' stories. Personalised stories, often referred to as human-interest stories, are a powerful technique used by journalists to disseminate health stories (Friedman et al., 2014; Hinnant, Len-Ríos & Young, 2013; Tanner, 2004; Viswanath et al., 2008). This news value is regarded as being influential on the audience since it stimulates more involvement and cognitive processing (Celsi & Olson, 1988). The journalists considered the personal living experience as a catalyst for increasing the understanding of the audience with regard to health issues, since it can help to explore a complicated health condition and treatment from the point of view of an ordinary person. Although health journalism, as a field, acknowledges that the human-interest role has value, Kreuter et al. (2007) warned of the potential risks of including a patient's narrative in health communication. For example, each patient has his/her views on their health condition and circumstances; this may lead to inaccurate information about the disease, and its treatment and diagnosis (Kreuter et al., 2007).

Despite the argument that some media provide inaccurate and over-sensationalised health stories, this study found that the journalists who were interviewed prioritised evidence-based practices and accurate reporting. However, this study showed that accessing published scientific evidence straight from scientific journals is not a standard approach among journalists. Journalists are highly dependent on primary sources, such as medical and health experts, to provide them with information and scientific evidence. This finding may indicate that journalists are not familiar with the idea of appraising scientific journals and lack the skills to translate them for their readers (Larsson et al., 2003a; Tanner et al., 2015).

9.4.3 Influence of Health Reporting Practices

9.4.3.1 Internal factors

The findings of the analysis captured how internal factors highly regulated the construction of health news. This finding is contrary to a previous study that demonstrated how organisational influence is overridden by personal interest in writing health stories (Tanner, Friedman & Zheng, 2015). The current study is parallel to other literature on journalistic reporting, where organisational structures are highly influential in determining the construction of news (Stephen D. Reese & Shoemaker, 2016; Rosen et al., 2016; Wallington et al., 2010a). As much as these internal factors have been developed to guide journalistic practices and processes, they are regarded as organisational constraints.

Journalists must comply with the demands and judgements of editors in addition to working within tight deadlines. The journalists acknowledged that the structure of the news organisation shaped their reporting practices, including following editors' demands, operating within journalistic routines and adhering to the values of the newspaper. To comply with demands while, at the same time, operating in a stressful work environment reflects the organisational hierarchy. The findings indicated that the hierarchy of the organisation legitimises the authority of the editors in evaluating health news. Most of the time, this judgement is determined by

many factors, such as commercial and institutional factors (Hallin & Mancini, 2004), but social norms of the local context also underpin editors' judgements. This evaluation demonstrated the role of the editor as a gatekeeper, who controls the selection of the stories and how much attention they receive (Amend & Secko, 2012; Rosen et al., 2016). As much as the newsworthiness of a story is essential, this evaluation shows that editors are sensitive to the social norms of the local society, and eventually repress some essential health stories from being published. This juxtaposition between social acceptance and the importance of health stories should be addressed delicately, to disseminate health issues that are considered sensitive.

Similar to many other studies, the findings showed that journalistic routines, such as tight deadlines, limited space and dealing with the demands of editors, impose challenges on journalists (D. M. Cook, Boyd, Grossmann, & Bero, 2009; Wallington et al., 2010a). These influences on the operational procedures of journalists in turn affect the way journalists interact with their sources, and subsequently, affect the coverage of the health stories. For example, because of time constraints, journalists may look to the same sources, with whom they have an established relationship. This routine may raise concerns with regard to the homogeneity of the coverage of news stories.

9.4.3.2 External factors

The findings showed that external factors located outside a news organisation also influence the construction of health news (Stephen D. Reese et al., 2009). Similar to many studies, health news is strongly influenced by the sources used by journalists to obtain information (Rosen et al., 2016). The most common sources are health professionals and government officials. Similar to a previous study, the relationship between journalists and their sources can be described as a symbiotic (Carlson, 2009). The function of a source goes beyond providing information; journalists seek out experts and officials with impressive credentials and

reputations for interviews, as their words carry authority and credibility (Amend & Secko, 2012; Hinnant et al., 2012). Journalists often perceived that individuals with credentials or in power, have better ability in understanding whatever is at issue (Carlson, 2009). Therefore, the sources also exert an influence and advocate for how an issue is to be presented in the media (Vliegenthart, 2012b). This role, known as that of a frame sponsor, explains how the sources carefully design the message to capture the attention of editors and journalists as well as to induce the target audience to interpret the issues from their favoured perspective (Chang Peng Kee, Ibrahim, Ahmad, & Khiang, 2012; Vliegenthart, 2012b). The journalists who were interviewed in this study noted that the government is selective or, in other words, controls who should be interviewed regarding health issues, as well as monitors the product of these interviews (the news item). One of the implications of the dominant frames sponsored by the government is that there is a lack of critical or investigative journalism involved in presenting health stories (Tamam & Abdullah, 2015).

This symbiotic relationship can be jeopardised by clashes of expectation between the news media and the sources of primary information. The accessibility of the sources was mentioned as one of the challenges facing journalists in obtaining information. Therefore, in meeting the demands of their working environment, journalists often opt for sources that are easily reachable (Amend & Secko, 2012; Wallington et al., 2010b). It was evident from the interviews that experts from private hospitals are the primary sources, as less red tape is involved for journalists to interview them. Although their accessibility is considered helpful, a concentration in the same type of source may lead to homogeneity in the news stories.

Apart from the issue of accessibility, another factor that threatens the symbiotic relationship is the different standards of the respective parties. The level of distrust between both parties is apparent, with, for example, the reporters finding it difficult to publish health stories in an entirely medical presentation as requested by the health professionals. Health professionals fear

misrepresentation, while journalists aim to simplify for the comprehension of the audience. Therefore, journalists often value sources that can provide complicated information in lay terms with a human-interest perspective (Waddell et al., 2005; Wallington et al., 2010b). One study recommended that expert sources provide prepared resources beforehand to meet both ends (Leask et al., 2010).

9.5 Limitations and Summary

This study has limitations. First, the analysis demonstrated that although it was a relatively small sample, data saturation was achieved. Despite the limited number of interviewees, the study included journalists from various newsprint organisations and backgrounds. Nonetheless, as the scope of the study focuses on journalists from newsprint media, the results should not be generalised to other types of news media, such as television and magazine production or online blog. It is also important to note that the age of the journalists may influence how they approach the news construction process. For example, if the participants were selected of young journalists, the results of the interviews may be different. Another limitation of the study is that all of the critical informants work as journalists. Therefore, the perspectives provided are limited to this level. It would be useful to conduct interviews with different media practitioners in different positions, such as editors of news organisations, to further understand the social interactions between other social actors in the news-making process.

In summary, in constructing health stories in the Malaysian newsprint media, the majority of the journalists viewed themselves as disseminators and translators of information with a social responsibility for promoting health awareness. They mostly focused on individual behavioural decisions and changes to address health issues, especially NCDs. The journalists upheld their role of disseminator by providing accurate reporting and practising evidence-based journalism. They also emphasised that it is important for them to maintain accurate and evidence-based

information as they are being closely monitored by the government. The study also showed that the journalists are dependent on sources, health professionals and the government, in reporting current health issues. This dependency and the news organisation relationship with the government may explain why there is no investigative journalism emerging in health news reporting in Malaysia.

Chapter 10. General Discussion

10.1. Introduction

While investigating the effects of health news is essential, studies of the production of health news should also be given attention, as it is also vital to examine what the news media has been producing on health issues, how they have been presenting these stories, and which factors have been influencing them in constructing health stories. In addressing these questions, the current research focused on the construction of health and NCD issues in the Malaysian news media. With the current increasing trend of NCDs in LMICs, the study selected Malaysia, an upper-MIC, as the setting of the research (Benziger, Roth, & Moran, 2016; WHO, 2015). Another reason of selecting Malaysia as the scope of the study is that, I am originally from Malaysia and am interested to contribute to health journalism as there are limited studies on media and health in the Malaysian media setting. Furthermore, for the past few decades, Malaysia has been experiencing an emerging NCDs problem, similar to other LMICs (MOH, 1995, 2012).

The primary objective of this study was to examine what role the news media has been playing in the midst of a heightened NCD crisis in Malaysia. Guided by the theory of agenda-building, frame-building and model of the hierarchy of influences, this research employed a multi-method study to investigate 1) how news media in Malaysia constructs NCD issues and 2) the influences on the construction of NCDs in the news media.

This chapter focuses on the main findings of the research. It outlines the strengths and limitations of the research, as well as the implications of the findings and potential directions for future research.

10.2. Main Findings of the Study

The main findings are structured based on addressing the central research questions of the study: 1) how news media in Malaysia constructs NCDs and health issues and 2) the influences on the construction of NCDs in the news media.

10.2.1 Presentation of NCDs in Malaysian News Media is Determined by Journalistic Routines

The first set of research questions (Research Questions 1 to 5) aimed to examine how mainstream Malaysian newspapers covered NCDs and other health stories. By conducting content and thematic analysis, the study determined the salient health topics and retrieved the framing mechanisms journalists applied in presenting NCDs in Malaysian mainstream newspapers. The findings of the content analysis of health articles demonstrated that among health topics covered in the Malaysian newsprint media, NCD issues are one of the most commonly represented.

This finding is contrary to previous content analyses of health news, which showed low coverage of NCDs in comparison to natural disasters or outbreaks (Berry, Wharf-Higgins, & Naylor, 2007; McCool, Cussen, & Ameratunga, 2011); for example, the immense coverage of outbreaks such as swine flu, SARS, the Zika virus or natural disasters during the event (Barnes et al., 2008; Berry et al., 2007; S Hilton & Hunt, 2011; Sell et al., 2018; N. Wilson & Thomson, 2004). As both type of health problems are unpredictable and catastrophic, causing a high case-fatality rate and creating fear among the public, the news media play a role in providing information and latest updates, prevention and precautions during these critical times (Sell et al., 2018). However, contrary to outbreaks and natural disasters, NCDs develop slowly. Although NCDs affect a high portion of the population, their occurrence is not perceived as

catastrophic as pandemic outbreaks. NCD effects are most visible at the individual level, and may be regarded as tragic, if only at the individual level.

One of the explanations on the common representation of NCDs in Malaysian news media is that, NCDs is relatively new to Malaysia, and for that, this problem is current and timely. Prior to the 1990s, the dominant burden of diseases in Malaysia were communicable, maternal, neonatal and nutritional diseases (Atun, Berman, Hsiao, Myers, & Wei, 2016); however, the burden of diseases has shifted to NCDs in recent years (Atun et al., 2016; Jaafar et al., 2013), parallel to the rapid economic growth and the urbanisation of the growing Malaysian population (Hopkins, 2006; Shin et al., 2007; Yusoff et al., 2000). Socioeconomic development has brought vast changes in lifestyles including poorer dietary habits and lower level physical activities (Chan et al., 2015; Rampal et al., 2010; Yasin et al., 2012). Therefore, the high attention given by the news media on NCDs indicates that NCD issues are newsworthy, satisfying the timeliness and the magnitude of news values criteria. Consequently, as journalists operate based on established routines including selecting newsworthy stories, the possibility of selecting NCDs stories is high based on their newsworthiness in the Malaysian context. This finding may differ from previous studies that found limited coverage on NCDs (Berry et al., 2007; McCool et al., 2011) because of the different timeline of epidemiological trends in the studied countries (Canada and New Zealand). Based on Omran's theory of epidemiologic transition, the patterns of health and diseases and level of mortality are linked to the stages of socioeconomic development (Omran, 2005, 1971). In this regard, Malaysia is relatively new to modernisation in comparison to other developed countries. Therefore, stories of NCDs are considered as relevant and current and valuable to the news media.

When comparing the types of NCDs presented in Malaysian mainstream newspapers, the results of the second content analysis (see Section 7.3.2) found that Malaysian news media pervasively covered stories about cancer in comparison with other types of NCDs. The second

most covered NCD type was diabetes, followed by heart disease, though these two are relatively less covered than cancer. These findings showed that there is a discrepancy between the coverage of the type of NCDs and their associated prevalence. For example, (lung) cancer was ranked as the fifth top cause of premature death in Malaysia, yet it received the highest coverage (IHME, 2017), while cardiovascular and heart-related diseases were of the top three diseases contributing to premature death but they received less attention than cancer in the news media. This finding is not unique, being similar to previous health news analyses (Berry et al., 2007; Pribble et al., 2006; Williamson, Skinner, et al., 2011), which found that health topics on cancer and infectious diseases often received higher coverage in the news media than other health conditions of greater population prevalence, such as heart diseases. One possible explanation for these findings is that cancer shares similar human-interest values such as ‘mysterious’ and ‘uncertain’ with outbreak pandemics. These elements may attract audience’s attention by evoking fear in them. Furthermore, individuals affected by pandemic or natural disaster are often treated as victims. A similar presentation may be adopted for cancer patients, implying that they are not responsible for their condition (MacKenzie, Chapman, & Holding, 2011). Unlike cancer patients, patients with diabetes and heart diseases are often not be presented as victims, but rather, as lacking the self-regulation to adopt a healthy lifestyle; that is, a moral judgement is made.

The empirical results on high coverage of NCDs and cancer support the theoretical assumption based on the model of hierarchy influences. In other words, journalists are highly influential in the agenda-building process and they play a pivotal role in putting a strong focus on NCDs and cancer. The central focus of agenda-building is a discussion on the processes and factors that lead to selection and deselection of issues to be featured in the news media (Nisbet, 2008; D. A. Scheufele, 2000). Using an agenda-building perspective, the extensive coverage of NCDs and cancer suggests that the news media constructed health news based on the newsworthiness

of the issues. The findings of the content analysis indicate that news media regarded NCDs and cancer as highly newsworthy issues.

This systematic selection regarding presenting health stories and the prioritisation of cancer over other NCDs may skew the NCD presentation, thus dampening the health communication effort in highlighting the severity of other NCDs, especially those that are more prevalent than cancer. As news media play a critical role in shaping the public agenda regarding what health issues to be presented in newspaper, they are important in determining public perceptions of what might be seen as important (M. E. Young, Norman, & Humphreys, 2008). With the common presentation of NCDs and cancer in the news media, the discourse on prevention and treatment of NCDs may become prevalent. As a result, this may increase the health awareness of these diseases and reduce the prevalence of NCDs in the population.

10.2.2 Framing NCDs as Individual Issues is a Result of Lack of Training in Journalists and Malaysian Media Environment

The second set of research questions (Research Questions 6 to 7) intended to investigate how news media presents NCD issues using thematic analysis. Overall, the study found that Malaysian news media pervasively framed NCDs as individual or behavioural issues by highlighting NCD risk factors and solutions at the individual level. The results demonstrated that the news articles highlighted risk factors and solutions for preventing and managing NCDs from an individual level. This finding is not unique to NCD issues; other analyses of health topics in the news media have also found a tendency to apply individual framing (Chau et al., 2017; De Brún et al., 2012; Hamad et al., 2015; Hilton et al., 2012; Jeong, Gilmore, Bleakley, & Jordan, 2014; Stefanik-Sidener, 2013). The individual focused presentation meant that other NCD risk factors, such as socioeconomic determinants and other macro-level factors were largely absent from reporting (see Section 2.3).

Pervasive individual framing of NCD issues may have the effect of shaping public understanding and beliefs on appropriate responses (De Brún, McKenzie, McCarthy, & McGloin, 2012b). This prevalent framing may lead to a dominant public discourse of changing individual behaviours while undermining discussion around societal causes and solutions in addressing NCDs. Although individual healthy practices such as a healthy diet and physically active are critical in addressing and preventing NCDs, it is equally important to discuss the societal causes that are the underlying determinants of behavioural risk factors of NCDs (Chau et al., 2017; De Brún et al., 2012; Stefanik-Sidener, 2013). Lack of discussion on socioeconomic determinants that expose the individual to NCD risk factors (i.e., poverty, inequality, unemployment and social instability) puts the sole responsibility for addressing NCDs on individuals. Previous studies with similar findings called for a reframing of NCD issues, from an individual to a societal frame (De Brún et al., 2012; Stefanik-Sidener, 2013). This call is based on the argument that changing individual behaviour may be more likely if support structures, such as equal access to health system, are present (Beaglehole et al., 2011).

Reframing of NCD issues to societal frame may not be easy to affect. Based on the interviews with the journalists, this study found that there are many influences that lead to the prevalence of individual framing of NCD issues. First, journalists' lack of training in the medical and public health fields may contribute to the limited presentation of NCDs. Even though most reporters interviewed in this study received formal education in mass communication at the tertiary level, with their lack of training in health and medical fields, they were required to make an extra effort to understand the background of health issues, such as the aetiology of the disease. In this case, the understanding of NCD risk factors is not limited to behavioural risk factors but also includes other risk factors such as health disparities due to social determinants and other macro-level factors (Beaglehole et al., 2011; McCracken & Philips, 2012). For example, the journalists should understand that health disparities between social groups are due

to the social, institutional, political factors. (Niederdeppe, Bigman, Gonzales, & Gollust, 2013). However, previous study showed that journalists viewed reporting health disparities as ‘not attractive’ and ‘complicated’ (Wallington et al., 2010a). As journalists are working under limited time and resources, such requirements would further burden their news construction processes (Larsson et al., 2003). Most journalists are dependent on certain sources of information, such as medical professionals and government officials (Carlson, 2009; Johnson et al., 2011; Wallington et al., 2010a), which may lead to establishing routines that merely report the information from the sources, and thus allow the sources to exert their influence on the presentation of NCD issues (Vliegthart, 2012b). These routines have led to the production of a homogenous presentation of NCDs, emphasising behavioural factors and individual solutions for NCDs.

The high prevalence of individual framing in Malaysian news media is a result of media environment in Malaysia. Individual framing indicates that the journalists presented NCD based on the perspective or frame provided by the sources, such as the government officials and the health experts. The emphasis on the individual risk factors and solutions also signifies an absence of societal and environmental risk factors in the news reporting. The high coverage of individual framing of NCDs and the lack of societal and risk factors indicate that the journalists play their role as the disseminator and translator of health information, without any critical views of their own on the information given by the sources. The role of disseminator and translator, which can be classified as passive journalism, is not unique for health news reporting. In fact, it is shared by many Malaysian journalists (O’Neill & O’Connor, 2008; Tamam & Abdullah, 2015). This passive journalism is a consequence of the Malaysian media environment. In contrary to Liberal Model practised in the U.S, where journalists enjoy the freedom of press with a very limited political parallelism, the Malaysian media ecology is rather rigid due to the government control mechanisms and cultural values in the Malaysian

journalism (Abbott, 2011; Ariff & Beng, 2006; Hallin & Mancini, 2004; Shaari, 1997; Tapsell, 2013; Wong, 2004). In Malaysia, the journalists operate within government-political-party controlled media and they are subjected to laws pertaining the media. Therefore, the journalists function as the agent of the Malaysian government, where their reporting is based on the views provided by the stakeholders, such as government officials and health experts, which are deemed to echo the government stance. In this case, the emphasis of individual framing demonstrates that the government places the burden of managing and preventing NCDs on individuals, therefore absolving the government from working on NCD societal risk factors such as unequal economic wealth and policy. For the journalists to not include criticisms on the lack of coverage on NCD societal risk factors also suggests that they tend to avoid conflicts with the government. Conflict-avoidance is the root of Malay values, which are pervasive in Malaysian journalism. As a result, the journalists become more accommodating with the government's agenda and they do not openly criticise the government in the media (indirectness) (Awang et al., 2013). This Malay values are aligned with the limited press freedom in a highly controlled media environment.

10.2.3 Limited Critical Discussion on NCD Issues in the News Media

One of the findings of this research is that there is the absence of critical discussion on NCD issues in the news media. This finding is based on the positive portrayal of the government and other stakeholders in addressing NCD issues and the limited presentation of societal causes and solutions for NCDs. This finding can be explained by both government control of media and journalists' conceptualisation of their role.

The symbiotic relationship between journalists, the government and health professionals caused journalists to value and maintain their relationships with these stakeholders. Therefore,

it is expected that the Malaysian news media would avoid producing stories that are critical of government policy. For example, most of the journalists were aware that news presentation and content are monitored by the Ministry of Health, and therefore, they must report cautiously in order to conform with the Ministry's guidelines. This finding demonstrates that investigative or critical journalism is restricted in Malaysia. This limited media freedom has been well documented in the coverage of political news (Ismail, Zin, & Rahman, 2009; Tapsell, 2013), where newspapers tended to publish pro-ruling parties' articles and silence favourable coverage from the opposition (Mohd Azizuddin Mohd Sani, 2014). The present study indicates that such restrictions also apply to health reporting. As the Malaysian media practices development journalism, they are required to function as government agents and serve their interests (Tamam & Abdullah, 2015). Development journalism proposed that news media should work together with the government in achieving a modern society. Further, providing a critical presentation of NCDs may lead to public debate and confrontation, which is against the Asian-values journalism in Malaysia (see Section 4.2.2). Therefore, highlighting issues such as health inequities as a driver of NCDs may lead to questioning the unequal distribution of economic resources, which indirectly questions the governance of the Malaysian government. As a result, the current Malaysian media environment limits critical views of the government, even though critical views should be regarded as a means to progress.

The lack of critical discussion of NCD risk factors may also be explained by journalists' conceptualisation of their role. The results of the interviews demonstrated that the journalists viewed themselves as disseminators and translators of health information. Most see their role as increasing health awareness by providing information and thus promoting behavioural change towards a healthy lifestyle. Since they conceptualised their role as changing and mobilising individuals, this may limit how they view the risk factors for NCDs. In fact, the journalists did not view their role as public debate promoters; therefore, it is no surprise that

the common message in health articles emphasised individual risk factors and solutions (Tandoc et al., 2013). Another possible explanation for presenting NCDs as individual issues is that journalists construct health articles based on their targeted audience. Based on the interviews, most of the Malay newspapers cater for low- and middle-income readers, and thus, most journalists aimed to cater to their audience by constructing information that is readily understandable (Len-rios et al., 2009; Young et al., 2011). For that, a discourse on individual causes and effects are somewhat preferred to presenting the complex causation pathway of NCDs (Mayer, 2008).

Other than individual risk factors, the results of the findings showed that Malaysian newspapers prevalently associate the causes of the unhealthy dietary pattern with cultural dietary practice. Since Malaysian dietary practice is profoundly influenced by cultural norms shared by the majority of the population, it is not surprising that journalists pick up on this story. This presentation of NCD risk factors includes the value of relevance, where the audience can relate to the news content (Harcup & O'Neill, 2001, 2009). However, the lack of in-depth discussion on how sociocultural factors lead to poor dietary choices may be associated with the complicated causation pathway of NCDs. For example, cultural dietary practices have been inherited from the previous generation. A high calorie diet may have been needed in the previous Malaysian social setting, as prior to the rapid growth in economic development, Malaysians mostly generated their income from agriculture, which required a high intake of calories. However, this dietary pattern is no longer suitable for the current Malaysian setting, as changes in lifestyle and occupations imply much less physical activity. Further, the increase in economic growth and per capita income has led to increased consumption of energy-dense food (Ismail et al., 2002). In addition, cultural practice has further exacerbated poor dietary choices. Food availability has increased in the past few decades in Malaysia with trade liberalisation, and the international food trade has led to increased consumption of fast food

and foreign direct investment (Soon, 2014). However, it appears that journalists are not keeping pace with these developments and limit their discussion to how cultural practices affect the dietary choices among Malaysians (Wallington et al., 2010a).

Another interesting finding of the news presentation is that other stakeholders, including corporations, are often portrayed positively in managing the NCD problem. This result is similar to a review on media representation of corporations in health issues (Weishaar et al., 2016), which found that the media are less critical of non-tobacco-related corporations. This positive portrayal is mostly presented through corporations' (CSR) participation in promoting health events. Some of the CSR events were organised by Big Food corporations and private hospitals. As CSR may enhance these stakeholders' visibility in the mass media, their agenda is questionable. For example, it is interesting that the Big Food industry is involved in public health promotion, as this conflicts with their products, which contribute to the burden of ill health (Brownell & Warner, 2009; Stuckler et al., 2012). Nonetheless, these CSR public-health-related events may be perceived by journalists as 'information subsidies' with high news value. Instead of questioning the Big Food industry involvement, the fact that journalists see themselves as facilitators and disseminators of health event awareness may hinder them from covering this angle. Another explanation for positive portrayal of these stakeholders is that they are the main players in the food industry and may be one of the important advertiser in the news media. Therefore, providing critical view on these industry players may not be perceived as parallel to the news organisation structure and values.

10.3. Implications of the Research

Empirical studies on news analyses of NCDs and health issues, as well as the interviews with the journalists, contribute to the major theoretical concepts of news production. The findings

of the studies also provide several practical implications for health journalism and public health.

Findings of this study showed that journalists' background, journalistic routines, the relationship between journalists and their sources as well as government control of media are highly influential in health news construction, especially for NCDs. These findings fit well with the hierarchy of influences model, proposed by Shoemaker and Reese (1996, 2014). In line with the levels of influence on news media content outlined in this model, the findings of this study describe how each level of influence plays an important role in shaping the agenda and the frame of health stories. The findings also showed that the mediated reality of health news is constructed by many factors which result in shaping public perception, attention and way of thinking on health issues. One of the unique findings of this study is that it showed how the construction of health news is influenced by the semi-authoritarian political system and the model of journalism practised in Malaysia.

The high coverage of cancer indicated that news media producers focused on highlighting NCDs with high news values. This pattern of coverage may lead to low presentation of other NCDs, diminishing them from public agendas. To promote the coverage of other NCDs, perceived as having low news value, news media producers should consider the angle of framing or values of other NCDs that may appeal to the public. For example, this study suggested that the advocates of other NCDs should organise health events and promote them through news media. The literature on NCD news analyses and the thematic analysis results suggest that one of the primary influences on NCD news coverage is public health events, such as the introduction of government policy, health initiatives and events for NCDs. Coverage of such events in the news media may provoke stakeholders, including the public, to participate in the NCD discourse and increase the news value of these stories. As for public health events, such events are usually attended by high-profile individuals, such as prominent figures or

celebrities. Reporting the activities of these high-profile individuals can increase the news values of the stories (Harcup & O'Neill, 2001). Therefore, stakeholders should consider involving high-profile figures in health promotional activities to gain media attention.

Previously, the majority of news coverage referred to cancer patients as 'victims' (Riles, Sangalang, Hurley, & Tewksbury, 2015). Such presentation may evoke sympathy towards the patients and thus increase audience attention. Instead of presenting other NCD patients as non-victims, journalists shall present individual modifiable risk factors as not solely dependent on lifestyle choices, but influenced by many beyond individual control factors such as poverty and aggressive marketing by tobacco and Big Food companies. By applying such a frame, journalists would not only attribute the blame for NCDs to individuals but also to macro-level factors involving other stakeholders. Note, however, that for journalists to be able to present this news coverage, they first need to receive training in public health.

The emphasis on individual risk factors in the news media may also be associated with the sources that journalists refer to for their NCD news content. A lack of emphasis on the broader perspective of NCDs' underlying determinants may be because of the message that journalists perpetuated from their sources. This could imply that most sources highlighted NCDs only from the individual risk factors, as the sources were selective in filtering information as well as advancing their own agenda of putting responsibility on individuals. Based on the interviews, most are either government officials or medical professionals. Therefore, journalists may also need to quote sociologists, economists and public health experts as their future references.

One of the prominent barriers to journalism in Malaysia is government control over the Malaysian media. This control has limited journalists' autonomy and hindered investigative journalism practices, especially for issues involving criticism of government policy. As

government officials are the primary sources of NCD stories, to encourage debate on societal causes and solutions, it is suggested that the discourse begin with official sources and associated research and documentation. For example, the results of NHMS IV highlighted social determinants (such as socioeconomic status) as risk factors for NCDs (IPH, 2015)—since these surveys were conducted by the MOH, a government agency, highlighting this angle would not be perceived as being critical of the government.

10.4. Limitations and Future Recommendations

There are several limitations of this study that could be taken into account in future research. First, this study focused on media communication in Malaysia, and therefore, the results are limited to this context. As this study is specific to Malaysia, but it cannot be generalised to other countries. Future research could consider expanding this study by comparing with neighbouring countries of similar socioeconomic status or similar government–media system. For example, Malaysia shares a similar media and healthcare system with Singapore (Chee, 2010); therefore, comparing health news construction in both countries may highlight similarities and differences in health communication. In addition, it is also essential to compare the production of health news in Malaysia with that in developed countries, so that the gap in health communication can be further addressed.

Second, this study was limited to the printed version of Malaysian newspapers. Considering the power of social media and the internet, especially in this current borderless information-sharing world, it is crucial for future studies to conduct analysis of the social media in presenting health information. Future studies should not be limited to the official websites of the Malaysian news outlets but include social media accounts of other stakeholders, such as medical practitioners, public health advocates and other government agencies. Further, as new media is perceived as liberating the Malaysian public (Mohd Azizuddin Mohd Sani & Zengeni,

2008), it would be interesting to analyse the differences in content and presentation between the printed media and social media and websites in presenting health stories.

Third, as the interviews with the journalists revealed that there are other factors involved in health news construction, such as organisational structure (including editors), government and health professionals, it is essential to examine these stakeholders' roles in constructing health and NCD stories. The finding of the interviews indicated that there is much 'red-tape' involved in dealing with government officials and doctors; it is important to understand the reasons behind this 'red-tape' and ways to improve communication between journalists and sources. Further, as this study showed that most of the NCD coverage focused on individual issues, it is important to examine the views of sources (government officials and health professionals) of the NCD problem.

Appendices

Appendix 1 - Example of search string:

((("newspapers"[MeSH Terms] OR "newspapers"[All Fields] OR "newspaper"[All Fields]) OR newsprint[All Fields] OR "print media"[All Fields]) AND (("neoplasms"[MeSH Terms] OR "neoplasms"[All Fields] OR "cancer"[All Fields]) OR ("diabetes mellitus"[MeSH Terms] OR ("diabetes"[All Fields] AND "mellitus"[All Fields]) OR "diabetes mellitus"[All Fields] OR "diabetes"[All Fields] OR "diabetes insipidus"[MeSH Terms] OR ("diabetes"[All Fields] AND "insipidus"[All Fields]) OR "diabetes insipidus"[All Fields]) OR "heart disease"[All Fields] OR "cardiovascular disease"[All Fields] OR ("asthma"[MeSH Terms] OR "asthma"[All Fields]) OR "chronic obstructive pulmonary disease"[All Fields])) AND (representation[All Fields] OR portrayal[All Fields] OR ("AHIP Cover"[Journal] OR "coverage"[All Fields]) OR reporting[All Fields])

Appendix 2 - Overview of studies of newspapers analyses on NCD-related issues

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
1	(Liu et al., 2010) China	Disease – skin cancer	To analyse skin cancer issues in Chinese newspapers	Content Analysis <i>n</i> = 134 Newspaper type: Most commonly read Chinese newspapers 2000 – 2007	None	<ol style="list-style-type: none"> 1) The numbers of articles about skin cancer increased over the study period. 2) Coverage of treatment is higher than prevention or detection.
2	(Jensen et al., 2010) U.S.	Cancer	To quantify the coverage of cancer and to compare the result with similar studies	Content analysis <i>n</i> = 5,327 Newspaper type: top 50 circulation rate 2003	Journalistic biases	<ol style="list-style-type: none"> 1) Breast cancer is overrepresented compared to its incidence rate. 2) News cancer coverage focuses more on cancer treatment. 3) The most common cancer risk factor mentioned in the news is lifestyle choices. 4) Incidence and mortality data are rarely mentioned 5) Personalization bias (e.g., celebrity) might explain the news coverage distortion.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
3	(Harris et al., 2010) U.S.	Prevention of Risk factor of NCD - Tobacco issues	To examine how tobacco issues were presented in Missouri's print media leading up to the 2006 election	Content Analysis <i>n</i> = 1,263 Newspaper type = major daily in Missouri 1/9/2005 – 6/12/2006	None	<ol style="list-style-type: none"> 1) Most tobacco articles are news stories (73.6%). 2) 54.8% of the tobacco articles is about tobacco tax policies, and 63.8% of them are pro-tobacco control. 3) The proportion of anti-tobacco control increased significantly a month before the election with an increase in economic-themed articles 4) Articles with the economic theme are higher in counties with less voter support for the tax. 5) Tobacco control position varied significantly across article types, with letters to the editor being the most anti-tobacco control position.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
4	(Al-Naggar & Al-Jashamy, 2011) Malaysia	Breast cancer	To compare the news coverage of breast cancer in 1997 and 2007	Content Analysis <i>n</i> = 97 Newspaper type = the most read English newspaper 1997 and 2007	None	<ol style="list-style-type: none"> 1) The number of articles on breast cancer in 2007 is four times higher than in 1997. 2) A personal account of cancer patients is the most common main theme in both years. 3) The risk factors and prevention presented in both years differ largely.
5	(Hind et al., 2011) U.K.	Management of Breast cancer treatment	To evaluate the types of actors and themes in coverage of pre-licensing access to trastuzumab (Herceptin) for early stages of breast cancer.	Content analysis <i>n</i> = 218 Newspaper type = national and local 26/4/2005 – 24/5/2006	None	<ol style="list-style-type: none"> 1) The public health events influenced the frequency of trastuzumab articles. 2) More article containing claims that trastuzumab confers clinical benefit than the uncertainty about the clinical benefits and potential harm. 3) Newspaper articles are more likely to feature claims by a breast cancer survivor or family member than any other interest groups.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
6	(Johnson et al., 2011) U.S.	Asthma	To determine the frequency of substantive asthma articles and the occurrence of stigma challenge, fear and management frames	Content analysis <i>n</i> = 203 Newspaper type = high agenda setting influence, wide circulation and represents regions for known asthma prevalence 2000 and 2007	None	<ol style="list-style-type: none"> 1) A lack of newspaper coverage on asthma. 2) Fear cues present in 43% of the sample and majority of them contain a management solution message.
7	(Williamson et al., 2011) U.K.	Cancer	To assess the media profile of the most common ten cancers in the U.K.	Content Analysis <i>n</i> = 5832 Newspaper type = tabloid and broadsheet 2009	None	<ol style="list-style-type: none"> 1) Breast cancer, kidney, and stomach cancer are overrepresented compared to their incidence rate. 2) Colorectal cancer is notably underrepresented. 4) There is a discrepancy between the number of articles on certain cancers and their associated prevalence.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
8	(Ries et al., 2011) U.S., Canada, U.K.	Management of Risk factor of NCD - Obesity	To identify and compare measures that attract media attention in three jurisdictions - the tone of press coverage, the characterization of obesity, and attitudes toward government interventions to address obesity.	Content analysis <i>n</i> = 360 Newspaper type = major newspaper January 1989 – April 2009	None	<ol style="list-style-type: none"> 1) Articles in the U.S., U.K. and Canada, portray the causes and nature of obesity in the similar term, a lifestyle problem. 2) Articles from each country have a different portrayal of responsibility, legal and policy intervention in addressing the obesity problem.
9	(Hellyer & Haddock-Fraser, 2011) U.K.	Risk factor of Cardiovascular diseases and Type 2 diabetes	To identify the extent to which newspapers inform people on the lifestyle-related risk factor of NCD	Content analysis <i>n</i> = 522 Type newspaper = populist, quality, and middle market January 2008 – March 2008	None	<ol style="list-style-type: none"> 1) The press has a higher interest in cardiovascular disease than type 2 diabetes. 2) ‘Popular’ press has a lower level of reporting than ‘Middle-market’ and ‘Quality’ papers. Poor reporting on social determinants as factors of the diseases.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
10	(Wakefield et al., 2011) Australia	Risk factor of NCD - tobacco issues	To characterize and analyse the coverage of tobacco issues and examine the nation-wide population reach of the tobacco-related newspaper articles over a recent period	Content analysis <i>n</i> = 6843 Newspaper type = major daily 2001 - 2006	None	<ol style="list-style-type: none"> 1) On average, one tobacco focused-article was published in every four days. 2) The coverage of tobacco was varied between years but no decline over time. 3) Most articles report on events that represented the progress for tobacco control. 4) The dominant matter related to tobacco coverage issues is smoke-free issues
11	(Collin & Hughes, 2011) Canada	Risk factor of NCD - hypertension	To analyse the representation of hypertension as a health risk factor.	Content, thematic and rhetorical analysis <i>n</i> = 378 Newspaper type = semi-serious, serious-popular and tabloid 1995 – 2005	None	<ol style="list-style-type: none"> 1) Main themes found in presenting hypertension as a health risk factor: the magnitude and undetectable nature of the disease, and the severity and unpredictability of its consequences. 2) Rhetorical procedures are used to convey the themes.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
12	(Mercurio & Elliott, 2011) Australia	Treatment of cancer: complementary and alternative medicines (CAM)	To describe the coverage of CAM use for cancer and to analyse the frames used in the coverage	Content and frame analysis <i>n</i> = 119 Newspaper type = tabloid and broadsheet published nationally or from a capital city 1/1/1998 – 31/12/2007	Framing theory	<ol style="list-style-type: none"> 1) The numbers of articles on CAM fluctuated over the years. 2) Biological forms of CAM are the most frequently described category in the news (39.4%). 3) Breast cancer is the most common cancer mentioned in the CAM articles. 4) Approximately two third of the articles describe CAM purpose as a cancer treatment. 5) Two main sources cited are personal account (16.9%) and biomedical practitioners (16.1%). 6) CAM is commonly framed in positive framing by discussing its potential benefits. 7) Negative frames such as potential risks and information on costs and how to access CAM are uncommon.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
13	(Hilton et al., 2012) U.K.	Risk factor of NCD - Obesity	To examine the framing and coverage of obesity over the years.	Content analysis <i>n</i> = 2,414 Newspaper type = serious, middle-market tabloid, tabloid 1996 – 2012	None	<ol style="list-style-type: none"> 1) Obesity coverage increased over time, especially on childhood obesity. 2) The obesity problem is commonly defined as a risk to health. 3) Individual drivers were the most commonly mentioned as the cause of obesity but there was a significant decline over time. 4) The trend coverage on obesity solutions shifted slightly from individual to societal solutions.
14	(Jones et al., 2012) U.K.	Colorectal cancer	To assess how educational information of colorectal newspaper articles.	Content analysis <i>n</i> = 203 Newspaper type= top 10 newspaper 2009	None	<ol style="list-style-type: none"> 1) Only 6.4% of colorectal cancer articles mention about red-flag symptoms. 2) 30% of the articles involve celebrities with colorectal cancer.

Appendices

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
15	(Henry et al., 2012) Canada	Cancer	To investigate the cancer portrayal over 20 years	Content analysis <i>n</i> = 988 Newspaper type = April – June of 1988/1989 and April – June of 2009	None	<ol style="list-style-type: none"> 1) Coverage on cancer is higher in 2008 compared to 1988/1989. 2) Cancer articles are commonly portrayed in positive valence (research, treatment, prevention) than in negative valence (related to death) in both periods. 3) Breast cancer is the most commonly covered cancer site in both years. 4) The coverage on psychosocial aspects of cancer remains low in both years.
16	(Cluckie et al., 2012) U.K.	Treatment of NCD - Stroke	To examine how thrombolysis for stroke is reported	Dispositive analysis <i>n</i> = 56 Newspaper type= local and national 1/1/2007 – 31/3/2010	None	<ol style="list-style-type: none"> 1) Main themes of thrombolysis articles: inaccurate description of thrombolysis, the involvement of stroke clinicians, presentation of the risks and personal stories of thrombolysis.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
17	(Wakefield et al., 2012) Australia	Prevention of NCD risk factors - tobacco issues	To characterize the presence of advocacy groups in media coverage of tobacco issues	Content analysis <i>n</i> = 4,387 Newspaper type = national and state capital daily 2004 -2007	None	1) Australian tobacco control advocacy groups have a reasonable presence (22%) in the news discourse on tobacco control issues
18	(Mayer, 2012) U.S.	Asthma	To explore the coverage of the relationship between asthma and air pollution	Content analysis <i>n</i> = 1020 Newspaper type = national 1986 – 31/12/2006	Dominant Epidemiological Paradigm	<ol style="list-style-type: none"> 1) The coverage of asthma in newspapers increased substantially over time. 2) Only a small percentage of articles address potential environmental links to asthma. 3) Outdoor sources of air pollution are frequently covered but with less certainty in the discussion of specific relationships. 4) Three themes: poor living conditions, personal responsibility and the normalization of the risk

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
19	(Helme et al., 2012) U.S.	Prevention of risk factor – smoking	To describe the portrayal of second-hand smoke and smoke-free policy	Content analysis <i>n</i> = 709 Newspaper type = local newspaper April 2007 – March 2008	None	<ol style="list-style-type: none"> 1) Only 19% of the articles have a pro-tobacco slant in this tobacco-growing state. 2) Most of the articles on second-hand smoke and smoke-free policy are pro-health (43%). 3) The most prevalent topic is indoor smoke-free policies in public or private indoor spaces and/or workplaces. 4) There is a positive correlation between population size and percentage of articles favourable toward smoke-free policy.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
20	(Gao et al., 2012) China	Prevention of risk factor – tobacco control issues	To describe the changing pattern of newspaper coverage of tobacco control issues in China over a decade	Content analysis <i>n</i> = 1,149 Newspaper type = national, vs/regional 2000 - 2010	None	<ol style="list-style-type: none"> 1) The coverage of tobacco control in Chinese newspapers increased during the study period. 2) The variation of the coverage on tobacco is associated with the public-related event. 3) A significant difference between national and local newspapers on tobacco control topics where national newspapers have more coverage on anti-tobacco while local newspaper has a mix of pro-tobacco and pro-tobacco articles.
21	(Higashi et al., 2013) Japan	Cancer survival rate data	To evaluate the newspaper coverage of the key points of public reporting program for the cancer survival data	Content analysis <i>n</i> = 13 Newspaper type = national Not available	None	<ol style="list-style-type: none"> 1) 4.5 of the 10 key points of the report are at least superficially covered. 2) Four articles are rated as ‘potentially misleading’. 3) The number of points covered is highly correlated to the article space.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
22	(Al-Nammari et al., 2013) U.K.	Disease - Bone tumours	To examine the portrayal of bone tumours in newspapers	Content analysis <i>n</i> = 253 Newspaper type = National May 2009 – May 2010	None	<ol style="list-style-type: none"> 1) Only 7% of the articles were solely on the bone tumour. 2) 41% of the articles have bone tumour as the main theme. 3) More articles on personal case reports (70%) 4) Fewer articles were found to include detailed information of bone tumour. 5) Articles that quote health professional contain quality medical information.
23	(Azar et al., 2013) Australia	Risk factor of NCD – alcohol related issues	To examine the coverage of alcohol-related issues in newspapers	Content analysis <i>n</i> = 4,217 Newspaper type = Daily Metropolitan 2000 - 2011	None	<ol style="list-style-type: none"> 1) The frequency of articles on alcohol generally increased. 2) The themes shifted direction where restrictions theme increased substantially, and the promotion themes reduced over the years. 3) The slant of topic and opinion becomes more disapproving of alcohol over time. 4) Public figures advocating for alcohol control objectives appear more frequently than the alcohol industry spokespeople over the years.

Appendices

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
24	(Kamenova et al, 2014) Canada, U.K., and U.S.	Prevention of breast cancer and celebrity	To investigate the portrayal of Angelina Jolie's preventive bilateral mastectomy in the news media	Content analysis <i>n</i> = 103 Newspaper type = top elite newspaper 13/5/2013 – 12/6/2013	None	<ol style="list-style-type: none"> 1) There is a high coverage on Jolie's preventive bilateral mastectomy in each country. 2) The story is prominently featured in the news sections (38.8%) of elite newspapers. Most of the articles do not provide the related critical medical information.
25	(Scully et al., 2014) Australia	Prevention of skin cancer	To examine the coverage of sun protection issues over a 12-year period in the context of an evolving skin cancer prevention agenda.	Content analysis <i>n</i> = 522 Newspaper type = metropolitan daily newspaper January 2001 – December 2012	None	<ol style="list-style-type: none"> 1) Vitamin D and sunbed issues are the most prevalent themes for sun protection news coverage from 2001 to 2012. 2) The coverage of 'established' sun protection themes remained steady over time.

Appendices

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
26	(Caburnay et al., 2014) U.S.	Risk factor of NCD - genetics	To characterize media coverage of genetics-related information between Black weekly newspapers and the general audience newspapers	Content analysis <i>n</i> = 357 Newspaper type = Black weekly and general audience newspaper January 2004 – December 2007	None	<ol style="list-style-type: none"> 1) Only 2% out of 17,172 health stories address genetics as risk factors. 2) Genetic-related stories are more prevalent in Black newspapers than general audience newspapers (36 vs. 26%). 3) Genetic related stories in Black newspapers are more locally and racially relevant and more likely to contain prevention.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
27	(Hilton et al., 2014b) U.K.	Management of risk factor – alcohol	To examine the news media framing from key-claim makers in creating the ‘climate of opinion’ around MUP in the months leading up to the passing of the Scottish legislation.	Content analysis <i>n</i> = 262 Newspaper type = Serious, middle-market, tabloid 1/1/2011 – 31/5/2012	None	<ol style="list-style-type: none"> 1) Politicians are the most cited source of discussion on MUP. 2) Advocates depicted the cause of the alcohol problem is the low price of alcohol and irresponsible marketing while critics presented problem people (youth binge drinkers and dependent drinkers) and problem attitudes to alcohol. 3) Advocates justify support by citing the intervention's targeted design, but critics denounce the policy as illegal. 4) Critics’ arguments are consistent over time, and they often give multiple arguments in one statement.

Appendices

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
28	(McGee et al., 2014) NZ	Prevention and management of risk factor – tobacco control	To examine the portrayal of Smokefree 2025 tobacco control initiatives	Content analysis <i>n</i> = 537 Newspaper type = national and regional 1/1/2011 – 31/12/2012	None	<ol style="list-style-type: none"> 1) The coverage of tobacco varied over the study period and more likely influenced by the tobacco-related event. 2) The main tobacco themes are Smokefree 2025, smoke-free areas, pricing tobacco industry, plain packaging and cessation. 3) Most of the articles are positive towards tobacco control objectives. The event tone and opinion tone are mostly positive.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
29	(He et al., 2014) China	Risk factor of NCD– tobacco issues	To determine to what extent the media coverage of tobacco issues comprises message that motivates healthy behaviour	Content analysis <i>n</i> = 4,821 Newspaper type = local and party newspapers 1/1/2008 – 30/6/2011	None	<ol style="list-style-type: none"> 1) The number of tobacco articles increased over the study time frame 2) Education, prevention and cessation programs (35%) are the most common themes used. 3) The majority of the articles that reported on events are positive for tobacco control while articles on opinion are mostly neutral. 4) There are significant differences between party newspapers and local newspapers in term of prominence, articles type, slant and fear appeal.

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
30	(Hilton et al., 2014a) U.K.	Management and prevention of risk factor – smoking	To examine how the debate about protecting children from second-hand smoke in cars have been reported over the past ten years	Content and thematic analysis <i>n</i> = 116 Newspaper type = Serious, middle-market tabloid, tabloid 2004 -2013	None	<ol style="list-style-type: none"> 1) There is an approximate ten-fold of increase in news on the harm of second-hand smoke exposure to children in vehicles and recent policy 2) Legislative action to prohibit smoking in vehicles carrying children is mostly portrayed as important, enforceable and received support. 3) Most of the drivers were not aware of the danger of smoking around children in a vehicle.
31	(Thrasher et al., 2014) U.S.	Management of risk factor – smoking	To characterize coverage of tobacco initiatives in South Carolina	Content Analysis <i>n</i> = 346 Newspaper type = Primary 2006 - 2010	None	<ol style="list-style-type: none"> 1) Media coverage of legislative tobacco tax initiatives is mostly positive towards the tobacco tax. 2) More pro-tobacco tax articles which provide economic arguments are observed during the success year in comparison to unsuccessful years.

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	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
32	(Patterson et al., 2015) U.K.	Management and prevention of risk factor – smoking issues	To study how debate around proposed legislation to prohibit smoking in private vehicles carrying children were reported	Content analysis <i>n</i> = 422 Newspaper type = Serious, middle-market tabloid, tabloid 1/1/2004 – 16/2/2014	None	<ol style="list-style-type: none"> 1) Articles related to second-hand smoke (SHS) are frequently published in Scotland and serious genre newspapers. 2) Most of the coverage (<i>n</i> = 129) is on SHS in vehicles carrying children. 3) The coverage had an overall gentle increase over time. 4) Children are frequently framed as victims of SHS (66.4%).

	Study (Author, year, country of the newspapers studied)	Topic of NCD	Aim	Study description (Study design, sample, time frame and newspaper type)	Theory/ Conceptual Framework	Key Findings
33	(Thrasher et al., 2015) U.S.	Management and prevention of risk factor – smoke-free policy	To examine the coverage of smoke-free policies from 2006 - 2009	Content analysis <i>n</i> = 447 Newspaper type = 2006 to 2009	None	<ol style="list-style-type: none"> 1) The coverage of smoke-free news varied significantly during the study period. 2) Most of the studies have either positive (45%) of mixed/neutral (43%) position towards the smoke-free ordinances. 3) The most common argument is protecting non-smokers from any health effect caused by SHS (44%), and there is a very low counter argument (3%). 4) The Economic argument on how the smoke-free policy negatively affects the business (26%) is higher than its counter argument (17%). The most common actors cited in the articles are elected government officials (58%)

Appendix 3 – Interview Guide



**MEDICAL AND
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INTERVIEW QUESTIONS : **JOURNALIST AND EDITOR (PARTICIPANT)**
RESEARCH TITLE : **The Representation of Non-Communicable
Disease in Malaysian Newspapers: The Role of
Journalism**
Name of student researcher : **Nurulaini Abu Shamsi**
nabu919@aucklanduni.ac.nz

- A. General questions
1. Could please you introduce yourself?
 2. Please include details on how long have you been working as a journalist.
 3. Please tell me about your role and duties within the newspaper.
- B. The current practices of health news reporting in Malaysian newspapers
1. How do you select and identify health stories?
 2. What made a health story newsworthy?
- C. The journalists' perception of their role as health communicator
1. Who is your target audience?
 2. Does having a target audience affect the way you write your story? How?
 3. Do you perceive your role as health communicator? How and why?

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D. Factors that influences the construction of news related to NCD.

1. Do you have any opportunities or challenges in reporting the health news?
2. Please explain there is any.
3. Please explain on how the opportunities or challenges affecting your coverage, accuracy and quality of health reporting.

E. The use of evidence or sources in health journalism.

1. Who and what are the main sources of health story?
2. Do you have any opportunities or challenges in accessing the sources and evidence?

Appendix 4 - Participant Information Sheet (Manager)



**MEDICAL AND
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PARTICIPATION INFORMATION SHEET: **FOR HEAD EDITOR OF NEWSPAPER AGENCY (MANAGER)**

Project Title	:	The Representation of Non-Communicable Disease (NCD) in Malaysian Newspapers : The Role of Journalism
Name of Researcher	:	Nurulaini Abu Shamsi
Name of Supervisor	:	Dr. Judith McCool
Name of co-Supervisor		Dr. Rob McNeill

Researcher Introduction

My name is Nurulaini Abu Shamsi, a Ph.D. candidate at School of Population Health, Faculty of Medicine and Health Sciences in the University of Auckland, New Zealand. I am supervised by Dr. Judith McCool and Dr. Rob McNeill.

This Project

Rationale

NCD is defined as a non-transmissible disease between individuals. Based on World Health Organization (WHO) studies, NCD includes cardiovascular disease, diabetes mellitus, cancers and chronic respiratory diseases. These diseases share similar modifiable risk factors, underlying determinants and opportunities for intervention. NCD is associated with four key risk factors which are tobacco use, physical inactivity, unhealthy diet and alcohol abuse. Across the globe, NCD caused 36 million of the 57 million deaths annually. More than three-quarter of these deaths occurred in low-income and middle-income countries (LMIC). One of the main barriers to control NCD is a lack of understanding and awareness.

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Mass communication especially health news is pivotal in shaping the public's understanding of health issues and attitudes to health promotion, disease prevention, and medical treatment. Since media have the ability to select and construct the health news, it is important to understand the factors that influence the news construction. With the rising annual statistics of NCD in LMIC, it signifies the need to understand how media have been playing their role in providing health information (especially NCD) to the mass in LMIC. This interview will explore the current practices of health and NCD reporting amongst journalists in Malaysian newspapers and the factors that influence the construction of NCD and health news. In this study, the word journalist refers to both editors and reporters.

Aim

The main aim of this study is to explore how media play their role in disseminating information about health and NCD in Malaysian newspapers. To achieve the aim, the current health reporting practices in Malaysian newspapers is explored by the following objectives:

- 1) To investigate how the journalists, select, shape and present health news stories.
- 2) To understand the journalists' perception of their role as health communicator.
- 3) To examine factors influencing health reporting.
- 4) To investigate the use of evidence or sources in health journalism.

To achieve the objectives, I would like to conduct interviews with the journalists who have written or edited health.

Duration

This project will continue for 12 months.

Benefits

The participants in this study will gain insight of the current practice of the health reporting on NCD issues in Malaysian newspapers. The findings of the study may inform guideline on NCD reporting such as improving the frequency and quality reporting.

Funding

The funding of this research was obtained through The University of Auckland PReSS account research grant.

Risk

Given the interview revolves around the news practices in constructing health and NCD issues, no adverse consequences or physical or psychological risks may be experienced during the interview. Moreover, journalism is an objective profession by nature. However, for a very small number of participants, if any discomfort on psychological aspect occurs during the interview, your employees will be advised to seek help from the Counselling Psychology Unit Department of Department of Social Welfare Malaysia via their hotline, 03-26124000.

Invitation to Participate

Why and How

Your agency has been selected as a prospective organisation based on its role, expertise, and experience in the field. Therefore, I would like to request to interview journalists who have written articles on NCD-issues such as diabetes, smoking, cancer and cardiovascular diseases.

Voluntary Participation

The participation is completely voluntary, meaning your agency and the journalist does not have to take part in this study. If you choose to take part, but then change your mind, you and your journalists are free to leave this study at any time, without giving a reason. The journalists can also withdraw their participation as well as withdraw any data and information provided in the interview, up until one

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month from the date of the interview. Participation is voluntary, also, I seek assurance that participation or non-participation will not affect the participants' relationship or employment with the organisation.

Project Procedures

Selected employees will be invited to participate in this study, they will be asked to be interviewed via online video call (i.e., Skype). The interview will be on:

- The current practices of health news reporting
- The journalists' perception of their role as health communicator
- To examine factors influencing health reporting.
- The use of evidence or sources in health journalism.

A list of interview questions will be sent once you have agreed to participate in the research. The expected time commitment from them for this will be between 30 to 60 minutes. They will be provided the copy of the transcript and summary upon request. They will also have the opportunity to edit the transcripts up until two weeks after the interview conducted.

Data Storage, Retention, Destruction, and Future Use

I will collect the data by using video call recorder software and digital voice recorders. The data will be transcribed and analysed by using MAXQDA software. All electronic data will be stored on a password protected University of Auckland computer, backed up by a server. I will store all other research materials for six (6) years in a secured office filing cabinet within the university premises. Electronic files will be deleted, and all printed material will be destroyed after six years following the end of the project. The results of this study will be used for my Ph.D. thesis and may be published in academic journals or presented at conferences.

Confidentiality

The preservation of confidentiality is paramount. The information that the journalists share with me will remain confidential and will not be shared with any third parties.

I will like to stress that I will undertake precaution to ensure the agency's name and the journalists' identities are not revealed. However, there is a slight possibility that they might be identified by the type of information that they discuss and also due to the small pool of journalists that will be interviewed. I will minimise this risk by protecting their privacy and confidentiality as much as possible. Any information that they provide will be reported or published in a way that does not identify the informants. The interview transcript will remain confidential between only the journalists and I (the researcher).

If you have any other questions in regards to the research, I can be contacted at the address at the bottom of this page.

CONTACT DETAILS AND APPROVAL

Researcher contact details:

Nurulaini Abu Shamsi

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Supervisor contact details:

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Head of Department name and contact details:

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For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711.
Email: ro-ethics@auckland.ac.nz.

Approved by the University of Auckland Human Participants Ethics Committee on 21st September 2016 for three years. Reference Number 018049

Appendix 5 - Consent Form for Manager (Editor)



**MEDICAL AND
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PARTICIPATION INFORMATION SHEET: **FOR HEAD EDITOR OF NEWSPAPER AGENCY (MANAGER)**

Project Title	:	The Representation of Non-Communicable Disease (NCD) in Malaysian Newspapers : The Role of Journalism
Name of Researcher	:	Nurulaini Abu Shamsi
Name of Supervisor	:	Dr. Judith McCool
Name of co-Supervisor	:	Dr. Rob McNeill

Researcher Introduction

My name is Nurulaini Abu Shamsi, a Ph.D. candidate at School of Population Health, Faculty of Medicine and Health Sciences in the University of Auckland, New Zealand. I am supervised by Dr. Judith McCool and Dr. Rob McNeill.

This Project

Rationale

NCD is defined as a non-transmissible disease between individuals. Based on World Health Organization (WHO) studies, NCD includes cardiovascular disease, diabetes mellitus, cancers and chronic respiratory diseases. These diseases share similar modifiable risk factors, underlying determinants and opportunities for intervention. NCD is associated with four key risk factors which are tobacco use, physical inactivity, unhealthy diet and alcohol abuse. Across the globe, NCD caused 36 million of the 57 million deaths annually. More than three-quarter of these deaths occurred in low-income and middle-income countries (LMIC). One of the main barriers to control NCD is a lack of understanding and awareness.

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Mass communication especially health news is pivotal in shaping the public's understanding of health issues and attitudes to health promotion, disease prevention, and medical treatment. Since media have the ability to select and construct the health news, it is important to understand the factors that influence the news construction. With the rising annual statistics of NCD in LMIC, it signifies the need to understand how media have been playing their role in providing health information (especially NCD) to the mass in LMIC. This interview will explore the current practices of health and NCD reporting amongst journalists in Malaysian newspapers and the factors that influence the construction of NCD and health news. In this study, the word journalist refers to both editors and reporters.

Aim

The main aim of this study is to explore how media play their role in disseminating information about health and NCD in Malaysian newspapers. To achieve the aim, the current health reporting practices in Malaysian newspapers is explored by the following objectives:

- 5) To investigate how the journalists, select, shape and present health news stories.
- 6) To understand the journalists' perception of their role as health communicator.
- 7) To examine factors influencing health reporting.
- 8) To investigate the use of evidence or sources in health journalism.

To achieve the objectives, I would like to conduct interviews with the journalists who have written or edited health.

Duration

This project will continue for 12 months.

Benefits

The participants in this study will gain insight of the current practice of the health reporting on NCD issues in Malaysian newspapers. The findings of the study may inform guideline on NCD reporting such as improving the frequency and quality reporting.

Funding

The funding of this research was obtained through The University of Auckland PReSS account research grant.

Risk

Given the interview revolves around the news practices in constructing health and NCD issues, no adverse consequences or physical or psychological risks may be experienced during the interview. Moreover, journalism is an objective profession by nature. However, for a very small number of participants, if any discomfort on psychological aspect occurs during the interview, your employees will be advised to seek help from the Counselling Psychology Unit Department of Department of Social Welfare Malaysia via their hotline, 03-26124000.

Invitation to Participate

Why and How

Your agency has been selected as a prospective organisation based on its role, expertise, and experience in the field. Therefore, I would like to request to interview journalists who have written articles on NCD-issues such as diabetes, smoking, cancer and cardiovascular diseases.

Voluntary Participation

The participation is completely voluntary, meaning your agency and the journalist does not have to take part in this study. If you choose to take part, but then change your mind, you and your journalists are free to leave this study at any time, without giving a reason. The journalists can also withdraw their participation as well as withdraw any data and information provided in the interview, up until one

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month from the date of the interview. Participation is voluntary, also, I seek assurance that participation or non-participation will not affect the participants' relationship or employment with the organisation.

Project Procedures

Selected employees will be invited to participate in this study, they will be asked to be interviewed via online video call (i.e., Skype). The interview will be on:

- The current practices of health news reporting
- The journalists' perception of their role as health communicator
- To examine factors influencing health reporting.
- The use of evidence or sources in health journalism.

A list of interview questions will be sent once you have agreed to participate in the research. The expected time commitment from them for this will be between 30 to 60 minutes. They will be provided the copy of the transcript and summary upon request. They will also have the opportunity to edit the transcripts up until two weeks after the interview conducted.

Data Storage, Retention, Destruction, and Future Use

I will collect the data by using video call recorder software and digital voice recorders. The data will be transcribed and analysed by using MAXQDA software. All electronic data will be stored on a password protected University of Auckland computer, backed up by a server. I will store all other research materials for six (6) years in a secured office filing cabinet within the university premises. Electronic files will be deleted, and all printed material will be destroyed after six years following the end of the project. The results of this study will be used for my Ph.D. thesis and may be published in academic journals or presented at conferences.

Confidentiality

The preservation of confidentiality is paramount. The information that the journalists share with me will remain confidential and will not be shared with any third parties.

I will like to stress that I will undertake precaution to ensure the agency's name and the journalists' identities are not revealed. However, there is a slight possibility that they might be identified by the type of information that they discuss and also due to the small pool of journalists that will be interviewed. I will minimise this risk by protecting their privacy and confidentiality as much as possible. Any information that they provide will be reported or published in a way that does not identify the informants. The interview transcript will remain confidential between only the journalists and I (the researcher).

If you have any other questions in regards to the research, I can be contacted at the address at the bottom of this page.

CONTACT DETAILS AND APPROVAL

<p><u>Researcher contact details:</u> Nurulaini Abu Shamsi nabu919@aucklanduni.ac.nz</p>
<p><u>Supervisor contact details:</u> Dr. Judith McCool</p>

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Email: ro-ethics@auckland.ac.nz.

Approved by the University of Auckland Human Participants Ethics Committee on 21st September 2016 for three years. Reference Number 018049

Appendix 6 - Participant Information Sheet (Journalist)



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PARTICIPATION INFORMATION SHEET: **FOR JOURNALIST (PARTICIPANT)**

Project Title	:	The Representation of Non-Communicable Disease (NCD) in Malaysian Newspapers: The Role of Journalism
Name of Researcher	:	Nurulaini Abu Shamsi
Name of Supervisor	:	Dr. Judith McCool
Name of co-Supervisor		Dr. Rob McNeill

Researcher Introduction

My name is Nurulaini Abu Shamsi, a Ph.D. candidate at School of Population Health, Faculty of Medicine and Health Sciences in the University of Auckland, New Zealand. I am supervised by Dr. Judith McCool and Dr. Rob McNeill.

This Project

Rationale

NCD is defined as a non-transmissible disease between individuals. Based on World Health Organization (WHO) studies, NCD includes cardiovascular disease, diabetes mellitus, cancers and chronic respiratory diseases. These diseases share similar modifiable risk factors, underlying determinants and opportunities for intervention. NCD is associated with four key risk factors which are tobacco use, physical inactivity, unhealthy diet and alcohol abuse. Across the globe, NCD caused 36 million of the 57 million deaths annually. More than three-quarter of these deaths occurred in low-income and middle-income countries (LMIC). One of the main barriers to control NCD is a lack of understanding and awareness.

Mass communication especially health news is pivotal in shaping the public's understanding of health issues and attitudes to health promotion, disease prevention, and medical treatment. Since media have

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the ability to select and construct the health news, it is important to understand the factors that influence the news construction. With the rising annual statistics of NCD in LMIC, it signifies the need to understand how media have been playing their role in providing health information (especially NCD) to the mass in LMIC. This interview will explore the current practices of health and NCD reporting amongst journalists in Malaysian newspapers and the factors that influence the construction of NCD and health news. In this study, the word journalist refers to both editors and reporters.

Aim

The main aim of this study is to explore how media play their role in disseminating information about health and NCD in Malaysian newspapers. To achieve the aim, the current health reporting practices in Malaysian newspapers is explored by the following objectives:

- 9) To investigate how the journalists, select, shape and present health news stories.
- 10) To understand the journalists' perception of their role as health communicator.
- 11) To examine factors influencing health reporting.
- 12) To investigate the use of evidence or sources in health journalism.

To achieve the objectives, I would like to conduct interviews with the journalists who have written or edited health news.

Duration

This project will continue for 12 months.

Benefits

The participants in this study will gain insight of the current practice of the health reporting on NCD issues in Malaysian newspapers. The findings of the study may inform guideline on NCD reporting such as improving the frequency and quality reporting.

Funding

The funding of this research was obtained through The University of Auckland PReSS account research grant.

Risk

Given the interview revolves around the news practices in constructing health and NCD issues, no adverse consequences or physical or psychological risks may be experienced during the interview. Moreover, journalism is an objective profession by nature. However, there may be a very small chance that the participants may experience some psychological discomfort during the interview, if so, you are advised to seek help from the Counselling Psychology Unit Department of Department of Social Welfare Malaysia via their hotline, 03-26124000.

Invitation to Participate

Why and How

You are invited to participate in this research because you have written or edited articles on health and NCD-issues such as diabetes, smoking, cancer and cardiovascular diseases. To find potential participants, like you, I have either:

- 1) Identified the details for authors that have written any article that related to NCD in Malaysian newspapers
- 2) Approached your head editors and seek their assistance to nominate journalists who have written or edited on health and NCD news.

Voluntary Participation

Appendices

Your participation is completely voluntary, meaning you do not have to take part in this study. If you choose to take part, but then change your mind, you are free to leave this study at any time, without giving a reason. You can also withdraw your participation as well as withdraw any data and information provided in the interview, up until one month from the date of the interview. Your Manager has provided an assurance that your participation or non-participation in this research will not affect your relationship or employment with the organisation.

Project Procedures

If you choose to participate, you will be asked to be interviewed via online video call (i.e., Skype). The interview will be on:

- The current practices of health news reporting
- The journalists' perception of their role as a health communicator
- To examine factors influencing health reporting.
- The use of evidence or sources in health journalism.

A list of interview questions is attached. The expected time commitment from you for this will be between 30 to 60 minutes. You will be provided the copy of your transcript and summary upon request. You will also have the opportunity to edit the transcripts up until two weeks after the interview conducted.

Data Storage, Retention, Destruction, and Future Use

I will collect the data by using video call recorder software and digital voice recorders. The data will be transcribed and analysed by using MAXQDA software. All electronic data will be stored on a password protected University of Auckland computer, backed up by a server. I will store all other research materials for six (6) years in a secured office filing cabinet within the university premises. Electronic files will be deleted, and all printed material will be destroyed after six years following the end of the project. The results of this study will be used for my Ph.D. thesis and may be published in academic journals or presented at conferences.

Confidentiality

The preservation of confidentiality is paramount. The information you share with me will remain confidential and will not be shared with any third parties.

I will like to stress that I will undertake precaution to ensure your identity is not revealed. However, there is a slight possibility that you might be identified by the type of information that you discuss and also due to the small pool of journalists that will be interviewed. I will minimise this risk by protecting your privacy and confidentiality as much as possible. I will not reveal your identity and organisations' names. Any information that you will provide will be reported or published in a way that does not identify the informant. The interview transcript will remain confidential between only you (the participants) and me (the researcher).

If you have any other questions in regards to the research, I can be contacted at the address at the bottom of this page. Many thanks for your participation in this research.

CONTACT DETAILS AND APPROVAL

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For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711.
Email: ro-ethics@auckland.ac.nz.

Appendix 7 - Consent Form Participant (Journalist)



**MEDICAL AND
HEALTH SCIENCES**
SCHOOL OF POPULATION HEALTH

Epidemiology & Biostatistics
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INTERVIEW CONSENT FORM : **JOURNALIST (PARTICIPANT)**
RESEARCH TITLE : **The Representation of Non-Communicable Disease in Malaysian Newspapers: The Role of Journalism**
Name of student researcher : **Nurulaini Abu Shamsi**
nabu919@aucklanduni.ac.nz
Name of Supervisor : **Dr. Judith McCool**
j.mccool@auckland.ac.nz
Name of co-Supervisor : **Dr. Rob McNeill**
r.mcneill@auckland.ac.nz

I have read the Participant Information Sheet, and I have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I agree to take part in this research.
- I understand that taking part in this study is voluntary and that I may withdraw from the study at any time without needing to give a reason.
- I understand that my Manager has provided an assurance that my participation or non-participation in this research will not affect my relationship or employment with the organisation.
- I understand the interview session will last between 30 to 60 minutes.
- I understand that the interview will be done via online video call.

Appendices

- I understand the interview will occur at a mutually agreed upon time.
- I understand that the interview session is audio-recorded and visual-recorded and will be transcribed by the student researcher.
- I understand I can stop the recording at any time without needing to give a reason.
- I understand that I have one month after the interview to withdraw the information that I have provided.
- I understand that I will have the opportunity to review and edit the transcript up until two weeks after the interview.
- I know whom to contact if I feel unwell after the interview session.
- I understand that my participation in this study is confidential.
- I understand that no material which could identify me will be used in any reports on this study however because of the small community of journalists involved in the interviews, there is a possibility that I may be identified.
- I understand that the researcher will take every precaution to ensure my identity and the identity of the agency are not revealed.
- I understand that the data will be used in a Ph.D. thesis and other publications such as conference papers and academic journal articles.
- I understand that the electronic data for this study will be stored on a password protected University of Auckland computer, backed up by a server and deleted after six years. All other research materials will be stored for six years in a secured office filing cabinet within the university premises.
- I wish to receive the transcript of my interview.
- I wish to receive a summary of findings, which can be emailed to me at this email address:
_____.
- I have been given the researcher's information and contact details and I know who to contact if I have questions.

Name: _____

Signature: _____

Date: _____

Approved by the University of Auckland Human Participants Ethics Committee on 21st September 2016 for three years. Reference Number 018049

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