Health Communication Research Among the Chinese Hui Ethnic Minority Group in Shenyang City

Gezondheidscommunicatie Onderzoek Onder de Chinese Hui Minderheid in Shenyang City

中国沈阳回族人健康传播研究

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Thesis

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Lei Yang 杨蕾 ☺

9th August 2019 in Rotterdam

The author has something to say… ☺

作者有话说. . . ☺

Table of Contents

Chapter 1 General Introduction

China is a country with multiple ethnicities and a diversity of cultures (Gladney, 2004). In this dissertation, the focus is on the Chinese ethnic minority population, the Hui. The Hui are the third largest minority group in China, while the Han are the dominant majority (Gustafsson & Sai, 2014). The Hui's culture is unique because of their Muslim ancestry (Dillon, 2013). Although not all the Hui practice the Islamic faith, their culture is different from the Han's in many respects. Two factors stand out concerning health. First, the Hui have different eating habits to the Han, and these include a high intake of sugar and fatty food (Ye, Ma, & Ren, 2013), meaning that they are more likely to suffer cardiovascular diseases (CVDs) (Osman & Abumanga, 2019). Second, compared to the Han and most other minority groups, the Hui have a higher incidence of cardiovascular risk factors (CVRFs), including hypertension, diabetes, dyslipidemia, overweight/obesity and current smoking (J. Wu et al., 2016).

Health communication is prominent across China today, but little attention is paid to the specific needs of ethnic minority groups, for example with respect to health and lifestyle (J. Wu et al., 2016). The culture-centered approach (CCA) in research on health communication has shown that health needs in a multicultural society generally differ between minority groups (in this case, the Hui) and the dominant population (in this case, the Han) (Dutta, 2008; Dutta, Anaele, & Jones, 2013; Gao, Dutta, & Okoror, 2016). This dissertation therefore explores the health-related needs of the Hui and examines to what extent these are taken into account in mediated health communication. The research aims to promote potential applications of its findings, because knowledge of CVDs and CVRFs is crucial for preventing these conditions in the Hui minority group.

This chapter will first describe the Chinese Hui ethnic minority, before the key theoretical concepts of the research are described in the second and third parts of the dissertation. I will subsequently expand on the research aims and questions in the fourth part, while the fifth sets out the methods and scope, and the final part contains an overview of each chapter.

1.1 The Chinese Hui Ethnic Minority

China is a country with 56 ethnic groups, including the Han majority and 55 ethnic minorities (Gustafsson & Sai, 2009; Information Office of the State Council of the People's Republic of China, 2000). Ten of the 55 ethnic minority groups are categorized as Islamic. Of these, nine have their own language and occupy their own ancestral land (Lipman, 1997). In contrast, the tenth, namely the Hui, whose members comprise almost half of Chinese Muslims, are dispersed across the country, speak Mandarin and do not have their own language (Dillon, 2013; Lipman, 1997).

1.1.1 The History of the Chinese Hui Ethnic Minority

There is a saying in Chinese concerning the members of the Hui ethnic minority that if Islam was not introduced into China, they would not have come into existence. In a sense, the process of Islamization in China is the process of the formation of the Hui. The origins of this group can be traced back to the Muslims who lived in China during the Tang dynasty (618-907), whose Islamic tradition has lasted from then to the present day (Dillon, 2013). Undoubtedly, these Arab and Persian traders were the earliest Muslims in China, but their influence was local and limited (Dillon, 2013). The ancestry of most of the Hui can be found in the thousands of mainly Persian-speaking Central Asian Muslims recruited or conscripted by the Mongol armies during the Yuan dynasty (1271-1368) (Dillon, 2013). The Chinese term *Hui* became widespread across

the country in this period (Gladney, 1996). These Muslims gradually married local Chinese people, but continued to raise their children as Muslims (Gladney, 2003). During the Ming dynasty (1368-1644), the Muslim population became a permanently settled community (Dillon, 2001), and the Hui used the Chinese language for all practical and daily purposes (Dillon, 2013). Historical analysis has shown that, in the process of settling in China, the Hui were assimilated into Chinese society through intermarriage and living among the Han (Dillon, 2013).

1.1.2 The Hui: 'Big Distribution, Small Concentration'

Figure 1.1 Target area - Shenyang City, as depicted in the map of China

There are currently around 10 million Hui in China (Gustafsson & Sai, 2015), and this population is described as 'big distribution, small concentration' (in Chinese: 大杂居，小聚居) (Ai, Chen, & Li, 2015). There are two kinds of

areas where the Hui live: autonomous and non-autonomous, and these are also known as scattered and ethnically mixed. Compared to the Hui in typical autonomous areas in Northwest China, those in non-autonomous regions have received little attention from the media. My focus in this dissertation is therefore on this population.

The Hui minority is an urbanized group (Gustafsson & Sai, 2014), with those from the eastern regions of China more influenced by the dominant culture of the Han (Lv, 2013). As a consequence, I chose to conduct my two empirical studies among the Hui in Shenyang City (in Chinese: 沈阳市) in Northeast China, which is the largest city in this part of the country (see Figure 1.1) and has a district known as the 'Hui Hui Quarter' (in Chinese: 回回营) that is the largest inhabited Hui area there.

1.2 Culture and Health Communication

Cultural factors have been found to play an important role in health communication (Geist-Martin, Sharf, & Ray, 2003; Thomas, Fine, & Ibrahim, 2004), meaning that different groups' cultures should be taken into account in multicultural societies (Dutta, 2007a). In 2007, Dutta introduced two different, but related, approaches to examining a culture's role in a health context: the culture-centered approach (CCA) (Dutta-Bergman, 2004a, 2004c, 2005; Dutta, 2007a, 2018) and the cultural sensitivity approach (Brislin & Yoshida, 1994; Brislin, 2000; Bronner, 1994; Dutta, 2007a; Ulrey & Amason, 2001).

1.2.1 The Culture-Centered Approach

This dissertation embraces the central tenet of the CCA. This holds that voices from the dominant group in a multicultural society are generally heard in health communication, but often at the expense of those of non-dominant groups, suggesting that the health needs of the latter are not perceived (Dutta-Bergman,

2004c; Dutta, 2007a, 2018; Gao et al., 2016). The CCA emphasizes the need to change health's social structures by listening to different cultural members, which creates space for non-dominant groups to be heard (Dutta, 2007a, 2008, 2018). In this dissertation, the non-dominant group is the Hui. My aim is to examine: whether the voices of the Hui are heard; and if their health information needs concerning CVDs are satisfied by information they acquire from different interpersonal and mediated sources.

1.2.2 The Cultural Sensitivity Approach

Cultural sensitivity means being aware of the cultural habits, beliefs and values of one's own and other cultural groups (Bronner, 1994), and plays an important role in healthcare settings (Bronner, 1994; Ulrey & Amason, 2001). Integrating essential cultural factors into health promotion for specific groups may increase its efficacy (Kreuter & Haughton, 2006). The cultural sensitivity approach argues that effective health information requires the cultural factors of specific groups to be taken into account (Dutta, 2007a). At a practical level, this suggests that health promotors in a multicultural society should incorporate the voices of non-dominant groups in their communication (Dutta, 2008, 2018; Dutta et al., 2013; Yehya & Dutta, 2010).

1.3 Health Information from Different Sources

According to social cognitive theory (SCT), health content in the media is essential, because research has shown that it has an impact on audiences (Bandura, 2012; Valkenburg & Peter, 2013; Valkenburg, Peter, & Walther, 2016). In 2016, Valkenburg, Peter and Walther included an analysis of the effects of mediated health campaigns in their overview of media effects research (Valkenburg et al., 2016). This confirmed the media's influence on people's health behaviors (Snyder et al., 2004; Valkenburg et al., 2016). Given these

findings, it can safely be assumed that relevant media content on CVDs will affect health beliefs and behaviors. In what follows, I will explain two types of information sources that are covered in this dissertation in detail.

1.3.1 Interpersonal Sources

Interpersonal communication has been found to provide information about health issues and is an effective means to influence people's health behaviors (Duggan & Street, 2015; Freimuth & Quinn, 2004; Van den Putte, Yzer, Southwell, De Bruijn, & Willemsen, 2011). Previous research in different countries has shown that doctors are the most trusted of all possible information sources with respect to health issues (Hesse et al., 2005; Marrie, Salter, Tyry, Fox, & Cutter, 2013). Family and friends serve as resources to identify symptoms and provide opportunities to discuss treatments and lifestyle changes (Dutta-Bergman, 2004b), while health-related and religious organizations are also used as sources of such information (Marrie et al., 2013).

1.3.2 Mediated Sources

Mediated sources, including newspapers, magazines, books, radio, television and the internet (including social media), convey health information (Dutta-Bergman, 2004b; Marrie et al., 2013). People may select a particular source based on their own preferences and needs; for instance, they can watch a health-related show on television or listen to health-related programs on the radio. Television is an important source of information in China, and dedicated health programs have played an key role in health communication in past decades (Y. Wu, 2010). The ubiquity of the internet in many countries has led to a rapid increase in the number of people accessing online sources (including social media) to acquire health information (De Choudhury, Morris, & White, 2014; Song et al., 2016; X. Zhang, Wen, Liang, & Lei, 2017). Indeed, WeChat is now

a common way for people in China to obtain information about their health (X. Zhang et al., 2017).

1.4 Research Aims and Questions

This dissertation aims to fill a lacuna in the research about health communication among Chinese ethnic minority groups, in particular the Hui. The research is largely exploratory with the intent to find general behavioral patterns, because there have been very few studies focusing on the Hui's health communication issues. It is guided by four research questions:

1. *How do the Hui ethnic minority people access and evaluate health information from different sources, in particular with respect to CVDs?*
2. *What needs do the Hui have concerning CVD-related health information from different sources?*
3. *What kinds of CVD-related health content do television and the internet convey in China?*
4. *How does the CVD-related health content on television health programs and WeChat official accounts target the Hui minority group?*

All the research questions are concerned with health communication in a changing media landscape. The process of communication can be analyzed from four different perspectives: production, content, distribution and reception (Fuchs, 2010; Napoli, 2010; Turow, 1992). In terms of content, the empirical research in this dissertation focuses on CVD-related health content distributed through two specific channels: Chinese television health programs and WeChat articles. For reception, the target group is the Chinese Hui ethnic minority. My aim is to investigate how the Hui access and evaluate CVD-related health information from different sources and what their health information needs are. The production and distribution of CVD-related content are not studied

empirically, but are sometimes referred to as a relevant context for content and reception issues.

1.5 Methods and Scope

1.5.1 Online Survey

An online survey was conducted in Shenyang City from December 2016 to February 2017 in order to answer my research questions about the Hui's access to and evaluation of CVD-related health information acquired from different sources. The major advantage of a survey administered through Qualtrics on mobile phones is that it can reach potential participants (in this case, the Hui minority group) who are difficult to access by other means (Wright, 2005). The survey asked both the Hui and the Han for their personal details (e.g., age, gender, education level), as well as for information about: their use of different sources to obtain CVD-related health content; and their preferred sources and views on their credibility. The participants were asked to give their informed consent before they started to answer the questionnaire.

1.5.2 Focus Groups

Six focus groups were held with the Hui participants in Shenyang City during December 2016 and February 2017 to answer my research question about their needs concerning CVD-related health information. The focus group was the most suitable method, because participants are able to interact and respond to each other, which can inspire them to reveal thoughts and ideas they would not have raised if they had just completed a questionnaire (Lune & Berg, 2017). The focus groups in Shenyang City mainly discussed the kinds of CVD-related health information they looked for from different sources and their needs with respect to this content. The Hui participants provided written informed consent before the focus groups started. The results acquired from the focus groups

supplemented the information obtained by the online survey concerning the Hui and Han's use and evaluation of CVD-related health information.

1.5.3 Qualitative Content Analysis

In addition to the issue of the reception of health information, relevant media content was examined in detail by exploring the kinds of CVD-related health information communicated on Chinese television health programs and in WeChat articles posted on WeChat official accounts. The chosen method for this was a qualitative content analysis, as this has been proved to be an effective way to analyze health-related content available in different forms of media (Glenn, Champion, & Spence, 2012; Lee, DeCamp, Dredze, Chisolm, & Berger, 2014).

1.6 Chapter Overview

Chapters 2 to 6 aim to answer the research questions set out above, with the goal being to make recommendations for health promoters in China. Each chapter's intent is discussed in brief here.

Chapter 2 aims to identify the Hui's access to and evaluation of CVD-related health information from different sources, and whether there are differences between them and the Han respondents. McGuire's communication-persuasion model (McGuire, 1981) is introduced as a theoretical framework. Using the results of an online survey (N = 738), this chapter highlights the main resources accessed by the Hui for CVD-related health information, their preferred sources, and how they assess their credibility. The findings are relevant for health advice promoters in China when it comes to communicating such information to the Hui more effectively.

Chapter 3 concerns the focus group study conducted in Shenyang City in Northeast China. The purpose of the chapter is to assess how the Hui obtain

CVD-related health information in the country's multicultural circumstances and what their needs are in this respect. The results provide a preliminary understanding of the kinds of information the Hui have successfully obtained from different sources. They also provide insights into the different CVD-related health information needs the Hui have. The important role of culture is also presented based on these findings, and recommendations are made to Chinese health information promoters about how to present advice on CVDs more effectively to the Hui minority.

Chapters 2 and 3 reveal that television and the internet are the sources the Hui use the most to access CVD-related health information, and so chapters 4 and 5 are concerned with the health content on television programs and online.

Television health programs are an important platform for promoting health in China (Y. Wu, 2010), but there has been limited research examining the CVD-related health content presented. The study in Chapter 4 is one of the first qualitative content analysis about such content on Chinese television health programs. In particular, I investigated the types of health information on CVDs communicated in two popular television programs: *The Doctor Is In* (in Chinese: 健康之路) and *Health Body Light* (in Chinese: 健康一身轻). I also examined whether any of this information is targeted at the Hui ethnic minority group. The findings of this study have implications for future health communication in China.

Chapter 5 presents the results of a qualitative content analysis of 108 popular WeChat articles. In particular, the kinds of CVD-related health content they convey are examined, as are whether they target the Hui. The results present five themes concerning CVD-related health content that arise from the articles, and Chinese health promotors can use these to disseminate information targeted at the Hui by way of WeChat official accounts.

Chapter 6 concludes the dissertation with a discussion of the most important findings and what they mean for future research about health communication among minority groups. It also makes recommendations to Chinese health promotors about taking the Hui's culture into consideration and using WeChat official accounts focused on health communication.

Chapters 2, 3, 4 and 5 have been written as articles, and all of them have been submitted to academic journals. Two of the four have been published and the remaining two are under review. Different elements of the research reported here have also been presented at international academic conferences. I have conducted all of the empirical research and am the main author of each article. My two supervisors provided detailed feedback on subsequent drafts of the articles and chapters. The status details of the chapters are explained in a footnote at the start of each of them.

Chapter 2 The Chinese Hui Ethnic Minority People's Access to and Evaluation of Cardiovascular Diseases-Related Health Information from Different Sources*

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* In the published version, the label "Chinese (urban) Hui Muslims" was used to describe the Chinese Hui ethnic minority people in Shenyang City. To make the labeling consistent across chapters in this thesis, the label "the (Chinese) Hui (ethnic minority) people" is used instead of (Chinese urban) Hui Muslims.

2.1 Abstract

This chapter aims to identify the sources that the Chinese Hui ethnic minority people access to get health information related to cardiovascular diseases (CVDs) and how they evaluate the information from different sources. This chapter focuses on health information related to cardiovascular diseases among the Hui people. The data was gathered by means of an online survey administered on mobile devices. To put the answers given by the Hui people into perspective and make a comparison between the Hui and the Han, we also gathered information from the Han - the dominant group in China. The results showed that the Hui people mostly used mediated sources, while the Han people mainly used interpersonal sources. Both the Hui and Han trusted and preferred health information about cardiovascular diseases provided by health organizations, doctors or healthcare providers. The information given by religious leaders was trusted the least, although the Hui people were significantly more positive about religious authority than the Han people. The current results are relevant for Chinese health information promoters and can help them diffuse CVD health information more effectively to the Chinese Hui people.

Keywords: the Chinese Hui ethnic minority people; health information; cardiovascular diseases; access; credibility; preference; minority's health; culture; health communication

2.2 Introduction

This study is aimed at contributing to the development of health communication in mainland China and enhancing knowledge about health communication targeted at Chinese minorities. Although knowledge on health communication among Chinese citizens is increasing, there is limited existing literature on health communication relating to Chinese minorities. This empirical research is concerned with the minority Hui population in China for three main reasons. Firstly, the Chinese Hui people are the third biggest group among minorities in China (Gustafsson & Sai, 2015). The 10 million Chinese Hui people are widely distributed in the country (Gustafsson & Sai, 2015). Secondly, the Hui minority group is an Islamic group, so they have a different eating habit compared to the Han, the population group that forms the majority of the Chinese population. Thirdly, the Chinese Hui people are facing a unique health threat by having the highest prevalence of hypertension in China (J. Wu et al., 2016).

With rapid changes in industrialization, urbanization, and lifestyle in China, morbidities related to being overweight, obese, hypertension, dyslipidemia, or diabetes present an accelerated trend among the Chinese population (Z. J. Yang et al., 2012). Cardiovascular diseases (CVDs) are now one of the most important diseases influencing the health of Chinese people (J. Wu et al., 2016; Z. J. Yang et al., 2012). Existing empirical research shows that the Chinese Hui people are more affected by cardiovascular risk factors (CVRFs) compared to other ethnic groups in China (J. Wu et al., 2016), which means that there are health disparities between the Chinese Hui people and people from other ethnic groups. Thus, corresponding health communication is required among the Hui minority group.

Previous research has shown that in multicultural societies, disadvantaged groups are more likely to use specific media (e.g., the internet) to access health information in order to overcome existing social inequalities

that limit their access to the information (Mesch, Mano, & Tsamir, 2012). The Chinese Hui people face obstacles to receive effective health information as a result of their different customs and living habits (L. Yang, Mao, & Jansz, 2018a). These obstacles could possibly be addressed by improving health communication. This chapter aims to better understand health communication of the Chinese Hui people by conducting an explorative study on how the Chinese Hui people access and evaluate CVD-related health information from different sources. McGuire's communication-persuasion model is applied to understand the online survey data collected from the Chinese Hui people.

McGuire's communication-persuasion model (McGuire, 1981) is a widely applied theory that presents five key factors that influence communication effectiveness (Kreuter & McClure, 2004): source, message, channel, receiver, and destination. Among the five fundamental factors of communication development (Kreuter & McClure, 2004), this study mainly focuses on the receiver (the Chinese Hui ethnic minority people), the message (health information with respect to cardiovascular diseases), and the source (the access to and evaluation of different sources) to investigate health communication issues among the Chinese Hui people.

2.2.1 Receiver: The Chinese Hui Ethnic Minority People in China

In China, 56 ethnic groups have been identified by the central government, and these comprise 55 ethnic minority groups and the Han majority (Gustafsson & Sai, 2009). There are 10 Muslim minority groups among these 55, with the Hui being one of them (Gustafsson & Sai, 2015). The Hui Muslim group is commonly characterized in China as 'big distribution, small concentration' (in Chinese: 大杂居，小聚居) (Ai et al., 2015) as they are dispersed across the so-called Hui autonomous and Hui non-autonomous areas. The latter are also described as scattered and mixed. In the scattered and ethnically mixed areas

(e.g., Shenyang City), where the Hui people live next to the majority of the population, the Hui people are considered almost the same as the majority. While some Hui people have continued to maintain their culture, religious beliefs, and living habits, others have already started to ignore their ethnic traditional culture and do not feel disappointed about the loss of their culture (Y. Lin, Jin, & Chen, 1997). Compared to the typical Hui minority autonomous area in Northwest China, the Hui area in the eastern part of China has received limited attention from the media. Therefore, this study concentrates on the Hui people living in the eastern part of China, more specifically, in the city of Shenyang. This study will include not only the Hui patients suffering from CVDs and CVRFs but also the healthy Hui people.

The Hui people are similar to the majority of the Chinese population in many respects, including customs, language, and culture (Chuah, 2004; Gustafsson & Sai, 2015). However, many Hui people follow Islamic dietary laws and take part in religious activities (Gustafsson & Sai, 2015). Even though the Hui culture contains elements from the dominant Han culture, the former is heavily embedded in the Islamic culture (Dillon, 2013). In addition, the social position of the Hui people is often vulnerable, for example, their education level is lower than that of the majority of the population (Gustafsson & Sai, 2015) and, their income growth is slower than that of the majority group (Y. Li, Aranda, & Chi, 2007). Previous research has shown that the Hui people have a higher prevalence of CVRFs compared to the Han majority group (J. Wu et al., 2016). This research aims to explore health communication differences between the Hui minority and the Han majority regarding CVD-related information.

2.2.2 Message: Health Information with Respect to Cardiovascular Diseases

CVDs have been regarded as the leading cause of death worldwide (Colom et al., 2018) and result in a huge economic burden to individuals and their families (Gu et al., 2005; J. He et al., 2005; J. Wu et al., 2016). CVDs are also the leading cause of death in the Chinese population (Gu et al., 2005; J. He et al., 2005; J. Wu et al., 2016; Z. J. Yang et al., 2012). Based on the Report on Cardiovascular Diseases in China (2014), 290 million Chinese people suffer from CVDs (National Center for Cardiovascular Diseases, China, 2015; Weiwei et al., 2016), and the prevalence of CVRFs is leading to a further increase in the incidence of CVDs (Weiwei et al., 2016). Hypertension, diabetes, dyslipidemia, overweight/obesity, smoking, and physical inactivity are considered to be the major risk factors for developing CVDs (Cheng et al., 2014; J. Wu et al., 2016; Yusuf, Reddy, Ôunpuu, & Anand, 2001). Among different ethnic groups, there are distinctions in CVRFs, with a higher incidence among the Hui people compared to other ethnic groups in China (J. Wu et al., 2016). Several nationally representative population studies have reported that the prevalence and clustering of major CVRFs have increased in China in the past decades (Gu et al., 2005; Weiwei et al., 2016; J. Wu et al., 2016; Z. J. Yang et al., 2012). However, Chinese people do not have enough awareness of how to treat and control CVRFs. For instance, the results of a survey study showed that Chinese people did not have enough awareness of how to control and treat hypertension (Lu et al., 2017). Thus, it is imperative for health promoters to convey health information related to CVDs and CVRFs to the Chinese public.

2.2.3 Source: Mediated Sources and Interpersonal Sources

Health communication happens everywhere, not just in medical institutions but also at home and in nonprofit organizations (Geist-Martin et al., 2003). Chinese

people can get health information from professionals (Wright, Sparks, & O'Hair, 2008), hospitals (Wright et al., 2008), interpersonal networks (Freimuth & Quinn, 2004; Leventhal, 1973), and traditional and new media (Dutta-Bergman, 2004b; Eng et al., 1998; Escoffery et al., 2005; Wright et al., 2008).

Chinese people can also access health information from mass media. Mass media channels are all those means of transferring messages that involve a mass medium, such as radio, television, newspapers, and a few individuals can reach a large audience through one of those mass media channels (Rogers, 1995). Mass media channels are often the most rapid and efficient way to inform audiences about the existence of an innovation (Rogers, 1995; Valkenburg & Peter, 2013) and have been used as important tools to raise public awareness of health issues (Gholami, Pakdaman, Montazeri, Jafari, & Virtanen, 2014).

For many people, the internet has become an important source for health information and advice (Escoffery et al., 2005; Tustin, 2010). A number of people will search health information online before turning to their physicians (Hesse et al., 2005; Tustin, 2010). Social media have improved the connectivity between different individuals and enable them to have direct online participation. This has direct implications for health communication programs and can also help identify new opportunities whereby social media can be used to influence health of individuals (Chou, Hunt, Beckjord, Moser, & Hesse, 2009; Thackeray, Neiger, Hanson, & Mckenzie, 2008; Vance, Howe, & Dellavalle, 2009). In China, many people can access health information from WeChat (X. Zhang et al., 2017). Increased access to the internet, combined with strategic uses of social media, can bring public health information to many more people, more quickly and directly than ever before (McNab, 2009). This is a very relevant development for the Hui people in China because they are known to face obstacles in acquiring health information (L. Yang et al., 2018a).

Individuals often gain health information from their interpersonal networks (Dutta-Bergman, 2004b). Social networks influence many of the lifestyle choices people make in their lives and can also be an essential way of providing support to people (Wright et al., 2008). The most important of these relationships are the connection or interaction between an individual and their healthcare providers and social support networks, such as family members and friends (Freimuth & Quinn, 2004). The Hui people have specific interpersonal networks that include family members, friends, and imams in mosques. Many Hui people gather at mosques every Friday to do prayers, so this provides a good opportunity for them to communicate with each other about health information.

A previous research (Marrie et al., 2013) has found that individuals with younger age, less disability, and higher annual income tend to use mass media rather than interpersonal sources for information. Different sources have different features, so the access frequency can also vary depending on different factors (e.g., gender, age, income, etc.) among different individuals. The following questions are generated to identify the key issues relating to the Hui people's access to different sources:

Research Question 1:

a. What sources do the Hui people access in Shenyang City to get health information related to CVDs?
b. What are the similarities and differences between the Hui and the Han, and between the Hui patients and non-patients in obtaining CVD health information from different sources?
c. What factors affect the Hui people's access to these sources (e.g., gender, age, income, etc.)? What are the relationships between these factors and the access?

Individuals have different preferences for information from different sources. Previous research has shown that healthcare providers and the internet are the two sources individuals prefer to obtain health information about a specific disease (Hesse et al., 2005). A trustworthy source can positively influence an individual's decision to make healthy choices and may even change their unhealthy behaviors (Freimuth & Quinn, 2004). Previous studies (Hesse et al., 2005; Viswanath & Ackerson, 2011) have shown that people expressed a higher level of trust for information from their physicians compared to other sources. Thus, in this study, we want to know how the Hui people evaluate the preference and credibility of CVD health information from different sources. The following questions have been formulated to address this query:

Research Question 2:

a. Which sources do the Hui people prefer to go to for CVD-related information?
b. How do the Hui people evaluate the credibility of CVD-related information from different sources?
c. What are the similarities and differences between the Hui and the Han in the preference and credibility of CVD-related information from these sources?

2.3 Materials and Methods

2.3.1 Pretest and Prestudy

The authors designed the questionnaire in English and then translated it into Chinese. The questionnaire was pretested by administering it to 10 Chinese bachelor's and master's students at a Dutch university. Comments were invited about the clarity of the questions and the ordering. The participants' feedback resulted in minor changes in the wording and layout of the questionnaire.

Subsequently, a larger prestudy was conducted in the city of Urumqi, China with the aim of ascertaining once more whether the questionnaire was clear and whether it was accessible on mobile devices in China. This field test was necessary because mobile devices are the most common way to access the internet in China. The prestudy questionnaire was administered online using Qualtrics. It resulted in 105 completed questionnaires. The answers were analyzed statistically, and the comments were used to improve the instrument's reliability and validity. The results of the prestudy showed that only minor changes were required.

2.3.2 Sample and Procedures

This study employed a cross-sectional online survey that was administered through Qualtrics and was open from 19th December 2016 to 9th February 2017. It took respondents approximately 15 min to complete the whole questionnaire. The questionnaire was in Chinese and optimized for mobile devices as that is the most common way to access the internet in China. Snowball sampling was used to find respondents for this study. The first strategy unfolded online by posting an invitation to participate with a link to the survey in popular Chinese social media channels, such as WeChat - an app that is similar to WhatsApp but includes some Facebook functions as well. This strategy amounted to handing out a paper invitation with a link to the survey among visitors to mosques and parents in a Hui primary school. In addition, the authors used the Chinese QQ groups, which are like WeChat but less popular in China nowadays. A total of 738 respondents participated in the survey, and the responses from all of them were included. Incomplete questionnaires were checked. It was established that respondents who did not complete all questions did not differ systematically from the ones that completed all questions; as a result, all responses were kept.

2.3.3 Measurement

Access frequency. Respondents were asked to report their frequency of access to eight different sources to get CVD-related health information: (1) the internet; (2) television; (3) radio; (4) newspapers or magazines; (5) books, brochures, pamphlets, etc.; (6) family, friends/co-worker (excluding those who work in health-related departments as they belong to source 7); (7) health organizations, doctors or healthcare providers; and (8) religious organizations and leaders. Respondents were asked to rate the frequency of access on a 5-point Likert scale ranging from *Never* to *Always*.

Evaluation criteria. Preference of CVD health information from different sources was measured by one single item on a 4-point scale (1 = *Not at all*; 2 = *A little*; 3 = *Some*; 4 = *A lot*). Trust in health information sources was assessed using a single question - "In general, how much would you trust information related to CVDs and CVRFs from each of the following sources?" - with the eight sources mentioned above included. Respondents were asked to rate their level of trust for each source on a 4-point Likert scale ranging from as *not at all, a little, some, a lot*. A similar single item on trust of health information from different sources was used successfully in the HINTS study, which was conducted in 2014 in the USA (National Institutes of Health, 2014; see also Hesse et al., 2005).

Demographic and other background variables. The demographic variables included gender, age, ethnic groups, education level, income ranges, insurance status, a geographical variable, and an Islamic eating habit. Apart from demographic variables, there were items about health beliefs and behaviors of respondents - frequency of eating beef, mutton, or inners per week; times of moderate exercise weekly; and frequency of smoking.

2.4 Results

The dataset was analyzed using statistics as offered in the program SPSS 23 (SPSS Inc., Chicago, IL, USA). The research questions in this chapter implied that we focused on both the Hui and Han respondents, which enabled us to make comparisons between them.

2.4.1 Descriptive Statistics

The first analysis aimed to show the demographic information and health beliefs and behaviors of survey respondents (see Table 2.1). Of the Hui individuals that participated in the survey, 82 (42.9%) were male and 109 (57.1%) were female. The mean age was 40.7 years (Standard Deviation [SD] = 14.0). Of the Hui respondents, 35.6% had a high school or lower education level and 41.6% Hui respondents had income of 2001-4000 RMB each month. A large proportion - 88.9% - of Hui respondents had health insurance. Some 39.7% Hui respondents considered themselves as following Islamic eating habit to some extent, i.e., they preferred Halal food and sometimes drank alcohol.

Table 2.1 Descriptive Statistics for Demographic Information and Health Beliefs and Behaviours

Variables	All N (%)	Hui N (%)	Han N (%)
Ethnic group	458 (100%)	191 (41.7)	241 (52.6)
Mean age, mean (SD)	37.0 (12.8)	40.7 (14.0)	35.0 (11.2)
Gender			
Male	154 (33.7)	82 (42.9)	68 (28.2)
Female	303 (66.3)	109 (57.1)	173 (71.8)
Education			
High school or lower	115 (25.2)	68 (35.6)	41 (17.0)
College degree	103 (22.5)	54 (28.3)	47 (19.5)
Bachelor's degree	162 (35.4)	58 (30.4)	91 (37.8)
Master's degree	64 (14.0)	11 (5.8)	51 (21.2)
PhD degree and above	13 (2.8)	0 (0)	11 (4.6)
Income Ranges			
0-2000 RMB	117 (25.8)	60 (31.6)	49 (20.6)
2001-4000 RMB	175 (38.5)	79 (41.6)	86 (36.1)
4001-6000 RMB	84 (18.5)	26 (13.7)	53 (22.3)
6001-8000 RMB	32 (7.0)	11 (5.8)	21 (8.8)
8001-10,000 RMB	18 (4.0)	4 (2.1)	12 (5.0)
10,001 RMB and above	28 (6.2)	10 (5.3)	17 (7.1)
Health Insurance			
Yes	410 (89.7)	169 (88.9)	221 (91.7)
No	47 (10.3)	21 (11.1)	20 (8.3)
Islamic Eating Habit			
Not at all (eat pork)		35 (18.5)	
A little (no pork, but alcohol accepted)		28 (14.8)	
Some (prefer Halal food, drink alcohol sometimes)		75 (39.7)	
A lot (only Halal food, no alcohol)		51 (27.0)	
Frequency of Eating Beef, Mutton or Inners per week			
Less than twice	238 (52.2)	51 (26.8)	166 (69.7)
2-4 times	116 (25.4)	55 (28.9)	56 (23.5)
5-7 times	63 (13.8)	49 (25.8)	12 (5.0)
More than 7 times	39 (8.6)	35 (18.4)	4 (1.7)
Time Spent on Moderate Exercise			
0-5 hours	305 (66.4)	114 (59.7)	170 (70.5)
6-10 hours	106 (23.1)	52 (27.2)	52 (21.6)
11-15 hours	27 (5.9)	16 (8.4)	10 (4.1)
More than 15 hours	21 (4.6)	9 (4.7)	9 (3.7)
Smoking Frequency			
Every day	67 (14.6)	40 (21.1)	26 (10.8)
Some days	29 (6.3)	14 (7.4)	14 (5.8)
Not at all	362 (79.0)	136 (71.6)	201 (83.4)

Note. 1. Sample size varied slightly for each variable because of missing data; 2. Some respondents belonged to other ethnic groups, so the total column does not correspond to the sum of the Han and Hui respondents.

In terms of the health beliefs and behaviors of respondents, results of *t*-tests showed that the Hui respondents (Mean [M] = 2.36) ate more beef, mutton, or inners per week than the Han respondents (M = 1.39), t (300.7) = −11.0, $p <$ 0.01. The Han respondents (M = 2.73) smoked more than the Hui respondents (M = 2.51), t (352.0) = 3.0, $p < 0.01$. The Hui (M = 1.58) spent more time on physical activity or exercise than the Han (M = 1.41), t (383.5) = −2.2, $p < 0.05$.

2.4.2 Access

The second analysis concerned the access and was aimed at finding out the access frequency of different sources of CVD-related health information and making comparisons between the Hui and Han respondents, and the Hui patients and non-patients. In addition, we wanted to check the factors that affected the access of the Hui respondents to these sources.

Table 2.2 shows the sources the Hui and the Han respondents accessed to gather CVD health information. The analysis showed the similarities in the sources that the Hui and the Han accessed. Television was important in both groups - the Hui respondents (M = 2.85, SD = 1.09) did access television more often than the Han (M = 2.57, SD = 1.01), t (411) = −2.71, $p < 0.01$ but the pattern was very similar. The Hui participants tended to get CVD health information from television the most (M = 2.85, SD = 1.09), while the Han participants tended to get CVD health information from family, friends/co-workers the most (M = 2.64, SD = 1.02). This means the Hui participants accessed mediated sources the most, while the Han participants accessed interpersonal sources the most. The least used source for both the Hui and Han was religious organizations and leaders. Given the embedding of the Islamic faith, it came as no surprise that the Hui (M = 1.68, SD = 0.94) scored significantly higher than the Han (M = 1.39, SD = 0.73), t (312.5) = −3.37, $p <$ 0.001 in this measure.

Table 2.2 Descriptive Analysis Using t-test for Frequency of Access to Cardiovascular Disease (CVD) Health Information from Different Sources

Variables	Hui		Han		*t*-Value
	M	**SD**	**M**	**SD**	
The internet	2.80	1.04	2.63	1.13	NS
Television	2.85	1.09	2.57	1.01	−2.71 **
Radio	2.41	1.18	2.19	1.04	−2.02 *
Newspapers or magazines	2.45	1.02	2.33	1.07	NS
Books, brochures, pamphlets, etc.	2.47	0.95	2.37	0.99	NS
Family, friends/co-worker	2.83	1.06	2.64	1.02	NS
Health organizations, doctors or healthcare providers	2.47	1.05	2.43	1.05	NS
Religious organizations and leaders	1.68	0.94	1.39	0.73	−3.37 ***

Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; M = Mean; SD = Standard Deviation; NS stands for Not Statistically Significant. All variables range from 1 (*Never*) to 5 (*Always*).

The Hui respondents (M = 1.39, SD = 0.49) looked for CVD health information less than the Han respondents (M = 1.50, SD = 0.50), t (408.5) = 2.33, $p < 0.05$. Among all the respondents, there were 82 CVD/CVRFs patients (34%) among the Han respondents, and there were 83 CVD/CVRFs patients (43.5%) among the Hui respondents. Therefore, the Hui respondents had a higher percentage of CVD/CVRFs patients than the Han respondents, which corresponds with previous research findings (J. Wu et al., 2016). Of the Hui respondents, 137 (72.1%) had family members who had CVDs/CVRFs. The Hui CVD/CVRFs patients tended to access the internet, health organizations and religious organizations more often than the Hui non-patients (see Table 2.3).

Table 2.3 Descriptive Analysis Using t-test for Frequency of Access to CVD Health Information from Different Sources

Variables	Hui Patients		Hui Non-Patients		*t*-Value
	M	SD	M	SD	
The internet	3.01	1.01	2.65	1.04	2.31 *
Television	2.90	1.11	2.81	1.08	NS
Radio	2.54	1.14	2.33	1.19	NS
Newspapers or magazines	2.59	1.03	2.35	1.00	NS
Books, brochures, pamphlets, etc.	2.57	0.96	2.40	0.95	NS
Family, friends/co-worker	2.89	0.99	2.78	1.11	NS
Health organizations, doctors or healthcare providers	2.74	1.11	2.29	0.97	2.87 **
Religious organizations and leaders	1.88	1.10	1.54	0.79	2.19 *

Note. * $p < 0.05$; ** $p < 0.01$; M = Mean; SD = Standard Deviation; NS stands for Not Statistically Significant.

A factor analysis assessing the frequency of access to CVD health information from the eight sources using a varimax rotation demonstrated a one-factor model with 50.19% of variance explained. Responses on the eight items were found to be highly consistent, as demonstrated by Cronbach's alpha of = 0.86.

A multiple linear regression was run to test the relation between the frequency of access and four demographic factors. Table 2.4 indicates that the four predictors explained 10.9% of the variance (R Square = 0.109, F (4,158) = 4.82, $p < 0.001$). It was found that gender was significantly positively correlated to the frequency of access to all the sources ($\beta = 0.18$, $p < 0.05$), as was age ($\beta = 0.25$, $p < 0.01$). Education and income factors could not predict the frequency of access to the sources used by the Hui participants to gain CVD-related health information. Thus, we can conclude that female and older Hui participants tended to access CVD-related health information from all the sources more frequently.

Table 2.4 Regression of Frequency of Access to All the Sources

	B	SE	β
Gender	2.15	0.89	0.18 **
Age	0.10	0.04	0.25 **
Education	−0.37	0.55	−0.06
Income	0.50	0.35	0.11
R^2		0.11	
F		4.82 ***	

Note. ** $p < 0.01$; *** $p < 0.001$.

2.4.3 Evaluation of Health Information

The third analysis concerned the evaluation and was aimed at identifying how the Hui and Han respondents evaluated the credibility of CVD-related health information from different sources. We also wanted to find out from which sources the Hui individuals preferred to obtain CVD health information and make a comparison between the Hui and Han respondents.

Table 2.5 shows source preference for the Hui and Han respondents regarding CVD health information. The results indicated a very similar pattern. Both the Hui (M = 2.98, SD = 0.82) and Han (M = 2.92, SD = 0.88) respondents preferred health organizations, doctors or healthcare providers over other sources to obtain CVD health information. Religious organizations and leaders were the least preferred source of CVD health information for both the Hui (M = 2.04, SD = 0.96) and the Han (M = 1.70, SD = 0.82) respondents. Even so, the Hui respondents (M = 2.04, SD = 0.96) preferred to get CVD health information from religious organizations and leaders (t (410) = −3.97, $p <$ 0.001) better than the Han respondents (M = 1.70, SD = 0.82).

Table 2.5 Descriptive Analysis Using t-test for Source Preference for CVD Health Information

Variables	Hui		Han		*t*-Value
	M	**SD**	**M**	**SD**	
The internet	2.73	0.80	2.66	0.83	NS
Television	2.67	0.80	2.46	0.79	0.007 **
Radio	2.29	0.85	2.20	0.81	NS
Newspapers or magazines	2.46	0.82	2.38	0.80	NS
Books, brochures, pamphlets, etc.	2.62	0.77	2.61	0.81	NS
Family, friends/co-worker	2.86	0.73	2.73	0.80	NS
Health organizations, doctors or healthcare providers	2.98	0.82	2.92	0.88	NS
Religious organizations and leaders	2.04	0.96	1.70	0.82	0.00 ***

Note. ** $p < 0.01$; *** $p < 0.001$; M = Mean; SD = Standard Deviation; NS stands for Not Statistically Significant. All variables range from 1 *(not at all*) to 4 (*a lot*).

Table 2.6 shows how the Hui and Han respondents evaluated the credibility of different sources of CVD-related health information. The analysis demonstrated an obvious similarity between the Hui and the Han. Both the Hui (M = 2.86, SD = 0.89) and Han (M = 2.94, SD = 0.92) respondents considered health organizations, doctors or healthcare providers as the most credible source of obtaining CVD health information. Similarly, both the Hui (M = 1.99, SD = 0.87) and Han (M = 1.78, SD = 0.83) respondents considered CVD health information from religious organizations and leaders as the least credible. However, the Hui respondents (M = 1.99, SD = 0.87) considered religious organizations and leaders more credible compared to the Han respondents (M = 1.78, SD = 0.83), $t\,(409) = -2.47$, $p < 0.05$. This is because of the Islamic beliefs of the Hui people, which led them to trust religious organizations and leaders better than the Han.

Table 2.6 Descriptive Analysis Using t-test for Credibility of Sources for CVD Health Information

Variables	Hui		Han		*t*-Value
	M	SD	M	SD	
The internet	2.52	0.71	2.45	0.69	NS
Television	2.57	0.74	2.56	0.75	NS
Radio	2.37	0.79	2.28	0.73	NS
Newspapers or magazines	2.41	0.79	2.41	0.80	NS
Books, brochures, pamphlets, etc.	2.60	0.81	2.66	0.84	NS
Family, friends/co-worker	2.75	0.79	2.70	0.84	NS
Health organizations, doctors or healthcare providers	2.86	0.89	2.94	0.92	NS
Religious organizations and leaders	1.99	0.87	1.78	0.83	0.000 ***

Note. *** $p < 0.001$; M = Mean; SD = Standard Deviation; NS stands for Not Statistically Significant. All variables range from 1 (*not at all*) to 4 (*a lot*).

2.5 Discussion

This is one of the first studies focusing on health communication issues among the Hui minority people in China. The study employed a survey of the Chinese Hui people to examine how they accessed and evaluated CVD health information from different sources. Ouyang and Pinstrup-Andersen had found that earlier research on health communication related to China mostly focused on the Han people, the majority group in China that accounts for around 91.6% of the country's population (Ouyang & Pinstrup-Andersen, 2012). They also concluded that few papers that had been published in English focused on the remaining 8.4%, which represents 112 million individuals (National Bureau of Statistics, 2010) belonging to 55 minority groups (Ouyang & Pinstrup-Andersen, 2012). Thus, this study filled a lacuna in research about health communication among Chinese minority groups.

The aim of this study was to identify the Hui people's access to and evaluation of different mediated and interpersonal sources and to see if there were differences between the Hui and Han respondents. The Chinese Hui are

an Islamic group that has a different culture compared to the Han majority in China. We assumed that there would be differences in the access to and evaluation of CVD health information from different sources. The results showed one major difference: the Hui people accessed mediated sources the most, while the Han people accessed interpersonal sources the most. Another notable difference related to the frequency with which religious leaders and organizations were accessed. The Hui respondents did this significantly more than the Han respondents, which is understandable due to the Islamic beliefs of the Hui minority. Past studies (Marrie et al., 2013) have found that age and income are associated with the use of different sources. However, in this study, we found that gender and age could predict the frequency of the access to all sources. Moreover, it did not matter whether the Hui people were patients or non-patients, with gender and age as more important factors than being a patient or not.

In terms of the evaluation of CVD health information from various sources, previous research (Hesse et al., 2005; Marrie et al., 2013) has shown that the most trustworthy source of information is physicians. In our study, we got the same result, with the Hui respondents considering health organizations, doctors or healthcare providers the most credible sources to obtain CVD health information. In previous research, a clear preference had been established for using healthcare providers and the internet first when seeking information about a specific disease (Hesse et al., 2005). In our study, interpersonal networks played the most important role among the Hui respondents, with the group preferring health organizations, doctors or healthcare providers to obtain CVD health information.

One limitation of this explorative survey is the employment of snowball sampling. This survey was distributed by one of the authors in the city of Shenyang in China, and the author chose snowball sampling, which may have

led to the respondents from similar backgrounds being recruited. However, as the sample size was substantial and had a decent distribution of age, gender, education, and income levels, we are confident that the results are reliable. A second limitation is that the sample might not be representative of the Hui population in China because it reflects the situation of the Hui people in the urban area, and not in the rural area. Future research should focus on a rural area, which would allow a comparison between health communication among the Hui people in urban and rural areas.

2.6 Conclusions

Our study highlighted the main sources of CVD health information accessed by the Hui people in Shenyang City of China and also studied their evaluation of CVD health information from different mediated and interpersonal sources. The results demonstrated the value of this survey study, which was embedded in McGuire's communication-persuasion model. Television was the source that the Hui people accessed most frequently for CVD health information, so television is an important source for health promoters to diffuse CVD health information among the Hui people. The current results are relevant for Chinese health information promoters and may help them diffuse CVD health information more effectively to the urban Hui. In addition, the study provides information for future research into health communication among other minority groups in China as our research shows that surveys are an effective tool to obtain data for this kind of study.

Chapter 3 Understanding the Chinese Hui Ethnic Minority's Information Seeking on Cardiovascular Diseases: A Focus Group Study*

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3.1 Abstract

The Chinese Hui ethnic minority group is an Islamic minority. The Hui people comprise the third largest minority population in China and are widely distributed throughout the country. Previous research shows that the Hui had a higher prevalence of cardiovascular risk factors (CVRFs) than most other ethnic groups. Therefore, the availability of health information relating to these factors is especially important for the Hui minority's preventive healthcare. They do, however, experience difficulties in obtaining health-related information. The current research aims to identify the needs of the Hui people on where and how they obtain cardiovascular disease (CVD) related information from the media and other sources. Six focus groups were conducted in Shenyang City. The results revealed that the participants relied on different sources to get advice about CVDs, of which the internet and television were the most prominent ones. The participants expressed a desire for credible and professional information from different sources and asked for mediated health communication programs specifically targeted at the Hui. In addition, the participants felt ignored by the Chinese mainstream media at large, which created barriers for them to get health information.

Keywords: the Chinese Hui ethnic minority; culture; cardiovascular diseases; health information; focus group; needs

3.2 Introduction

The Chinese Hui people are an Islamic minority in China. Their health situation is unique because they experience a higher prevalence of cardiovascular risk factors (CVRFs) than the Chinese Han majority and most other minority groups (J. Wu et al., 2016); in particular, they suffer from a high prevalence of hypertension (J. Wu et al., 2016). Thus, the Hui people need preventive health information to reduce their chance of getting cardiovascular diseases (CVDs). However, they experience difficulties in obtaining health-related information. There are indications that inequalities exist across different ethnic groups in obtaining health information (Viswanath & Ackerson, 2011; Wertz & Kim, 2015). In some cases, the health information targeting at minorities was simply lacking; in other cases, the minorities could not access available information (Eng et al., 1998; Viswanath & Ackerson, 2011). Previous research has shown that, in multicultural societies, disadvantaged groups are more likely to use media (e.g., the internet) to acquire information (e.g., health information) to overcome existing social inequalities in accessing information (Mesch et al., 2012).

In China, there exist fifty-six ethnic groups that are identified by the central government: 55 ethnic minority groups and the Han majority (Gustafsson & Sai, 2009; Information Office of the State Council of the People's Republic of China, 2000). Although the 55 minority groups host a population of 114 million people, which accounts for eight percent of the whole population in China (Leibold, 2013), there is limited research about how Chinese minorities obtain health information in the multicultural society. In particular, there is hardly any health communication research related to CVDs conducted among the Chinese Hui people, despite the size of Hui population (around 10 million) (L. Yang, Mao, & Jansz, 2018b). Thus, this chapter aims to contribute to filling that lacuna by investigating what health information the Hui

need about CVDs and what they have obtained. First, the theoretical framework for the focus group study is discussed. Next, we describe how we organized and executed the focus groups and how we analyzed what was shared therein. The presentation of the results is organized according to the four overarching themes that emerged from our analysis. Finally, we reflect and discuss the results in the light of previous academic literature and the specific social context of the Hui in China. Based on the strengths and limitations of this study, we propose future research directions in this line of research. Besides, this Chinese minority case can also help us understand that minorities have specific needs related to their position in a multicultural society, and these needs can partly be fulfilled by media.

3.2.1 The Chinese Hui People's Socio-Cultural Background

This chapter focuses on the Chinese Hui ethnic minority, which is the third largest minority group in China and is also widely distributed throughout the country (Gustafsson & Sai, 2014). At first glance, the Chinese Hui are quite similar to the Han, the Chinese ethnic majority, because the Hui share customs, language, and culture with the Han (Chuah, 2004). On closer inspection, the Chinese Hui have their own ethnic culture, because many of them follow Islamic dietary laws and take part in religious activities (Gustafsson & Sai, 2015). Previous research shows that health information that is culturally appropriate for a specific group is more effective than information that does not integrate culture (Kreuter & Haughton, 2006). It is, therefore, relevant to know what the Hui need in terms of health information in a multicultural environment.

In order to understand the Chinese Hui minority's health, it is important to consider the association between dietary habits and health. It is evident that the traditional dietary habits of a cultural group can promote or prevent certain diseases (Kreuter & McClure, 2004). For example, dietary habits are among the

strongest predictors of CVRFs (Lloyd-Jones et al., 2010). As believers in Islam, the Hui have different dietary habits compared to the majority of the Chinese population. In particular, the Hui people like to eat high-sugar and high-fat food such as beef, mutton (including inners), and to drink Babao tea (Ye et al., 2013). These foods can cause high prevalence of hyperlipidemia among the Hui (Ye et al., 2013). In addition, previous research shows that high-sugar dietary habits can increase the incidence of CVDs (Osman & Abumanga, 2019). Thus, the Hui's unique dietary habits can make them susceptive to CVDs.

CVDs are currently the leading cause of death in China (J. Wu et al., 2016; Xu et al., 2015; Z. J. Yang et al., 2012). Hypertension, diabetes, dyslipidemia, overweight/obesity, and current smoking are known to be the five main CVRFs (Gu et al., 2005; J. Wu et al., 2016; Xu et al., 2015; Z. J. Yang et al., 2012) that can cause CVDs. With the higher prevalence of CVRFs among the Hui minority than the Chinese Han majority and most other minority groups, it is important to come up with effective intervention plans for the Hui. Health education containing information about a healthy diet and lifestyle can be effective in reducing CVRFs. It is, therefore, crucial to gain insight into how the Hui people obtain health information related to CVDs.

In this research, we focus on the circumstances of the Hui in an urban area, namely Shenyang City, because Shenyang is the biggest city in Northeast China, and there is one area called 'Hui Hui Quarter' (in Chinese: 回回营) where most Hui people live in Shenyang City.

3.2.2 Cultural Influences on Health Communication

China is a country with many ethnicities and diverse cultures (Gladney, 2004). In multicultural societies, cultural factors play an important role in health communication because a group's cultural characteristics can be related to health decisions (Geist-Martin et al., 2003; Thomas et al., 2004), behaviors, or

the adoption of health education and health communication programs (Kreuter, Lukwago, Bucholtz, Clark, & Sanders-Thompson, 2003; Kreuter & McClure, 2004; Pasick, D'Onofrio, & Otero-Sabogal, 1996). Thus, culture needs to be taken into account in health communication (Dutta, 2007a).

Health communication in cultural backgrounds can be understood in two approaches: the culture-centered approach and the cultural sensitivity approach (Dutta, 2007a). The culture-centered approach (CCA) emphasizes social structures surrounding health can be changed through dialogues with cultural members, which can create spaces for minorities' cultural voices (Dutta, 2007a). In China, the Han culture is dominant. Ethnic minority groups' cultures are different from the Han culture, but the information from media mainly targets the Han majority. Based on the framework of CCA, the dialogues with ethnic minority groups can be treated as alternative ways to listen to their voices and bring their narratives into mainstream structures, which enable the access to health resources (Gao et al., 2016). Thus, we conducted this focus group study to get to know the Hui's needs for CVD health information.

Taking cultural differences into consideration, the cultural sensitivity approach presents that there should be appropriate health messages tailored to the cultural factors of specific groups (Dutta, 2007a). First, it is necessary to identify the groups experiencing poor health from a specific medical perspective (e.g., the Chinese Hui people have a high prevalence of CVRFs), and then to seek to recognize the cultural factors that influence health in these particular groups (e.g., dietary habits). Utilizing this approach, a specific group's cultural characteristics, values, and behaviors can be recognized, enhanced, then relied on to provide targeted health information. This approach has been suggested as a practical way to address culture in health communication (Kreuter et al., 2003; Kreuter & McClure, 2004). Health communication, as such, can employ different sources, which is discussed in the next section.

3.2.3 Health Information from Different Sources

Health information is essential because knowledge about health and disease may help to keep individuals well by encouraging them to adopt a healthy lifestyle. This was demonstrated by Street and Piziak (Street & Piziak, 2001), who found that the successful treatment of chronic diseases relied mainly on the patients' ability to lead a healthy lifestyle, take medications as required, and reduce risk factors (e.g., by losing weight). Health information can also be used to understand the diagnosis and treatment options for various diseases (Brashers et al., 2000; S. Y. Lee & Hawkins, 2010; Xie, Su, Liu, Wang, & Zhang, 2017), as well as disease prevention (Eng et al., 1998).

Individuals can obtain health information from various sources. Key informants are medical professionals (Wright, Sparks, & O'Hair, 2013; Xie et al., 2017), other healthcare providers (Xie et al., 2017), and interpersonal networks of family, friends, and colleagues (Duggan & Street, 2015; Dutta-Bergman, 2004b; Van den Putte et al., 2011). In addition to health information from these sources, individuals often find valuable assistance in both traditional media (newspapers, magazines, radio, and television) (Dutta-Bergman, 2004b; Marrie et al., 2013) and online media, including social media (De Choudhury et al., 2014; W. Y. Lin, Zhang, Song, & Omori, 2016; Neiger et al., 2012; X. Zhang et al., 2017). Media serve an important role in bridging information gaps in multicultural societies (Croucher, 2011). Mediated information is particularly relevant because individuals can follow their own preferences for mediated sources: they can watch a health program on television or actively search online and check many different health-related websites. Online health information has become one of the most important information sources globally in recent years (An, 2017; S. Y. Lee & Hawkins, 2010; Xiao, Sharman, Rao, & Upadhyaya, 2014). Furthermore, obtaining health information via social media (e.g., WeChat) is now very common in China (X. Zhang et al., 2017). The Hui people

can simultaneously check many different sources, thus gaining knowledge about multiple examples. They can then choose which information is most suitable for their particular circumstances. Accordingly, we assume that the Hui people may obtain different kinds of health information from different sources. Our first research question targets the relevance of health information to the Hui by asking:

RQ1. What kinds of health information on CVDs do the Hui people obtain from different sources?

3.2.4 Health Information Needs

Our second research question is concerned with the reasons why the Hui people seek health information related to CVDs. Seeking specific information is goal-directed behavior that stems from needs, which can be different and related to different aspects of being unwell. Previous research found that health information must satisfy two different needs: 1) cognitive needs - concerned with (factual) information about disease prevention and treatment, and 2) emotional needs - namely needs that concern feelings related to a disease and its consequences (S. Y. Lee & Hawkins, 2010). Research by Tustin (2010) indicates that individuals who seek information about particular medical conditions have specific needs related to: diagnosis (Dickerson, 2006; Rutten, Arora, Bakos, Aziz, & Rowland, 2005); prognosis (S. Y. Lee & Hawkins, 2010; Rutten et al., 2005); treatment options (Beckjord et al., 2008; Dickerson, 2006; Kalichman et al., 2003; S. Y. Lee & Hawkins, 2010; Rice, 2006; Rutten et al., 2005; Shuyler & Knight, 2003); the side-effects of treatment (Beckjord et al., 2008; S. Y. Lee & Hawkins, 2010); and getting appropriate support (Dickerson, 2006; Kalichman et al., 2003; S. Y. Lee & Hawkins, 2010; Rice, 2006; Rutten et al., 2005). Health information needs are prevalent and diverse; for example, previous research has shown that individuals with diabetes or a CVD indicated

that they hoped to be better informed about the risks and effects of their diseases when they were diagnosed (Huygens et al., 2016). Fulfilling that need would have helped them to pay more attention to the consequences of their unhealthy lifestyles at that time (Huygens et al., 2016). Accordingly, the current study also aims to answer the following:

RQ2. What needs do the Hui people have relating to health information about CVDs from different sources?

3.3 Materials and Methods

This study employed a focus group methodology to identify the needs of the Hui people with respect to CVD health information from different sources, with a particular focus on how the participants appraised the quality of such information and how it satisfied their needs. Focus groups have been widely applied to explore minority groups' health experiences. For instance, focus groups have been conducted to understand immigrant minority people's attitudes, knowledge, and health-seeking behaviors in the prevention and screening of cancer (Gany, Herrera, Avallone, & Changrani, 2006). Lunt and Livingstone (1996) emphasized that a focus group can be seen as a context in which everyday communication, which is inaccessible for researchers, is simulated (Lunt & Livingstone, 1996). A major strength of focus groups is the interaction between members (Lune & Berg, 2017). Participants respond to each other in the conversation, which may create an awareness of issues that they may not have considered before and even solutions to a problem (Lune & Berg, 2017). The outcomes may also inductively result in findings that were not anticipated by researchers. Focus groups provide new and rich information in early groups; later groups may provide overlapping information from early groups (Lunt & Livingstone, 1996). The re-occurring themes across different groups reveal shared experiences and perspectives. In this research, six focus

groups, each with three to four participants, were conducted in Shenyang City. In total, there were 23 Hui participants, including nine men and 14 women aged between 23 and 75. The focus groups lasted for, on average, 60 min. A snowball technique was used to recruit the participants, with local support from a mosque and a Hui primary school. The focus groups were conducted in Chinese, and the transcripts were translated into English.

Previous research has shown that a focus group runs best when the participants know each other, and the groups take place in an everyday setting that is familiar (Liebes & Katz, 1990; Onwuegbuzie, Dickinson, Leech, & Zoran, 2009). Accordingly, the groups were composed in such a way that each member knew one or two other participants. The focus groups took place in familiar settings, like the workplace or a participant's home. One of the authors moderated the discussion. To enable the content of the focus groups to be analyzed thoroughly, the moderator recorded the proceedings using two recording devices. The moderator informed all the participants in advance about this procedure and asked them to sign letters of consent and complete a short questionnaire about their demographic characteristics (see Table 3.1), dietary habits, and health status. At the end of the session, the participants were given a small gift as a token of appreciation.

The answers to the questionnaires showed that 12 participants only ate Halal food and never drank alcohol. Six others followed most Hui eating habits by generally preferring Halal food and not drinking alcohol. One participant only partially conformed to the relevant dietary habits by not eating pork, but still drank alcohol. Four others did not follow the Hui eating habits at all and ate pork. Referring to their health status, only 13 out of 23 participants described themselves as healthy without any CVDs or CVRFs.

Table 3.1 Demographics of the Focus Group Members

Members	Age	Gender	Occupation	Highest Education
Lisa	47	Female	Teacher	Bachelor
Wendy	53	Female	Manager	College
Lily	43	Female	Teacher	Bachelor
Jack	45	Male	Teacher	Bachelor
Nancy	48	Female	Accountant	College
Helen	39	Female	Teacher	Bachelor
Tom	43	Male	Teacher	Bachelor
Barbara	49	Female	Teacher	Bachelor
Joan	41	Female	Teacher	Bachelor
Jasmine	49	Female	Teacher	College
Emily	47	Female	Teacher	College
Mia	30	Female	Office worker	Master
Mary	35	Female	Office worker	Bachelor
Ian	23	Male	Student	Bachelor
John	24	Male	Student	Bachelor
Emma	75	Female	Retired	High school
Sara	60	Female	Custodian	High school
Olivia	60	Female	Medicine laboratory technician	High school
Robert	60	Male	Retired	High school
Alex	60	Male	Retired	High school
Ethan	23	Male	Imam	Bachelor
Eric	75	Male	Retired	High school
Thomas	57	Male	Imam	Bachelor

Note. All the participants' names have been anonymized by the researchers.

All the focus groups unfolded according to a similar procedure. First, the moderator welcomed the participants to the focus group. Next, she explained the purpose of the focus group as enabling her to acquire data for her PhD research on health communication issues among the Chinese Hui ethnic minority people in the city of Shenyang, which will contribute to improving knowledge about health communication targeted at the Hui. She then gave an overview of the topic and provided guidelines for the discussion. Thereafter, she initiated the discussion by asking the participants to write down all the sources they used to obtain information about CVDs. Five minutes later, the participants were asked to place their papers in a position where everyone could see and discuss them during the focus group. In order to start the conversation about the health information they had obtained, the moderator then asked the

group to share what kinds of CVD health information they had gleaned from the sources they had written down. In the final part of the discussion, the moderator also asked the participants to write down what kinds of CVD-related health information they needed most.

A thematic analysis was used to analyze the transcripts because this is a systematic procedure with enough flexibility to allow for (theoretical) freedom in the interpretation (Braun, Clarke, Hayfield, & Terry, 2019). The authors analyzed the transcripts using inductive analysis techniques, which require all the themes of the analysis to emerge from the data (Gany et al., 2006). The coding proceeded stepwise. The first step was 'open coding', in which the coder read through all the transcripts and coded the themes inductively. After open coding, axial coding was applied to draw themes from the transcripts. Finally, we conducted a selective coding procedure and chose representative quotes from the participants for different themes.

3.4 Results

Four themes were identified in the thematic analysis of the data: (1) CVD health information obtained from different sources; (2) the credibility of health information about CVDs; (3) the Hui's neglected feelings; and (4) the Hui's needs relating to CVDs. These themes will now be explained in detail.

3.4.1 CVD Health Information Obtained from Different Sources

The information sources that the participants wrote down at the start of each focus group revealed that the Hui people used different sources to acquire CVD-related health information. Table 3.2 shows that the internet and television were the most prominent channels. During the discussions, three participants also mentioned WeChat, a very popular social media platform in China, as a source. Next, the participants were asked about the kinds of CVD health information

they were looking for from different sources. In response, they shared that they mainly wanted to obtain information about prevention and treatment for both themselves and their family members. None of the participants had ever heard of CVD health information from any source that targeted the Hui.

Table 3.2 Sources Used by the Hui Participants to Obtain Information on CVDs

Sources	Frequency
The internet	18
Television	14
Family and friends	10
Hospitals and doctors	10
Radio	5
Newspapers	3
Total	60

Note. The participants were able to write down multiple sources.

The discussion then moved on to why the participants were so focused on obtaining CVD health information regarding prevention and treatment. In summary, they thought it was necessary to obtain some basic medical knowledge of CVDs because of their high prevalence in China. Lisa, a 47-year-old female teacher, set out her opinions:

> I mainly got information about treatment and prevention for myself and also for my family. I think it's necessary for people to know how to prevent CVDs, and this comes from common medical knowledge. Besides, we need to know which medicines we can use when there's an emergency, and what medicines are reasonable.

Four of the participants mentioned that they would probably put more time and effort into obtaining information about CVDs if family members were affected. Not only did they pass the relevant information on to family members,

but they also used it to stop themselves from developing CVDs, because they were concerned that they would be affected due to their genes. Ian, a 23-year-old male bachelor student, presented his fear as follows:

> I get CVD health information mainly from the internet, but I've got some targets. Because our family has hereditary hypertension, I pay attention to the prevention aspect. The hereditary of hypertension is obvious, so I need to know the symptoms and then how to prevent hypertension.

When asked about whether they adjusted their behaviors according to the information they obtained, the participants all said they were not able to follow all of the advice. One reason for this was their working/living conditions (e.g., no place to keep fit by exercising), while other objective circumstances (e.g., cold weather in winter) were also a factor. Another reason was that some participants considered themselves to be so busy with their work and family that they did not have time to do as much physical activity as the information recommended. In addition, participants mentioned that when they did have some free time, they preferred to use it to engage in relaxing activities rather than focusing on their own health. Mia, a 30-year-old female office worker, said:

> I can't follow all the health information related to preventing CVDs. I can do no smoking, no drinking, and less salt. But in terms of doing sports more, one reason I can't is that it's super cold in winter in Shenyang... Two subjective reasons: firstly, I don't have enough time; secondly, I'm kind of lazy. So I can only partly do as some of the information suggests.

Next, the participants were asked whether they were satisfied with the CVD health information they had obtained from different sources. Among these 23 participants, seven said they were satisfied, and 15 were unsatisfied. Nancy,

a 48-year-old female accountant, said that she was satisfied with the quantity of health information she had acquired, but not with its quality. Only one participant said that he did not pay any attention to advice about CVDs.

3.4.2 The Credibility of Health Information about CVDs

One of the main reasons why most of the Hui participants were not satisfied with the CVD-related information they had acquired was that they had faced obstacles when obtaining it, particularly with respect to its credibility. Most of the participants complained about the difficulty they had in identifying how credible health information was from different sources. Jasmine, a 49-year-old female teacher, expressed her view as follows:

> Now if I want to get some information, I can manage it using the internet. But the credibility is one issue, and sometimes we doubt it. We don't know whether the information is real or fake, so we can't trust all of it.

The participants also had different views about the credibility of information from different sources. Mary, a 35-year-old female office worker, said:

> In China, physicians can't provide specific explanations and may not tell the truth because of their own benefits. If I consult more, then the physicians aren't happy. But when there's a situation happening, we have no other choices but to follow the physicians' suggestions.

Other participants had similar views; they expressed their helplessness, as well the fact that they could not totally trust physicians, although they still thought that doctors were more professional and knowledgeable and so they tried to have confidence in them and follow their suggestions. Some of the

participants were puzzled by the contradictory information expressed by the same media. Nancy, a 48-year-old female accountant, shared two typical stories:

> On the Liaoning TV channel, a health program called *Health Body Light* once mentioned that eating sweet potatoes was good and can cure some diseases. After a while, the program changed by saying that eating sweet potatoes was not good. So, the program had two contradictory recommendations, and we don't know which one to follow.

Later in the discussion, she gave another example:

> My husband bought me two tons of protein powder; then I checked online about how to use it, and I found that there were like 100 pieces of information with 100 pieces of advice. Some of the information said that you could eat it, but some said that this was not suitable to eat; so, I don't know which one to believe.

We found that what troubled the participants most was that they were eager to obtain appropriate health information, but could not determine which advice was the most trustworthy. The participants' distrust of Chinese medical information was so strong that a few said that they preferred to rely on information from other countries and they wanted to know how they could obtain information about CVDs from abroad. Mia, a 30-year-old female office worker, said:

> I want to know how to get health information about CVDs from other countries. What we can get online is health information from China, but we can't get information from other countries.

Later, Mia also addressed why she wanted to get information from other countries:

> I trust health information from other countries more than that from China… If I get information from abroad, it can be more specific, and I can get information targeting my own situation more, but doctors in China can only explain the general situation, which has only limited relevance to my own circumstances.

Finally, it became clear in the focus group discussions that the participants were critical of the structure of the Chinese medical system. Mia said that physicians perhaps cared more about earning money and making a profit than about their patients' health. This was echoed by other participants, who complained that doctors cared too much about their benefits and too little about improving the health of patients. Wendy, a 53-year-old female manager, explained her views:

> There's one serious issue in China that's called 'over-treatment'. If I go to hospital, even if I don't have any serious symptoms, the doctors will still suggest a list of medicines to buy; then I have to find some friends or relatives I trust to consult with and decide whether to buy the medicines or not. This is because, sometimes, the medicines that the doctor recommends are related to his profits. It's hard to tell whether the medicines are suitable for my condition or not.

3.4.3 The Hui's Neglected Feelings

The focus group participants linked their serious concerns about the credibility of health-related information and the structure of the Chinese medical system to their feelings of being ignored which impaired their satisfaction with the health information available about CVDs. It was often mentioned that the Hui people did not receive any beneficial treatment, which made them feel that they were being ignored. The participants complained, for example, that beef and

mutton were much more expensive than pork, but the government did not intervene in the pricing, and nor did it offer support. Robert, a 60-year-old male retiree, said:

> There was only one time that the government financed 100 yuan meat benefits for one Hui household each year, but that happened only once. And now, there's no continuing financial aid or other aid anymore.

The sense of being ignored also applied to how the Hui people were represented in the mainstream media. In China, the television news sometimes reports on events in different communities, like, for example, with a competition to determine 'The Best Community'. Alex, a 60-year-old male retiree, said that, as far as he could remember, there was never anyone reporting research, reports or interviews on television about Hui communities in or outside Shenyang. Therefore, he felt that the Hui people were ignored by the mainstream media, and their voices were never heard.

> There was only once that someone doing interviews about the Hui district selected a model district in the Hui community. Apart from that time, nobody else has reported anything about the Hui people or cared for the Hui people. But on television, I always see that journalists go to different communities to do interviews, but then I was thinking, why does nobody do any interviews in our Hui community? The media don't even give the Hui people a chance to speak out our voice!

After Alex expressed his view, the other three participants in this focus group agreed with him. Interestingly, one participant expressed a different view about why the Hui were neglected in the media. Barbara, a 49-year-old female

teacher, said that this neglect was the consequence of the 'National Unity Policy' promoted by the Chinese government:

> Generally, there couldn't be any health information targeting the Hui. In China, there's one rule called 'one national unity'. I think that you can't distinguish different groups very clearly, as we build our school based on the core of 'harmony'. If everything distinguished ethnic differences clearly, then this would be a big problem in society.

In general, Barbara's view was not shared by the other participants. Most clearly expressed a desire to be the focus of more attention from society and the media. In particular, some participants mentioned that, as the Hui population had a higher prevalence of CVRFs than other groups, there should be research conducted among them to identify the reasons for this. The participants all noted that no one had conducted research among the Hui people before.

3.4.4 The Hui's Needs Relating to CVDs

After addressing the health information they had obtained, the medical system, and general issues regarding the position of the Hui in China, the discussions focused on the needs of the participants with respect to CVD-related information. Overall, most expressed a clear need for credible, professional, and reliable information about CVDs. Lily, a 43-year-old female teacher, said:

> No matter if it's the internet or television, when transmitting health information to people, there should be someone supervising this to ensure its credibility; we can't accept that there's profit behind this …We just need real and pure CVD health information.

During the discussions, the participants were asked to list what kinds of health information they needed. The analysis of their answers revealed six features. The most prominent were prevention, treatment, and general information (including symptoms, etc.) (see Table 3.3). Ian, a 23-year-old bachelor student, expressed the most prominent needs:

> I focus more on the information about how to prevent CVDs, knowing the mechanism of this disease; then I can adjust my eating and living habits to prevent it. If I get the disease one day, I can understand my situation based on the symptoms in the early stage before the serious symptoms come; then I can keep all this in mind and know which stage I am at myself.

Table 3.3 The Types of Information on CVDs Required by the Hui Participants

Types of CVD health information	**Frequency**
Prevention	17
Treatment	10
CVD general information (including symptoms etc.)	10
Healthy diets	6
Authority and government promotion	3
Medical consultation	2

Note. The participants were able to write down multiple types of CVD health information.

The participants thought that professional public health institutes or agencies should have programs to disseminate health information. This is because they thought that health information from such bodies was much better and more credible than that from the internet and television. The participants experienced a lot of stress due to their work and emphasized that it was impossible for them and other Hui people to devote much of their scarce leisure time to obtaining reliable health information. Olivia, a 60-year-old female laboratory technician, said:

> Like now the Hui's prevalence of CVDs is high, so I suggest taking some action in promoting health information about CVDs among the Hui people. Do more CVD health information promotions, let the Hui people get attention, and cultivate the Hui people. The Hui people's education level is low, so we really need effective CVD health information.

The analysis of the transcripts also revealed two other needs related to CVDs. The first concerned healthy and safe food, which was mentioned by two participants. They revealed that food products in China were subjected to extensive applications of fertilizers and other additives. The participants, therefore, expressed their concerns about food safety issues. Emma, a 75-year-old retired woman, said:

> The main issue is that the food people eat in China is very unsafe. Chinese people can get hypertension easily after eating food with too many additives …In China, there are too many fake things, especially the vegetables; there are too many bad ingredients added. This morning I saw the news reporting that amounts of glue were added to unborn things; I don't think that Chinese people will feel healthy after eating food like this.

The second need concerned financial support for insurance. Four participants, who were over 60 years old, said that they needed more financial help with their social health insurance cards. In China, people who have jobs will have these cards, which can be used to buy medicines. The government distributes a certain amount of money to the account each month, with the amount varying for different jobs and how long someone has worked. Four participants revealed that the financial help available was very different in China; for example, there were jobs like civil servants, which were famous for

being ‘lifelong secure jobs’ with good benefits, and these workers perhaps had a certain amount of insurance money left each month. Meanwhile, for people with ordinary jobs, the insurance money was inadequate, according to the participants. Moreover, they had no other resources to pay for medication. Robert, a 60-year-old male retiree, said:

> The medical insurance card gives us a certain amount of money each month, but if we want to recuperate well, we can only buy some medicine this month, and then we will use next month’s money to buy the rest. If we want to follow health advice, our economic conditions don’t allow us to do so.

Nancy, a 48-year-old female accountant, mentioned a new department in a hospital for the ‘preventive treatment of diseases’, which refers to doctors taking measures to prevent patients from becoming ill. She hoped that the government would provide financial aid to help more people in this regard; for example, if a treatment costs 100 yuan, the government can subsidize 80 yuan, meaning that people only need to pay 20 yuan themselves. If this occurred, Nancy believed that people would be more likely to make an effort to submit to treatments aimed at preventing diseases, including CVDs.

3.5 Discussion and Conclusions

This explorative research provides a preliminary understanding of health information about CVDs that the Hui people in China have successfully obtained from different sources. Building upon CCA that argues that the voices of minorities are often erased from dominant discourse (Dutta, 2008, 2014, 2018; Gao et al., 2016), this research provides insights into what needs the Hui people have in relation to CVD health advice. It was striking that the participants mainly relied on the internet and television to obtain health information. This

suggests that, although there was no information targeting the Hui in the media, the participants still consulted the general media to obtain health advice. These findings are in line with the results of previous research conducted among different ethnic groups and demonstrate that the internet is one of the main sources used when people are looking for information about a specific disease (Cline & Haynes, 2001; Hesse et al., 2005). Minority groups that do not have access to traditional sources of health information use the internet to overcome their lack of access to specialist advice (Mesch et al., 2012). Nowadays, social media can attract individuals when it comes to acquiring health advice and play an important role in health communication (Chou et al., 2009). In this case, WeChat has become a prominent channel for sharing and searching for health information in China (X. Zhang et al., 2017), and was also mentioned by our Hui participants. WeChat is, thus, an important source of health information in China (X. Zhang et al., 2017).

The Hui participants in this study experienced obstacles in getting health information about CVDs and expressed a desire for credible and professional information from reliable sources. Credibility has been described as a factor influencing message receivers' perceptions and attitudes (Bates, Romina, Ahmed, & Hopson, 2006), and previous research shows that some CVD patients become anxious as a result of what they have found online (Huygens et al., 2016). On the one hand, our Hui participants had doubts about online health information and were unsure of what they could trust. On the other hand, they often distrusted the information provided by physicians, which differed from previous findings that individuals have a high level of trust in the health advice provided by doctors compared to all other sources (Hesse et al., 2005). Their distrust of physicians was not related to the ethnic differences between the Han and the Hui. Moreover, it did not generalize to the entire medical profession. It

was rather the opposite because our participants generally acknowledged the importance of medical expertise and wanted to benefit from it.

Our second research question invited the focus group participants to discuss their needs with respect to health information concerning CVDs. Compared to previous studies, which suggested that information and emotional support were important to individuals with illnesses (Jefferies, 2002; Street, 1990), our research found that the Hui participants talked exclusively about their cognitive needs for CVD health advice. Emotions were absent in the group discussion: No one mentioned their emotional needs. Nevertheless, the participants' need for health advice with respect to treatment for CVDs corresponded with previous findings (Beckjord et al., 2008; Dickerson, 2006; Kalichman et al., 2003; S. Y. Lee & Hawkins, 2010; Rice, 2006; Rutten et al., 2005; Shuyler & Knight, 2003). In addition, the participants pointed out two needs that were not directly related to health information in a strict sense, namely the desire for more financial help with their social health insurance cards and the need for healthy and safe food. With respect to the wider context of health in China, the Hui participants were concerned about the lack of health information for the Hui, and they also expected mediated health communication programs specifically targeted at the Hui.

These results indicate the value of this focus group study. We successfully reached out to the Hui minority in Shenyang City, making our study the first to use qualitative methods to explore the Hui minority's needs regarding health information about CVDs. Meanwhile, a few limitations need to be considered when generalizing and applying findings from this study. First, our current research had a relatively small number of participants, and most of our participants' education levels were above the average. Second, the existing relationship among participants may affect the group dynamics in the discussions. A focus group is especially effective when the participants know

each other (Liebes & Katz, 1990; Onwuegbuzie et al., 2009). Some of our participants were colleagues in the same school. On the one hand, it was easy for the moderator to build rapport and facilitate the discussions; on the other hand, some participants might feel reluctant to share or intentionally withhold certain information due to the professional relationship they had with each other. Overall, the discussions in the focus groups were rich, open, and active. The focus group discussions provided meaningful and new information on the Hui minority's unique experiences of health information seeking and health practices. Third, this research was conducted in only one city in Northeast China. The characteristics of local context and regional differences should be taken into consideration when generalizing or applying findings from this study to different contexts. Future research can compare the Hui people in Hui autonomous areas in Northwest China with their counterparts in non-autonomous areas on how they receive, process, and apply CVD-related health information. Drawing from initial findings from our qualitative research, future research could apply a quantitative approach to examine the associations between the Hui's health information seeking behaviors and health outcomes.

In today's culturally diverse world, intercultural communication is increasingly important (Sorrells, 2015; Ulrey & Amason, 2001). Integrating culture in health information programs and materials for specific groups is a way to take diversity into account (Kreuter & Haughton, 2006). It will also help to enhance the effectiveness of health communication, which may contribute to eliminating the structural health inequalities present in multicultural societies (Kreuter & Haughton, 2006). The current results are also relevant for Chinese health information promoters. Indeed, they may help them to consider cultural factors and disseminate advice about CVDs more effectively to the urban Hui people. The focus group discussions showed that our participants mostly used television and the internet including social media as their sources of information.

Future health promotion campaigns should take this into account. A major difficulty in the diffusion of health information among the Hui is the distrust and feelings of neglect they expressed, as well as their fundamental need for credible, reliable, and professional health advice about CVDs. There are ethnic inequalities in health and healthcare in multicultural societies, thus healthcare systems should provide a fair service to multiethnic populations (Bhopal, 2007). Efforts to promote health information without considering cultural dimensions are unlikely to address a specific group's needs (Shaw, Huebner, Armin, Orzech, & Vivian, 2009). Researchers and health promoters alike should take the wider context of the Hui's cultural backgrounds into consideration when developing a campaign (Dutta, 2007a). Finally, this Chinese minority case may also be relevant for research about multicultural communication among other minority groups in other countries.

Chapter 4 Health Information Related to Cardiovascular Diseases Broadcast on Chinese Television Health Programs*

* This chapter is under review as Yang, L., Mao, Y., & Jansz, J.: Health information related to cardiovascular diseases broadcast on Chinese television health programs.

Chapter 5 A Qualitative Content Analysis of Health Information Related to Cardiovascular Diseases on Chinese WeChat Official Accounts*

* This chapter is under review as Yang, L., Mao, Y., & Jansz, J.: A qualitative content analysis of health information related to cardiovascular diseases on Chinese WeChat official accounts.

Chapter 6 General Conclusion and Discussion

Very little research has been published about how the Chinese ethnic minority the Hui deal with health issues and the kinds of health-related information they require. This dissertation aims to contribute to filling that lacuna by reporting on the results of explorative empirical research conducted among the Hui in Shenyang City of China. The research was guided by four related questions: (1) How do the Hui ethnic minority people access and evaluate health information from different sources, in particular with respect to CVDs? (2) What needs do the Hui have concerning CVD-related health information from different sources? (3) What kinds of CVD-related health content do television and the internet convey in China? (4) How does the CVD-related health content on television health programs and WeChat official accounts target the Hui minority group? In this conclusion, I intend to present and discuss the key findings of my four empirical studies. I will then reflect on their limitations and make recommendations drawn from these results. Lastly, I will present the contributions of this research.

6.1 Summary of the Key Findings

6.1.1 The Hui's Use and Evaluation of CVD-Related Information from Different Sources

The survey described in Chapter 2 examined the main sources that the Hui used to access health information on CVDs, and also investigated how they evaluated this. The results of this study revealed differences between the Hui minority and the Han majority in terms of the kinds of sources they employed. The Hui participants generally used mediated sources, with television exploited most frequently followed by the internet, particularly social media. The Han majority, meanwhile, used interpersonal sources the most. In terms of their evaluation of

the information on CVDs they obtained, the Hui and the Han were similar: both preferred information provided by health organizations, doctors or other healthcare providers. They also trusted these sources the most. Although the Hui are an Islamic group, the information delivered by religious organizations and leaders was used, trusted and preferred the least.

6.1.2 The Hui's CVD-Related Health Information Needs

The second empirical study conducted for this dissertation was concerned exclusively with the Hui minority group, and explored the kinds of health information on CVDs that they have obtained from different sources and what their needs were in this regard. The qualitative focus group study described in Chapter 3 revealed that the Hui used different sources, with the internet and television most prominent. They particularly wanted information about prevention and treatment for both themselves and family members, but were not satisfied with the advice available to them, because they had concerns about its credibility. As a consequence, most expressed a clear need for professional and reliable information. They also mentioned two other needs that were relevant for their health: (1) healthy and safe food; and (2) financial support for their health insurance. Many participants wanted a mediated health communication program specifically focusing on them to make up for the current lack of information.

The findings on the importance of television and the internet for the Hui led to the dissertation's third and fourth empirical studies, which focused on the content of television health programs and articles about health posted on WeChat official accounts.

6.1.3 Health Information about CVDs on Chinese Television Health Programs

Chapter 4 describes a qualitative content analysis aimed at examining the kinds of health content on CVDs broadcast on two health programs on Chinese television: *The Doctor Is In* (in Chinese: 健康之路) and *Health Body Light* (in Chinese: 健康一身轻). The findings revealed that these two programs have depicted a wide range of information about what CVDs and CVRFs are, and how these conditions are treated. How traditional Chinese medicine prevents and cures CVDs was also an important topic. The presentation of the information was generally serious, but both programs also included elements like quizzes and cartoons to make them more entertaining. The content analysis revealed that these programs included a lot of advice about CVDs, but none was specifically concerned with the Hui, despite the high prevalence of these conditions in this group.

6.1.4 Health Information on CVDs in Articles Posted on WeChat Official Accounts

WeChat is very popular in China today, and a growing number of WeChat official accounts present huge amounts of different kinds of health information to the Chinese audiences. Chapter 5 describes a qualitative content analysis of 108 articles posted on these official accounts. These included a lot of information about healthy lifestyles and provided different explanations of CVDs and CVRFs. The articles also used famous people's experiences related to CVDs (e.g., how to lead a healthy life) to promote their CVD advice. Traditional Chinese medicine in relation to CVDs was also identified as a unique theme in the Chinese social and cultural context. Despite the high prevalence of these conditions among the Hui, none of the articles included specific health information tailored to their unique needs.

The findings set out in chapters 4 and 5 enabled me to conclude that the health programs on television and the articles on WeChat official accounts have communicated a rich array of CVD-related health information, including advice on prevention and treatment, but none of this was targeted at the Hui, despite their vulnerability to these conditions.

6.2 Discussion

6.2.1 How the Hui and the Han Use and Evaluate Different Sources

This dissertation is built upon the assumptions of the culture-centered approach (CCA), namely that there are differences between diverse cultural groups with respect to health communication (Dutta, 2007a, 2008). The Chinese Hui are an Islamic group with a different culture from the Han majority (Dillon, 2013), and in Chapter 2 I identified the differences between them in relation to health communication. First, the results revealed one key difference between the Hui and the Han concerning the access to CVD-related health information from different sources: the Hui used mediated sources the most, while the Han prioritized interpersonal resources. This resonates with the results of previous research that, in multicultural societies, minority groups who do not have access to specialist networks are more likely to use specific forms of media (e.g., the internet) to obtain health information (Mesch et al., 2012). The Hui consulted religious organizations and leaders the least to access health information, but nevertheless did so more often than the Han, which can be understood as a result of the Islamic faith that many Hui practice. It should, however, be noted that the Hui had little confidence in their religious organizations and leaders regarding health issues, and these sources were consulted far less than television and the internet.

The Hui and the Han were similar with respect to their evaluation of the health information on CVDs that they obtained from different sources: they both

considered information from health organizations, doctors or other healthcare professionals to be the most credible. This corresponded with the findings of previous research, which found that people trusted health information provided by physicians the most (Hesse et al., 2005; Marrie et al., 2013).

6.2.2 The Hui's Concerns about the Credibility of Health Information on CVDs

Chapter 3 describes the views of our Hui focus group participants in relation to their difficulty in obtaining advice on CVDs because of their concerns about its credibility. First, it was clear that they distrusted information provided by doctors, which was not related to the ethnic differences between the Hui and the Han. This concern was related to the structure of the healthcare system in China: high medical costs and the system's inappropriate incentives to physicians for over-prescribing and over-treating were all factors that led to this distrust (Yan, 2018). The doctor-patient relationship plays an important role in health services (A. J. He & Qian, 2016), but some medics have to rely on promoting very profitable medicines to patients to increase their income (F. Zhang, 2014), affecting their credibility as a result. In addition, Chinese doctors' heavy workload has caused a decline in the quality of health services, which may lead to an increase in the number of doctor-patient disputes (A. J. He & Qian, 2016). In general, the Hui participants acknowledged doctors' medical expertise and wanted to benefit from it, but also wanted to be sure that it was reliable. Despite these concerns, the Hui also had doubts about the credibility of CVD-related health advice from mediated sources: for instance, they revealed problems with obtaining such information because they came across different, and even controversial, advice online, with an example given concerning a nutritional product. Such views were also identified in previous research, which found that

some CVD patients are anxious about the information they acquire in this way (Huygens et al., 2016).

6.2.3 The Hui's Health Needs with Respect to CVDs

In terms of the Hui's requirements with respect to health information on CVDs, our participants discussed their own particular needs, but felt ignored by the mainstream media. This corresponds with the fundamental argument of the CCA, namely that the voices of minority groups may not be heard in multicultural societies, leading to circumstances where their health needs are also not expressed (Dutta-Bergman, 2004c; Dutta, 2008; Gao, Dutta, & Okoror, 2016). In China, the official media (e.g., People's Daily) promote national unity (Y. Zhang, 2013), and tend to treat different minority groups as one, without any further specification (Y. Zhang, 2013). Generally, however, such groups are treated as vulnerable by this form of media (Y. Zhang, 2013). In this context, Y. Zhang (2013) argues that mass media should devote its attention to the real lives of ethnic minorities and respect their customs and habits. In the same vein, the Hui participants in this study maintained that they should be targeted by the media in health communication programs. It is, therefore, clear from this that Chinese media should take minority groups' cultural and lifestyle factors into account when promoting health advice.

6.2.4 CVD Content on TV and WeChat

Although neither TV health programs nor WeChat official accounts distributed any CVD-related health information targeted at the Hui, both sources communicated much information about the explanations of CVDs and CVRFs, and traditional Chinese medicine.

In this research, the experts in the TV health programs and WeChat official accounts often assumed that individuals misunderstood the information

related to CVDs, which was also shown in previous research: many people in China have difficulties in fully understanding health information (X. Lin et al., 2014).

Nowadays, although some Chinese people do not use traditional Chinese medicine, our findings show that traditional Chinese medicine is not marginalized. In my research corpus, the TV health programs and WeChat articles communicated a substantial amount of information about traditional Chinese medicine in terms of prevention and treatment of CVDs. This shows that traditional Chinese medicine plays an important role in Chinese medical environments. As Keji and Hao (2003) have argued, traditional Chinese medicine is an alternative approach to Western medicine, and each system has its merits for the Chinese population in the prevention and treatment of diseases.

6.3 Limitations and Recommendations for Future Research

6.3.1 The Hui in Autonomous and Non-Autonomous Areas

Two empirical studies were conducted for this dissertation in the non-autonomous area of Shenyang City, which is located in Northeast China (see Map in Chapter 1). The Hui and the Han in the city had differences concerning how they accessed CVD-related health information from different sources, but generally they revealed a very similar pattern. The findings of chapters 2 and 3 cannot be generalized to the Hui in other areas, because the data was limited and reflected their circumstances in a non-autonomous area. Future research should therefore make a comparison between the Hui in the autonomous areas in Northwest China and their counterparts in non-autonomous locations concerning how they access, use and evaluate CVD-related health information.

6.3.2 The Hui's Health-Behavior Changes and Their Use of Health Information

My study's initial findings revealed that the Hui were able to acquire health information on CVDs from different sources. However, I did not know whether they really followed this advice by adjusting their health behaviors, and so future research is required to test health outcomes. For example, a quantitative approach (e.g., cross sectional survey; experiment) could be used to examine the associations between the Hui's health behavior changes and their use of health information.

6.3.3 The Production and Distribution of Health Information on CVDs

In general, the communication process includes the production, distribution, content and reception of media (Fuchs, 2010; Napoli, 2010; Turow, 1992), but this dissertation focuses on the latter two. The study did not engage with the people who produced the relevant television health programs or WeChat articles, but my findings can serve as the foundation for studies focusing on production and distribution; for example, future research could examine why certain CVD-related health content is selected and distributed by producers to gain a better understanding of what is actually depicted and why.

6.3.4 Health-Related Information Targeted at the Hui

The findings in this dissertation make it clear that Chinese health promotors and media producers should target health information at the Hui; for example, they could promote health messages and make use of the channels targeted at the Hui minority group, increasing social awareness of the Hui minority's special health needs, and advocating policies and health information promotion plans to increase information accessibility and impacts.

6.4 Contributions of This Research

The Chinese television programs and WeChat articles studied in this dissertation did not target CVD-related health information at the Hui minority group, which confirms the fundamental argument of the CCA (Dutta, 2007a, 2008, 2018; Dutta et al., 2013; Gao et al., 2016). In addition, it was found that the Hui experienced problems in obtaining such information. These results have practical implications for health communication, as they highlight that Chinese health promotors should take the Hui's culture and lifestyle into account. More specifically, Chinese health promotors should pay attention to the Hui minority's special health needs, and promote health information targeted at the Hui people, to increase their access to health information.

Over the course of this dissertation, I have spoken with the Hui people from different backgrounds about their health concerns. The focus group discussions revealed a lot about CVD- and CVRFs-related issues, but also produced unexpected findings, two of which stood out as important contexts for any health campaign: some Hui participants needed financial support for insurance, and also expressed a desire for healthy and safe food. Although these two findings may apply to people from other ethnic groups, these results underline once more that improving health requires paying extra attention to the targeted group. It is necessary to share information concerning healthy lifestyles and the healthcare system, as much as advice about diseases and treatment.

I hope this dissertation has contributed to the health communication field in three ways: by filling the lacuna in health communication research concerning the Chinese Hui ethnic minority; by highlighting the specific CVD-related health needs of this group; and by providing a foundation for future health communication research among the Hui, which could also be used in health campaigns that take their needs seriously. Overall, the research in this

dissertation has shown that the Hui have their own health needs and require specific health information to be targeted directly at them.

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Appendices

Appendix A: Full Questionnaire Survey (Chapter 2)

Full Questionnaire Survey (English Version)

Shenyang Citizen's Access, Evaluation and Usage of Cardiovascular Disease Health Information*

Start of Block: 1

Informed Consent

Q1.1 You are participating in a study about health communication issues among Chinese people. You will spend approximately 5 minutes to finish this questionnaire. Your answers will be treated confidentially and anonymously. The data will be only used for the PhD candidate's research at Erasmus University Rotterdam.

If you have any questions, please contact by email: yang@eshcc.eur.nl

Q1.2 Please indicate if everything is clear to you:

- Yes, everything is clear and I agree to participate in the survey.
- No, I have doubts and I will not participate in the survey.

Skip To: End of Survey If Please indicate if everything is clear to you below: = No, I have doubts and I will not participate in the survey.

End of Block: 1

Start of Block: 2

Q2.1 This survey is about Chinese people's access, evaluation and usage of health information about cardiovascular diseases (CVDs) from different sources. CVDs are the number one cause of death globally: more people die annually from CVDs than from any other causes. Hypertension, diabetes, dyslipidemia, overweight/obesity, smoking, and physical inactivity are known to be major risk factors for developing CVDs.

This study aims to contribute to the development of health communication in China and to enhance knowledge about health communication targeted at Chinese minority groups. Your answers are very important for us. Thank you for your cooperation! :)

End of Block: 2

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*The questionnaire was distributed in Chinese, and it has been translated into English for the purpose of this thesis.

Start of Block: 3

Part 1 Accessing CVD Health Information

Q3.1 In this part, there will be 12 items about your access to information on CVDs and cardiovascular risk factors (CVRFs). This part also covers your usage of the information from different sources.

Q3.2 Do you have any of the following conditions? Mark all that apply.

- ▢ Diabetes or high blood sugar?
- ▢ Hypertension?
- ▢ Dyslipidemia?
- ▢ Overweight/Obesity?
- ▢ Cardiovascular diseases
- ▢ None of above

Q3.3 Have any of your family members ever had CVDs or CVRFs (including hypertension, diabetes, dyslipidemia, overweight, and current smoking)?

- ○ Yes
- ○ No
- ○ Not sure

Q3.4 Have you ever looked for information related to CVDs or CVRFs from any sources? (e.g., media, friends, health organizations, etc.)

- ○ Yes
- ○ No

Q3.5 Have you ever obtained health information on CVDs or CVRFs from below sources?

	Never	Rarely	Sometimes	Often	Always
The internet	○	○	○	○	○
Television	○	○	○	○	○
Radio	○	○	○	○	○
Newspapers or magazines	○	○	○	○	○
Books, brochures, pamphlets, etc.	○	○	○	○	○
Family, friends/co-worker (excluding who work in health-related departments)	○	○	○	○	○
Health organizations, doctors or health care providers	○	○	○	○	○
Religious organizations and leaders	○	○	○	○	○

Display This Question:
If Have you ever obtained health information on CVDs or CVRFs from below sources? = The internet [Sometimes]
Or Have you ever obtained health information on CVDs or CVRFs from below sources? = The internet [Often]
Or Have you ever obtained health information on CVDs or CVRFs from below sources? = The internet [Always]

Q3.6 In terms of using the internet to obtain health information on CVDs and CVRFs, how often do you use below channels?

	Never	Rarely	Sometimes	Often	Always
Health section of the portal (e.g., Sina health)	○	○	○	○	○
The portal of health category (e.g., 39 health network)	○	○	○	○	○
Microblogging (e.g., Sina microblogging)	○	○	○	○	○
WeChat official accounts	○	○	○	○	○
Health category mobile APPs (e.g., the Spring rain doctors, Lilac garden)	○	○	○	○	○
Search engines (e.g., Baidu)	○	○	○	○	○
Network forums (e.g., Tianya Forum)	○	○	○	○	○
Encyclopedia websites (Baidu Encyclopedia, Wikipedia)	○	○	○	○	○
Q&A websites (Baidu know, Zhihu)	○	○	○	○	○

Display This Question:

If Have you ever obtained health information on CVDs or CVRFs from below sources? = The internet [Sometimes]

Or Have you ever obtained health information on CVDs or CVRFs from below sources? = The internet [Often]

Or Have you ever obtained health information on CVDs or CVRFs from below sources? = The internet [Always]

Q3.7 Sometimes people use the internet to connect with other people online through social networks like WeChat or Weibo. This is often called “social media”. Have you ever used social media for any of the following reasons?

	Yes	No
Sharing health information on social networking sites	○	○
Participating in an online forums or support groups for people with similar health or medical issues	○	○
Watching a health-related video on websites like Youku or Tudou	○	○

Display This Question:
If Have you ever obtained health information on CVDs or CVRFs from below sources? = Health organizations, doctors or health care providers [Sometimes]
Or Have you ever obtained health information on CVDs or CVRFs from below sources? = Health organizations, doctors or health care providers [Often]
Or Have you ever obtained health information on CVDs or CVRFs from below sources? = Health organizations, doctors or health care providers [Always]

Q3.8 You have ever read or heard health information on CVDs from health organization, doctor or health care provider. Is the Hui hospital included?

- ○ Yes
- ○ No

Q3.9 Have you ever heard of any specific health information related to CVDs and CVRFs from different sources targeting **the Hui minority people**?

- ○ Yes (if so, what was it? Please fill in) _____
- ○ No

Q3.10 How long in average have you been online per day in the past three months? (Including social media, online forums, emails, etc.)

- ○ 0-2 hours
- ○ 3-5 hours
- ○ 6-8 hours
- ○ More than 8 hours

Q3.11 How do you evaluate your level of experience with the internet?

- ○ Not experienced
- ○ Somewhat experienced
- ○ Very experienced

Q3.12 Based on the results of your most recent search for information related to CVDs and CVRFs, how much do you agree or disagree with the following statements?

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
It took me a lot of effort to get the information I needed.	○	○	○	○	○
I was concerned about the quality of the information.	○	○	○	○	○
The information I found was hard to understand.	○	○	○	○	○
I felt that my needs for health information were satisfied.	○	○	○	○	○

Q3.13 Overall, how confident are you that you could get advice or information related to CVDs and CVRFs if you needed it?

- ○ Not confident at all
- ○ A little confident
- ○ Somewhat confident
- ○ Very confident
- ○ Completely confident

End of Block: 3

Start of Block: 4

Part 2 Evaluation of Health Information from Different Channels

Q4.1 In this part, there will be 5 items about your evaluation of information about information on CVDs and CVRFs according to different criteria.

Q4.2 In general, rate the level of **accuracy** of information on CVDs and CVRFs from the following sources:

	Very low	Somewhat low	Neutral	Somewhat high	Very high	I do not know
The internet	○	○	○	○	○	○
Television	○	○	○	○	○	○
Radio	○	○	○	○	○	○
Newspapers or magazines	○	○	○	○	○	○
Books, brochures, pamphlets, etc.	○	○	○	○	○	○
Family, friends/co-worker (excluding who work in health-related departments)	○	○	○	○	○	○
Health organizations, doctors or health care providers	○	○	○	○	○	○
Religious organizations and leaders	○	○	○	○	○	○

Q4.3 In general, rate the level of **understandability** of information on CVDs and CVRFs from the following sources:

	Very low	Somewhat low	Neutral	Somewhat high	Very high	I do not know
The internet	○	○	○	○	○	○
Television	○	○	○	○	○	○
Radio	○	○	○	○	○	○
Newspapers or magazines	○	○	○	○	○	○
Books, brochures, pamphlets, etc.	○	○	○	○	○	○
Family, friends/co-worker (excluding who work in health-related departments)	○	○	○	○	○	○
Health organizations, doctors or health care providers	○	○	○	○	○	○
Religious organizations and leaders	○	○	○	○	○	○

Q4.4 In general, rate the level of **utility** of information on CVDs and CVRFs from the following sources:

	Very low	Somewhat low	Neutral	Somewhat high	Very high	I do not know
The internet	○	○	○	○	○	○
Television	○	○	○	○	○	○
Radio	○	○	○	○	○	○
Newspapers or magazines	○	○	○	○	○	○
Books, brochures, pamphlets, etc.	○	○	○	○	○	○
Family, friends/co-worker (excluding who work in health-related departments)	○	○	○	○	○	○
Health organizations, doctors or health care providers	○	○	○	○	○	○
Religious organizations and leaders	○	○	○	○	○	○

Q4.5 In general, how much would you trust information related to CVDs and CVRFs from each of the following sources?

	Not at all	A little	Some	A lot
The internet	○	○	○	○
Television	○	○	○	○
Radio	○	○	○	○
Newspapers or magazines	○	○	○	○
Books, brochures, pamphlets, etc.	○	○	○	○
Family, friends/co-worker (excluding who work in health-related departments)	○	○	○	○
Health organizations, doctors or health care providers	○	○	○	○
Religious organizations and leaders	○	○	○	○

Q4.6 Earlier, you answered a question about access frequency, now we want to know, in general, which sources would you prefer to get information related to CVDs and CVRFs from?

	Not at all	A little	Some	A lot
The internet	○	○	○	○
Television	○	○	○	○
Radio	○	○	○	○
Newspapers or magazines	○	○	○	○
Books, brochures, pamphlets, etc.	○	○	○	○
Family, friends/co-worker (excluding who work in health-related departments)	○	○	○	○
Health organizations, doctors or health care providers	○	○	○	○
Religious organizations and leaders	○	○	○	○

End of Block: 4

Start of Block: 5

Part 3 Health Beliefs and Behaviors

Q5.1 In this part, you will be asked 6 items about your health beliefs and behaviors (Including diets, physical activities, body mass index, smoking), please answer them based on your daily life.

Q5.2 How tall are you without shoes?

_____ cm

Q5.3 How much do you weigh without shoes?

_____ Kg

Q5.4 How often do you eat beef, mutton or inners per week?

- Less than twice
- 2-4 times
- 5-7 times
- More than 7 times

Q5.5 How much do you think health behaviors (e.g., diets and physical activities) will reduce the risk of getting each of the following conditions?

	Not at all	A little	Some	A lot
Diabetes/High blood sugar	○	○	○	○
Obesity	○	○	○	○
Smoking	○	○	○	○
High blood pressure/Hypertension	○	○	○	○
Dyslipidemia	○	○	○	○
CVDs	○	○	○	○

Q5.6 In a typical week, how much time do you spend on any physical activities?

- 0-5 hours
- 6-10 hours
- 11-15 hours
- More than 15 hours

Q5.7 How often do you smoke cigarettes?

- Every day
- Some days
- Not at all

End of Block: 5

Start of Block: 6

Part 4 Demographic Information

Q6.1 In this part, you will be asked 8 demographic items, please answer them based on your own situation.

Q6.2 How old are you? (Only fill out the figures: e.g., 27)

_____

Q6.3 Are you female or male?

- Male
- Female

Q6.4 What is your education level?

- High school or lower
- College degree
- Bachelor degree
- Master degree
- PhD degree and above

Q6.5 What is your monthly income (after paying tax) from all sources?

- 0-2000 RMB
- 2001-4000 RMB
- 4001-6000 RMB
- 6001-8000 RMB
- 8001-10000 RMB
- 10001 RMB and above

Q6.6 Do you have health insurance (including any types)?

- Yes
- No

Q6.7 Which ethnic group do you belong to?

- Han majority group
- Hui minority group
- Other minority groups

Q6.8 Where do you live?

- Shenyang Xiguan Hui Hui Quarter area
- Other areas in Shenyang
- Outside Shenyang

Display This Question:
If Which ethnic group do you belong to? = Hui minority group

Q6.9 How strict do you follow the Islamic eating habit?

- Not at all (eat pork)
- A little (no pork, but alcohol accepted)
- Some (prefer Halal food, drink alcohol sometimes)
- A lot (only Halal food, no alcohol)

End of Block: 6

Thanks for your time to participate in this survey.
Your replies has been recorded.

Full Questionnaire Survey (Chinese Version)

沈阳人对心血管疾病健康信息的获取、评估与使用研究

Start of Block: 1

知情同意书

Q1.1 您正在参与一项关于中国人健康传播问题的研究。您大概需要 5 分钟的时间完成该问卷，您的回答将是匿名的，并且您的信息不会被公开。问卷结果将只用于一位博士生在荷兰伊拉斯姆斯大学的研究。

如果您有任何问题，请联系：邮箱：yang@eshcc.eur.nl

Q1.2 若您对以上信息已经明确，请您选择：

- 是，以上信息明确，我同意参与。
- 不，我还有疑问，我拒绝参与。

Skip To: End of Survey If 若您对以上信息已经明确，请您选择： = 不，我还有疑问，我拒绝参与。

End of Block: 1

Start of Block: 2

Q2.1 本调查是关于中国人对来自不同渠道的心血管疾病健康信息的获取、评估和使用情况。**心血管疾病**是全球的头号死因：每年死于心血管疾病的人数多于任何其它死因。高血压、糖尿病、血脂异常、超重和吸烟是公认的引起心血管疾病的风险因子。

本研究致力于推动中国健康传播的发展，并改善中国少数民族群体的健康传播状况。您的回答对我们至关重要！非常感谢您的参与！:）

End of Block: 2

Start of Block: 3

第一部分 对心血管健康信息的获取

Q3.1 第一部分包含 12 道题目。这些题目是关于您平时对心血管疾病及其风险因子信息的获取，还有您平时从各个渠道对其使用情况。

Q3.2 您有以下状况吗？（可多选）

- ▢ 糖尿病或高血糖？
- ▢ 高血压？
- ▢ 血脂异常？
- ▢ 超重/肥胖？
- ▢ 心血管疾病
- ▢ 无以上状况

Q3.3 您的直系亲属中有患心血管疾病或者具备其高危风险因子（包括高血压、糖尿病、血脂异常、超重和吸烟）的吗？

- ○ 是
- ○ 否
- ○ 不确定

Q3.4 您曾经从任何渠道（例如，媒体、朋友、健康机构等）搜索过关于心血管疾病及其风险因子的信息吗？

- ○ 是
- ○ 否

Q3.5 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？

	从不	很少	有时	经常	非常频繁
网络	○	○	○	○	○
电视	○	○	○	○	○
广播	○	○	○	○	○
报纸或杂志	○	○	○	○	○
书籍，说明书，宣传册，等等	○	○	○	○	○
家人，朋友/同事（除医疗部门工作者）	○	○	○	○	○
健康机构，医生或医疗服务提供者	○	○	○	○	○
宗教组织及其领导人	○	○	○	○	○

Display This Question:
If 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 网络 [有时]
Or 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 网络 [经常]
Or 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 网络 [非常频繁]

Q3.6 在使用网络获取心血管及其风险因子的健康信息时，您使用以下渠道的频率是？

	从不	很少	有时	经常	非常频繁
门户网站的健康版块（如新浪健康）	○	○	○	○	○
健康类门户网站（如 39 健康网）	○	○	○	○	○
微博（如新浪微博）	○	○	○	○	○
微信公众号	○	○	○	○	○
健康类手机客户端（如春雨医生、丁香园）	○	○	○	○	○
搜索引擎（如百度）	○	○	○	○	○
网络论坛（如天涯论坛）	○	○	○	○	○
百科类网站（百度百科、维基百科）	○	○	○	○	○
问答类网站（百度知道、知乎）	○	○	○	○	○

Display This Question:
If 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 网络 [有时]
Or 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 网络 [经常]
Or 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 网络 [非常频繁]

Q3.7 有时，人们会通过社交网络（比如：微信或者微博）和其他人进行联系。这些社交网络被称为“社交媒体”。您曾经因以下原因使用过社交媒体吗？

	是	否
在社交网站分享健康信息	○	○
参与为具有相似健康和医疗问题的人们所建立的在线论坛或小组	○	○
在诸如优酷或者土豆的网站上看与健康主题相关的视频	○	○

Display This Question:
If 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 健康机构，医生或医疗服务提供者 [有时]
Or 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 健康机构，医生或医疗服务提供者 [经常]
Or 您曾经从以下渠道获取过关于心血管疾病及其风险因子的信息吗？ = 健康机构，医生或医疗服务提供者 [非常频繁]

Q3.8 您曾经从健康机构、医生或医疗服务提供者渠道获取过关于心血管疾病的健康信息，这些渠道中包括回民医院吗？

- ○ 是
- ○ 否

Q3.9 您曾经从不同渠道听说过针对**中国回族人**的心血管疾病及其风险因子的健康信息吗？

- ○ 是 （什么渠道？请您填写） _____
- ○ 否

Q3.10 在过去的三个月中，您每天平均在线时间多久？（这包括社交媒体、在线论坛、电子邮件等等。）

- ○ 0-2 小时
- ○ 3-5 小时
- ○ 6-8 小时
- ○ 超过 8 小时

Q3.11 您如何评价您的上网水平？

- ○ 不高
- ○ 一般
- ○ 非常高

Q3.12 根据您最近一次搜索心血管疾病及其风险因子相关信息的结果，您在多大程度上赞同或反对以下这些说法？

	强烈反对	比较反对	中立	比较同意	强烈同意
需要花费很多精力才能获取到我需要的信息。	○	○	○	○	○
我比较担心信息的质量。	○	○	○	○	○
我很难理解搜索到的信息。	○	○	○	○	○
我对健康信息的需求得到了满足。	○	○	○	○	○

Q3.13 总体来说，如果您需要的话，您在多大程度上能获取到心血管疾病及其风险因子的信息？

- ○ 完全不能
- ○ 较少程度
- ○ 一定程度上
- ○ 很大程度
- ○ 完全可以

End of Block: 3

Start of Block: 4

第二部分 对不同渠道健康信息的评价

Q4.1 以下 5 道题目是关于您对**心血管疾病及其风险因子相关信息**的评价标准。

Q4.2 总体来说，您如何评价以下渠道的心血管疾病及其风险因子相关信息的**准确程度**？

	非常低	比较低	一般	比较高	非常高	不知道
网络	○	○	○	○	○	○
电视	○	○	○	○	○	○
广播	○	○	○	○	○	○
报纸或杂志	○	○	○	○	○	○
书籍，说明书，宣传册，等等	○	○	○	○	○	○
家人，朋友/同事（除医疗部门工作者）	○	○	○	○	○	○
健康机构，医生或医疗服务提供者	○	○	○	○	○	○
宗教组织及其领导人	○	○	○	○	○	○

Q4.3 总体来说，您如何评价以下渠道的心血管疾病及其风险因子相关信息的**易懂程度**？

	非常低	比较低	一般	比较高	非常高	不知道
网络	○	○	○	○	○	○
电视	○	○	○	○	○	○
广播	○	○	○	○	○	○
报纸或杂志	○	○	○	○	○	○
书籍，说明书，宣传册，等等	○	○	○	○	○	○
家人，朋友/同事（除医疗部门工作者）	○	○	○	○	○	○
健康机构，医生或医疗服务提供者	○	○	○	○	○	○
宗教组织及其领导人	○	○	○	○	○	○

Q4.4 总体来说，您如何评价以下渠道的心血管疾病及其风险因子相关信息的**实用程度**？

	非常低	比较低	一般	比较高	非常高	不知道
网络	○	○	○	○	○	○
电视	○	○	○	○	○	○
广播	○	○	○	○	○	○
报纸或杂志	○	○	○	○	○	○
书籍，说明书，宣传册，等等	○	○	○	○	○	○
家人，朋友/同事（除医疗部门工作者）	○	○	○	○	○	○
健康机构，医生或医疗服务提供者	○	○	○	○	○	○
宗教组织及其领导人	○	○	○	○	○	○

Q4.5 总体来说，您在多大程度上信任来自以下不同渠道的心血管疾病及其风险因子的相关信息？

	完全不能	较少程度	一定程度上	很大程度
网络	○	○	○	○
电视	○	○	○	○
广播	○	○	○	○
报纸或杂志	○	○	○	○
书籍，说明书，宣传册，等等	○	○	○	○
家人，朋友/同事（除医疗部门工作者）	○	○	○	○
健康机构，医生或医疗服务提供者	○	○	○	○
宗教组织及其领导人	○	○	○	○

Q4.6 之前，您回答了关于使用频率的题目，现在我们想要了解总体上您喜欢从哪些渠道获取心血管疾病及其风险因子的健康信息？

	很不喜欢	比较不喜欢	比较喜欢	很喜欢
网络	○	○	○	○
电视	○	○	○	○
广播	○	○	○	○
报纸或杂志	○	○	○	○
书籍，说明书，宣传册，等等	○	○	○	○
家人，朋友/同事（除医疗部门工作者）	○	○	○	○
健康机构，医生或医疗服务提供者	○	○	○	○
宗教组织及其领导人	○	○	○	○

End of Block: 4

Start of Block: 5

第三部分 健康信念和行为

Q5.1 在这部分，您将会回答 6 道有关健康理念和行为（包括饮食、健身运动、身体质量指数、吸烟）的题目，您只需根据日常生活情况回答即可。

Q5.2 您的净高？

_____ cm（厘米）

Q5.3 您的体重？

_____ Kg（公斤）

Q5.4 您每周吃牛羊肉或者肝脏下水的频率？

- 2 次以下
- 2-4 次
- 5-7 次
- 7 次以上

Q5.5 您认为健康行为（比如饮食和运动）会在多大程度上降低以下状况出现的可能性？

	完全不能	较少程度	一定程度上	很大程度
糖尿病/高血糖	○	○	○	○
肥胖	○	○	○	○
抽烟	○	○	○	○
高血压	○	○	○	○
血脂异常	○	○	○	○
心血管疾病	○	○	○	○

Q5.6 在日常的一星期中，您在运动健身方面大约花费多少时间？

- 0-5 小时
- 6-10 小时
- 11-15 小时
- 超过 15 小时

Q5.7 您多久抽次烟？

- 每天
- 偶尔
- 从不

End of Block: 5

Start of Block: 6

第四部分 个人基本信息

Q6.1 在这部分，您将会回答 8 道有关个人基本信息的题目，您只需根据实际情况回答即可。

Q6.2 您的周岁年龄？（只填数字：例如 27）

_____

Q6.3 您的性别？

- 男
- 女

Q6.4 您的教育水平？

- 高中及以下
- 大专
- 本科
- 硕士
- 博士及以上

Q6.5 您每个月的各项税后收入加起来大概有？

- 0-2000 元
- 2001-4000 元
- 4001-6000 元
- 6001-8000 元
- 8001-10000 元
- 10001 元及以上

Q6.6 您有医疗保险吗（任何形式都包括在内）？

- 是
- 否

Q6.7 您的民族？

- 汉族
- 回族
- 其他少数民族

Q6.8 您居住的区域在哪里？

- 沈阳西关回回营回族聚居区
- 沈阳其他区域
- 非沈阳

Display This Question:
If 您的民族？ = 回族

Q6.9 您在多大程度上遵守本民族的伊斯兰饮食习惯？

- 完全不（吃猪肉）
- 一点儿（只是不吃猪肉，接受饮酒。）
- 一些（倾向清真食物，偶尔饮酒。）
- 非常（只吃清真食物，并且不饮酒。）

End of Block: 6

感谢您抽出宝贵的时间参加此调查。
已记录您的回复。

Appendix B: Topic List Focus Groups (Chapter 3)

Focus Group Guide (English Version)*:

1. **Past experiences:**
   - From the sources you wrote down, what kinds of health information on cardiovascular diseases (CVDs)/cardiovascular risk factors (CVRFs) have you ever searched for from these channels respectively?
   - Did you follow the advice in the information you obtained? Why? Will you continue to follow the information in the future?

2. **Evaluation:**
   - From the information you obtained, with what aspects do you feel satisfied?
   - With what aspects do you feel unsatisfied?

3. **Targeting the Hui's situation:**
   - You mentioned that some of your needs are satisfied, but some are not. So why are some needs not satisfied?
   - Do you think it is related to the Hui people's different living and eating habits? Can you explain why?
   - If you have had an unsatisfactory experience in obtaining health information, what advice do you have to make you feel satisfied?

4. **Health needs:**
   - Based on your health situation, what kind of health information on CVDs/CVRFs do you need most? You can list all kinds of information needs, and rank those needs.
   - Why do you rank different needs in this way?
   - As a Hui person, do you have special needs on CVDs/CVRFs that are related to your ethnic identity? If yes, what are they?

5. **Others**
   - Are there any other things that you find important but we haven't discussed?

*All focus groups were conducted in Mandarin; the focus group guide has been translated into English for the purpose of this thesis.

Focus Group Guide (Chinese Version):

焦点小组访谈提纲（第三章）

1. 以往经历
   - 从您列举的渠道中，您分别获取过哪些与心血管疾病及其风险因子相关的健康信息？
   - 您有遵循这些信息给出的建议吗？为什么？在未来，您还会继续遵循这些建议吗？
2. 评价情况
   - 从您获取的信息来看，您在哪些方面的信息需求得到了满足？
   - 在哪些方面，您感觉没有得到满足？
3. 回族情况
   - 您提到您的有些信息需求得到了满足，有些并没有。那么，没有得到满足的原因是什么呢？
   - 您认为这与回族人的生活和饮食习惯有关系吗？您能解释下为什么吗？
   - 如果想满足您的信息需求，您有哪些建议？
4. 健康需求
   - 根据您自身的情况，哪种关于心血管疾病及其风险因子的健康信息是您最需要的？您可以在便签纸上列出所有的信息需求，并为这些需求进行排序。
   - 为什么您把不同的需求排序如下？
   - 作为回族人，在心血管疾病及其风险因子的信息方面，您有没有一些特殊需求是与回族这个民族相关的？这些需求是什么？
5. 其他
   - 还有没有其他情况是您认为很重要，但是我们在访谈中没有涉及到的？

Appendix C: The Demographic Questionnaire (Chapter 3)

English Version*:

1. Are you female or male?
   - Male
   - Female

2. How old are you? (Only fill out the figures: e.g., 27)

   _____

3. What is your occupation?

   _____

4. What is your education level?
   - High school or lower
   - College degree
   - Bachelor degree
   - Master degree
   - PhD degree and above

5. Do you have any of the following conditions? Mark all that apply.
   - Diabetes or high blood sugar?
   - Hypertension?
   - Dyslipidemia?
   - Overweight/Obesity?
   - Cardiovascular diseases
   - Other chronic diseases (_____)
   - None of above

6. Do your immediate family members have any of the following conditions? Mark all that apply.
   - Diabetes or high blood sugar?
   - Hypertension?
   - Dyslipidemia?
   - Overweight/Obesity?
   - Cardiovascular diseases
   - Other chronic diseases (_____)
   - None of above

7. How often do you smoke cigarettes?
   - Every day
   - Some days
   - Not at all

8. How strict do you follow the Islamic eating habit?
   - Not at all (eat pork)
   - A little (no pork, but alcohol accepted)
   - Some (prefer Halal food, drink alcohol sometimes)
   - A lot (only Halal food, no alcohol)

*The questionnaire was distributed in Chinese, and it has been translated into English for the purpose of this thesis.

Chinese Version:

焦点小组访谈受访者基本信息调查

1. 您的性别？
   - 男
   - 女
2. 您的周岁年龄？（只填数字：例如，27）

   _____
3. 您的职业？

   _____
4. 您的教育水平？
   - 高中及以下
   - 大专
   - 本科
   - 硕士
   - 博士及以上
5. 您有以下状况吗？(可多选)
   - 糖尿病或高血糖？
   - 高血压？
   - 血脂异常？
   - 超重/肥胖？
   - 心血管疾病
   - 其他慢性疾病（_____）
   - 无以上状况
6. 您的直系亲属中有具备以下状况的吗？(可多选)
   - 糖尿病或高血糖？
   - 高血压？
   - 血脂异常？
   - 超重/肥胖？
   - 心血管疾病
   - 其他慢性疾病（_____）
   - 无以上状况

7. 您多久抽次烟？

- 每天
- 偶尔
- 从不

8. 您在多大程度上遵守本民族的伊斯兰饮食习惯？

- 完全不（吃猪肉）
- 一点儿（只是不吃猪肉，接受饮酒。）
- 一些（倾向清真食物，偶尔饮酒。）
- 非常（只吃清真食物，并且不饮酒。）

Appendix D: Thematic Analysis Scheme for Content Analysis of TV Health Programs (Chapter 4)

Appendix E: Thematic Analysis Scheme for Content Analysis of WeChat Articles (Chapter 5)

Appendix F: Overview of the WeChat Articles Shown in the Results (Chapter 5)

Summary (Dutch, English, Chinese)

Nederlandse Samenvatting

De Hui vormen een van de grotere minderheidsgroepen in China, terwijl de Han de dominante meerderheid zijn (Gustafsson & Sai, 2014). Historisch gezien hebben de Hui hun eigen cultuur die is gebaseerd op de Islam, maar tegenwoordig worden ze in toenemende mate ook beïnvloed door de Han cultuur (Dillon, 2013). Wel hebben de Hui specifieke gezondheidsproblemen, zoals een hoog risico op hart-en vaatziekten (J. Wu et al., 2016). Om deze situatie vanuit een gezondheidscommunicatie perspectief te verbeteren dienen er campagnes gevoerd te worden met betrekking tot een gezondere leefstijl met aandacht voor gezonde voeding en voldoende lichaamsbeweging (J. Wu et al., 2016). Het doel van deze dissertatie is een bijdrage te leveren aan de ontwikkeling van gezondheidscommunicatie in China. Het onderzoek is verankerd in de cultuur-specifieke benadering van gezondheidscommunicatie, de Culture Centered Approach (CCA) (Dutta, 2007a, 2008; Gao, Dutta, & Okoror, 2016). De onderzoeken in deze dissertatie dragen bij aan de verbetering van de gezondheidscommunicatie die gericht is op de Chinese minderheidsgroep, de Hui. In dit onderzoek werden de volgende vragen gesteld:

1. *Welke bronnen gebruiken de Hui om gezondheidsinformatie te verwerven, in het bijzonder over hart- en vaatziekten, en hoe evalueren zij deze bronnen?*

2. *Welke behoeften hebben de Hui in relatie gezondsheidsinformatie over hart- en vaatziekten uit verschillende bronnen?*

3. *Welke informatie over hart-en vaatziekten is beschikbaar op televisie en het internet in China?*

4. *Op welke wjze is de gezondheidsinformatie in televisieprogramma's en WeChat artikelen gericht op de Hui?*

Deze vragen zijn beantwoord door middel van online-enquêtes, focusgroepen en inhoudsanalyses van televisieprogramma's en WeChat artikelen. De resultaten van de verschillende studies laten zien dat de Hui gebruik maken van verschillende bronnen voor advies over hart-en vaatziekten, waarbij het internet en de televisie domineren. De Hui hebben het meeste vertrouwen in informatie afkomstig van gezondheidsorganisaties, artsen en de gezondheidszorg. De informatie van religieuze leiders en organisaties wordt het minst betrouwbaar gevonden. De Hui die aan ons onderzoek deelnamen hebben behoefte aan betrouwbare en professionele informatie vanuit verschillende bronnen die gekoppeld zou moeten worden aan gezondheidscampagnes. Uit ons onderzoek naar gezondheidsprogramma's op de Chinese televisie en WeChat artikelen blijkt dat beide bronnen verschillende soorten gezondheidsinformatie bieden, maar dat geen van beide zich specifiek op de Hui richt. Deze resultaten zijn relevant voor professionals die zich bezighouden met het verspreiden van gezondheidsinformatie gericht op de verschillende Chinese minderheidsgroepen. Daarnaast kan dit proefschrift bijdragen aan het op een effectievere manier overbrengen van informatie over hart-en vaatziekten aan de Hui.

Summary

The Chinese Hui are the third largest minority group in China, where the Han are the dominant majority (Gustafsson & Sai, 2014). Historically, the Hui have embraced their own distinct culture based on their Muslim ancestry, but they are now also influenced by that of the Han (Dillon, 2013). Nonetheless, issues relating to the Hui's health are still unique, as they have a higher incidence of cardiovascular risk factors (CVRFs) (J. Wu et al., 2016). Improving this situation from a health communication perspective would require the promotion of a healthy lifestyle, including diet and exercise (J. Wu et al., 2016). The aim of this dissertation is to contribute to the development of health communication in China. The research is embedded in the culture-centered approach (CCA) to health communication (Dutta, 2007a, 2008; Gao, Dutta, & Okoror, 2016). More specifically, the studies described contribute to improving what is known about health communication targeted at the Chinese Hui ethnic minority group. The research was guided by the following questions:

1. *How do the Hui ethnic minority people access and evaluate health information from different sources, in particular with respect to CVDs?*
2. *What needs do the Hui have concerning CVD-related health information from different sources?*
3. *What kinds of CVD-related health content do television and the internet convey in China?*
4. *How does the CVD-related health content on television health programs and WeChat official accounts target the Hui minority group?*

These questions were answered using an online survey, focus groups and content analyses of television programs and WeChat articles. The results of the different studies revealed that the Hui rely on different sources for advice about CVDs, with the internet and television most prominent. They trust and prefer the information provided by health organizations, doctors or healthcare

providers, while that delivered by religious organizations and leaders is trusted the least. The Hui in our corpus want credible and professional information from different sources and mediated health communication programs that are targeted at them; the research's examination of the health programs on Chinese television and the articles posted on WeChat official accounts revealed that both convey different kinds of CVD-related health information, but none of this is specifically targeted at the Hui. These results are relevant for health information promoters concerned with Chinese minorities, and can help them to disseminate advice on CVDs to the Hui more effectively.

概要

回族是中国第三大少数民族，汉族是中国主体民族 (Gustafsson & Sai, 2014)。历史上，回族的祖先是穆斯林，回族形成了自己独有的民族文化。当今，回族人也受汉族文化的影响 (Dillon, 2013)。但是，回族人的健康状况与汉族和其他少数民族相比，具备独特性——回族人的心血管疾病风险因子的流行率较高 (J. Wu et al., 2016)。从健康传播的视角来改善这种状况，需要在回族人中提倡一种健康生活方式，包括健康的饮食习惯和体育锻炼 (J. Wu et al., 2016)。

本博士论文致力于为中国健康传播发展做出贡献。本论文采用以文化为中心的研究方法 the culture-centered approach (CCA) 来探讨健康传播 (Dutta, 2007a, 2008; Gao, Dutta, & Okoror, 2016)。更详细地说，本论文致力于为中国回族健康传播增添新内容。主要研究问题如下：

1. 回族人如何获取和评估来自不同渠道的心血管疾病健康信息？
2. 关于来自不同渠道的心血管疾病健康信息，回族人有哪些需求？
3. 中国的电视和网络传播了哪些关于心血管疾病的健康信息？
4. 对于回族受众，中国的电视健康节目和微信公众号以哪种方式传播心血管疾病健康信息？

本论文通过在线问卷调查、焦点小组访谈和电视健康节目与微信文章内容分析三种方式来回答研究问题。不同研究的结果显示，回族人使用不同的渠道来获取关于心血管疾病的信息，其中以网络和电视为主导。回族人最信任和最喜欢通过健康机构、医生或医疗服务提供者获取心血管疾病健康信息。然而，宗教组织及其领导人所提供的心血管疾病健康信息最不受信任。回族人表达了对来自不同渠道的可信和专业的健康信息的需求，并且希望有专门对于回族人的健康传播节目。中国电视健康节目和微信文章传播了不同的心血管疾病相关健康信息，但是电视和微信没有提供专门对于回族人的健康信息。

本研究的成果将帮助中国少数民族健康传播的推动，并帮助健康传播者更有效地向回族人传播心血管疾病相关的健康信息。

List of Publications Related to This Project

Yang, L., Mao, Y., & Jansz, J. (2018). Chinese urban Hui Muslims' access to and evaluation of cardiovascular diseases-related health information from different sources. *International Journal of Environmental Research and Public Health*, *15*(9), 2021. https://doi.org/10.3390/ijerph15092021

Yang, L., Mao, Y., & Jansz, J. (2019). Understanding the Chinese Hui ethnic minority's information seeking on cardiovascular diseases: A focus group study. *International Journal of Environmental Research and Public Health*, *16*(15), 2784. https://doi.org/10.3390/ijerph16152784

Manuscripts related to this project submitted for publication:

Yang, L., Mao, Y., & Jansz, J. Health information related to cardiovascular diseases broadcast on Chinese television health programs.

Yang, L., Mao, Y., & Jansz, J. A qualitative content analysis of health information related to cardiovascular diseases on Chinese WeChat official accounts.

Portfolio

Courses Followed During the PhD Project

The Academic Year 2015-2016:

- How to survive your PhD
  (EGSH, Erasmus University Rotterdam, September-December 2015, 2.5 ECTS)
- Making your research proposal work for you
  (EGSH, Erasmus University Rotterdam, October 2015-January 2016, 2.5 ECTS)
- Doing the literature review
  (EGSH, Erasmus University Rotterdam, November 2015-March 2016, 2.5 ECTS)
- Introduction to statistical analysis (Course Code: CM1005)
  (ESHCC, Erasmus University Rotterdam, November 2015-January 2016, 5 ECTS; Grade: 7.6)
- English academic writing for PhD candidates
  (EGSH, Erasmus University Rotterdam, February-March 2016, 2 ECTS)
- PhD workshop: Introduction to media contacts for researchers
  (EGSH, Erasmus University Rotterdam, March 2016)
- PhD workshop: Work-life balance for PhD candidates
  (EGSH, Erasmus University Rotterdam, April 2016)
- Presenting and networking
  (EGSH, Erasmus University Rotterdam, April 2016, 2.5 ECTS)
- Introduction to qualitative comparative analysis (QCA)
  (EGSH, Erasmus University Rotterdam, June 2016, 1.5 ECTS)

The Academic Year 2016-2017:

- PhD workshop: Professionalism and integrity in research
  (EGSH, Erasmus University Rotterdam, September 2016, 1 ECTS)

- Philosophy of the social sciences and the humanities
  (EGSH, Erasmus University Rotterdam, September 2016, 2.5 ECTS)
- Quantitative methods in media and communication (Course Code: CM2005)
  (ESHCC, Erasmus University Rotterdam, September-November 2016, 5 ECTS; Grade: 7.7)
- PhD workshop: Brush up your SPSS skills
  (EGSH, Erasmus University Rotterdam, October 2016, 1 ECTS)
- Your personal PhD work-life balance: How to do less, but achieve more
  (EGSH, Erasmus University Rotterdam, October 2016, 1 ECTS)
- The Dean's Master Classes: Session 1 Religion; Session 2 Migration; Session 3 Sex; Session 4 Aging
  (Award: The Dean's Award for Multidisciplinary Excellence, Session 2 Migration, January 2016).
  (EGSH, Erasmus University Rotterdam, September 2015-November 2016, 5 ECTS)

The Academic Year 2017-2018:

- Cross-cultural awareness and communication
  (EGSH, Erasmus University Rotterdam, August 2017, 1 ECTS)
- Shut up and write
  (EGSH, Erasmus University Rotterdam, November 2017, 1 ECTS)
- Data analysis with R
  (EGSH, Erasmus University Rotterdam, March 2018, 1 ECTS)
- Full interviewing curriculum
  (EGSH, Erasmus University Rotterdam, November 2017-March 2018, 2.5 ECTS)

The Academic Year 2018-2019:

- Research school for Media Studies (RMeS) Winter School & Graduate Symposium 2018-19
  (RMeS, Leiden University, January 2019, 2 ECTS)
- Brush up your research design: Tips and tricks to achieve your research aim
  (EGSH, Erasmus University Rotterdam, January-February 2019, 2.5 ECTS)

The Academic Year 2019-2020:

- Presenting PechaKucha style
  (EGSH, Erasmus University Rotterdam, September-October 2019, 1 ECTS)

Invited Guest Lectures During the PhD Project

Title: Health Communication Issues among Chinese Hui Muslims in Shenyang (China)
Course Name: Research workshop Media and Migration (Course Code: CM4254)
Date: 26th November, 2018
Location: Department of Media and Communication, Erasmus University Rotterdam, Rotterdam, the Netherlands.

Title: 中国沈阳回族人健康传播问题研究
Health Communication Issues among Chinese Hui Minority People in Shenyang (China)
Course Name: Health Communication
Date: 26th December, 2018
Location: School of Journalism, Fudan University, Shanghai, China.

Academic Services During the PhD Project

July 2018	Reviewer for *Telematics and Informatics* journal
November 2018	Reviewer for the 69th Annual International Communication Association (ICA) Conference
November 2019	Reviewer for the 70th Annual International Communication Association (ICA) Conference
November 2019	Reviewer for Etmaal van de Communicatiewetenschap (24 Hours of Communication Sciences) 2020

Conferences and Academic Workshops During the PhD Project

Presentations:

Conference: The 67th Annual Conference of the International Communication Association
Dates: 25th-29th May, 2017
Location: San Diego, USA
Work Presented: Chinese Hui Minority People's Access and Usage of Cardio-Vascular Diseases Health Information from Different Channels

Conference: Etmaal van de Communicatiewetenschap (24 Hours of Communication Sciences) 2018
Dates: 8th-9th February, 2018
Hosting University and Location: Ghent University, Ghent, Belgium
Work Presented: Chinese Hui Minority People's Needs in Obtaining Health Information about Cardiovascular Diseases

Conference: The 68th Annual Conference of the International Communication Association
Dates: 24th-28th May, 2018
Location: Prague, Czech Republic
Work Presented: Chinese Hui Minority People's Needs in Obtaining Health Information about Cardiovascular Diseases

Symposium: Research School for Media Studies (RMeS) Winter School & Graduate Symposium 2018-19
Date: 31st January, 2019
Hosting University and Location: Leiden University, Leiden, the Netherlands
Work Presented: Health Information Related to Cardiovascular Diseases and Cardiovascular Risk Factors in Chinese Television Health Programs

Conference: Etmaal van de Communicatiewetenschap (24 Hours of Communication Sciences) 2019
Dates: 7th-8th February, 2019
Hosting University and Location: Radboud University, Nijmegen, the Netherlands
Work Presented: Health Information Related to Cardiovascular Diseases and Cardiovascular Risk Factors in Television Health Programs in China

Seminar: Erasmus Research Centre for Media, Communication and Culture (ERMeCC) Lunch Seminar
Date: 15th October, 2019
Hosting University and Location: Erasmus University Rotterdam, Rotterdam, the Netherlands
Work Presented: Health Information Related to Cardiovascular Diseases in Chinese Television Health Programs

Attended conferences and academic workshops:

Conference: Denim on Stage: University Meets Industry at Denim City
Date: 30th October, 2015
Hosting University and Location: Organized by Erasmus University Rotterdam on behalf of The Enterprise of Culture, in collaboration with HTNK fashion recruitment & consultancy and the University of Leeds, Amsterdam, the Netherlands

Conference: European Fan Cultures Conference
Dates: 12th-13th November, 2015
Hosting University and Location: Erasmus University Rotterdam, Rotterdam, the Netherlands

Conference: Etmaal van de Communicatiewetenschap (24 Hours of Communication Sciences) 2016
Dates: 4th-5th February, 2016
Hosting University and Location: Vrije Universiteit Amsterdam, Amsterdam, the Netherlands

Symposium: Mediated Narratives, Interactive Technology and Health Behaviors
Dates: 23rd-24th March, 2017
Hosting University and Location: University of Antwerp, Antwerp, Belgium

Academic Workshop: Social Media Data Harvesting Workshop
Date: 8th November, 2017
Hosting University and Location: Erasmus University Rotterdam, Rotterdam, the Netherlands

Symposium: Media & Business Symposium: Leading in Tumultuous Times - What Digitalisation Means For the Future of Media and Business
Date: 8th December, 2017
Hosting University and Location: Erasmus University Rotterdam, Rotterdam, the Netherlands

Conference: Erasmus Early-Career Scholars Conference on "New business models and globalized markets: Rethinking public and private responsibilities"
Dates: 11th-13th April, 2018
Hosting University and Location: Erasmus University Rotterdam, Rotterdam, the Netherlands

Academic Workshop: Nefca Method workshop - Membership Categorization Analysis
Date: 17th May, 2019
Hosting University and Location: Erasmus University Rotterdam, Rotterdam, the Netherlands

Curriculum Vitae

Lei Yang (1989) was born in Shenyang City, Liaoning Province, China. She holds a Bachelor's degree in Journalism (2012, Liaoning University) and a Research Master's degree in Journalism (2015, Liaoning University). During her studies, Yang worked as a journalism intern and a part-time magazine writer. In addition, she also taught drama, film & TV literature, English and math as part-time jobs. Yang received China National Scholarship in 2013 and scholarship from the China Scholarship Council (CSC) in 2015.

In 2015, Yang started as a PhD candidate at the Department of Media & Communication at Erasmus University Rotterdam. Her PhD project is titled "New media and health communication: from an inter-cultural perspective". She was a researcher at the Erasmus Research Centre for Media, Communication and Culture (ERMeCC), where she participated actively in lunch seminars and workshops. She also joined activities in the ERMeCC PhD Club. In 2016, she got "The Dean's Award for Multidisciplinary Excellence". In 2017, her photograph won 1st prize in *ACCESS* magazine's Our View Photo Contest in the Netherlands.

During her PhD candidacy, Yang participated in various international academic conferences and symposiums. She was a member of International Communication Association (ICA) and the Netherlands - Flanders Communication Association (NeFCA). In 2017, she was a visiting researcher at the Department of Communication Studies at California State University, Long Beach in USA. In 2018, she was invited by Fudan University (Shanghai, China) to give guest lecture at school of Journalism. In addition, her research has been published in international peer-reviewed academic journals and she also reviewed articles for international academic journals.

Yang visited 20 countries in her PhD career. Having lived in Asia, Europe and North America, she gained international experience and she likes to communicate with people from different cultural backgrounds.

作者简介

杨蕾，回族人，1989 年出生于中国辽宁省沈阳市。2012 年，毕业于辽宁大学，新闻学专业学士；2015 年，毕业于辽宁大学新闻与传播学院，新闻学专业学术型硕士。在攻读本科和硕士学位期间，曾在报社和杂志社做过实习记者和兼职作家。此外，她还曾在培训学校兼职教授戏剧影视文学、英语和数学的课程。2013 年，杨蕾获得“硕士研究生国家奖学金”；2015 年，获得“国家留学基金委 (CSC) 国家公派出国留学资格”。

2015 年，杨蕾开始在荷兰鹿特丹伊拉斯姆斯大学媒体与传播专业攻读博士学位。她的博士研究课题名为“跨文化视角下的新媒体与健康传播”。她是伊拉斯姆斯媒体、传播与文化中心的研究人员，积极参与中心举办的午间研讨会和讲座。此外，她还参与中心旗下的博士俱乐部举办的活动。2016 年，杨蕾获“院长多学科卓越奖”。2017 年，她的摄影作品在荷兰 ACCESS 杂志举办的 Our View Photo Contest 摄影比赛中荣获“一等奖”。

在博士学习生活中，杨蕾曾多次参加各种国际学术会议和研讨会。她曾是国际传播学会和荷兰—法兰德斯传播学会的会员。2017 年，她在美国加州州立大学长滩分校传播学专业做访问学者。2018 年，她受邀在中国复旦大学新闻学院做客座讲座。此外，她还曾在国际学术期刊上发表学术论文，并为国际学术期刊进行审稿。

杨蕾喜欢和来自不同文化背景的人交流。在攻读博士学位期间，她曾游历 20 个国家。在亚洲、欧洲和北美生活的经历令她获得了国际化的视野和丰富的人生阅历。