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**A CASE STUDY ON SAUDI'S HEALTH-RELATED ATTITUDE,
BEHAVIOR, AND CONSCIOUSNESS**

Leenah Iskandarani

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**A CASE STUDY ON SAUDI'S HEALTH-RELATED ATTITUDE,
BEHAVIOR, AND CONSCIOUSNESS**

A DISSERTATION SUBMITTED TO THE FACULTY OF THE
SCHOOL OF EDUCATION OF THE UNIVERSITY OF ST. THOMAS
ST. PAUL, MINNESOTA

by

Leenah Suhail Iskandarani

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF EDUCATIONAL LEADERSHIP

2021

UNIVERSITY OF ST. THOMAS,
MINNESOTA


**A CASE STUDY ON SAUDI'S HEALTH-RELATED ATTITUDE,
BEHAVIOR, AND CONSCIOUSNESS**

We certify that we have read this dissertation and approved it as adequate in scope and quality. We have found that it is complete and satisfactory in all respects, and that any and all revisions required by the final examining committee have been made.

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May 21, 2021

Final Approval Date

DEDICATION

This dissertation is dedicated to my children Salma, Suliman, and Dawud. I hope this work inspire you to carry on your dreams and become what you believe. This is proof that hard work pays off, so aim high and achieve great things. Remember, always put your faith in God, trust yourself, be patient, don't give up, do your best, show respect, and be kind. I LOVE YOU!

ACKNOWLEDGMENT

and say: My Lord! Advance me in knowledge

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ABSTRACT

The burden of non-communicable diseases (NCDs) is progressively increasing in Saudi Arabia. Tackling the common risk factors of NCDs is an urgent priority to ensure the population's health. Even though healthcare is free of charge in Saudi Arabia, the issue of non-compliance or non-adherence from the public still exists. The current research addressed the factors that affect Saudi's health related attitudes and behavior, which has so far been lacking in the scientific literature. This qualitative case study provided an in-depth analysis of Saudis' health consciousness phenomena. The findings are based primarily on themes that emerged from the data analysis of 1618 qualitative survey responses and 18 personal interview transcripts. Major themes that emerged from this study were: health beliefs, health awareness, health motivation, and health barriers. The data described the participants' health-related knowledge, practices, and challenges. Participants correctly identified the relation between healthy lifestyles and disease prevention. Yet, many participants failed at maintaining a healthy lifestyle. The data clearly presented a dichotomy between Saudis' health-related knowledge and practice. Saudis' health understanding is based on a broad range of cultural domains, and not solely on health perceived knowledge. Hence, Saudis' health behavior is influenced by personal, social, environmental, and economic factors. Saudis must reflect on their health reality, by addressing the influential factors, and change the myth or the misunderstood health concepts. Understanding the concept of health consciousness as a personal attribute will have greater power in predicting diverse health behaviors among Saudis. The Health Conscientization Model calls for a need to foster critical health consciousness to build collective action to improve the health status of the Saudi

population. It is only by reaching critical health consciousness that the health status of Saudis will improve. The model defined Saudis' ability to recognize and analyze influential forces shaping health status and their willingness to change unhealthy behaviors. The Health Conscientization Model speaks to health policymakers, leaders, educators, and the Saudi community at large to empower Saudis in changing their risky behaviors to improve their health.

Keywords: Saudis' health, health attitude, health behaviors, health consciousness, Saudi Arabia healthcare system, health awareness, health information, healthcare utilization, Paulo Freire's notion of level of consciousness, critical consciousness, Health Conscientization Model.

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List of List of Abbreviations

MOH	Ministry of Health
WHO	World Health Organization
NCDs	Non-communicable Diseases
SHIS	Saudi Health Interview Survey
COVID-19	Coronavirus Disease 2019

CHAPTER 1: INTRODUCTION AND OVERVIEW

Historical Background of the Problem

Health is a prerequisite for national development as healthy citizens make the country more politically stable and financially secure (Brower, 2003). Investment in the health sector has become a top priority for the Saudi government to ensure the lasting growth of the country (Almutari et al., 2014). Healthcare in Saudi Arabia is free of charge to all Saudi citizens as it seen as a “human right.” According to the Saudi Constitution (1992; rev. 2013), “The State shall be solicitous for promoting public health and shall provide medical care to every citizen” (Article 31, p. 6/ Para. 9). The Ministry of Health (MOH), the institution responsible for running the country’s healthcare system, is committed to improve the health of the public by planning strategic healthcare services, implementing health polices, and running several public health programs targeting health promotion (MOH, n.d.).

With the discovery of oil in Saudi Arabia, the socioeconomic status of Saudi citizens changed dramatically, therefore changing all aspects of how Saudis live their lives (Walston et al., 2008). The country witnessed rapid industrialization that changed the transportation, residential, commercial, and institutional divisions. Moreover, the new advanced socioeconomic status of Saudi Arabian citizens improved the infrastructure and facilities throughout the country (Aljoudi et al., 2015). Yet, as people have become more dependent on transportation, they have shifted from field jobs to office jobs, and they find entertainment from the convenience of their couches rather than experiencing it outside their homes. These changes in Saudi culture have promoted a sedentary lifestyle with a low prevalence of physical activity (Rahmman, 2020; Khalil et al., 2018).

In addition, the shift in culture has negatively affected the food consumption of Saudi citizens. The rapid urbanization of Saudi Arabia vividly changed people's lifestyles not only with regard to activities but with food as well (Aljoudi et al., 2015). In fact, the economic growth of Saudi Arabia had a positive effect on the food supply throughout the country. However, though there remained larger quantities of overall food throughout the country, the nutritional value of that food decreased substantially. As a result of the new food trends, the concept, behavior, and pattern of eating changed among Saudis. Saudis abandoned their simple prepared foods in favor of modern processed foods that are higher in sugar, salt, and fat (Moradi-Lakeh et al., 2016). As well, Saudis' consumption of fast food, that possesses significant amounts of refined flour and vegetable oils, is increasing. Unfortunately, the changes in lifestyle negatively impacted Saudis' health status. In fact, the Saudi Health Interview Survey (SHIS) revealed that the prevalence of obesity, low physical activity, and poor dietary habits among Saudis are significantly increasing year after year (MOH, 2017). This evidence calls for comprehensive programs that improve the health status of Saudis.

The healthcare system in Saudi Arabia is undergoing rapid changes to confront the new health issues and challenges. The government increased the health sector budget to support the development of healthcare facilities for its citizens (Alfaqeeh et al., 2017). The healthcare sector budget in 2019 reached 172 billion Saudi Riyals (MOH, n.d.). MOH introduced many reforms to its services, focusing on the goal of preventing chronic diseases (Al-Masabi, 2013). It planned and implemented a variety of strategies that: (1) provided health education campaigns to promote public awareness, (2) increased the number of screening clinics to detect diagnosis early, and (3) controlled the risk factors to decrease the incidence of chronic diseases. The MOH integrated mass media, printed media, community engagement, and advocacy strategies to attend the public

health awareness. The MOH strategic approach focused on treating diseases to promote health awareness among all Saudi communities.

Problem Statement

Despite the MOH efforts, the issue of non-compliance or non-adherence from the public still exists (Moradi-Lakeh et al., 2016). This issue poses serious health concerns and challenges to maintain healthy status among the public. Unfortunately, the burden of non-communicable diseases (NCDs) is still increasing (MOH, 2017). NCDs, are chronic diseases that characterized with long-lasting and slow-progressing illnesses that are not transmissible directly from one person to another (WHO, n.d.). According to the World Health Organization (WHO), NCDs will soon become the principal cause of morbidity and mortality in Saudi Arabia (WHO, 2015). As a result, 17% of adults, ages 30 to 70, are expected to die from four main NCDs: diabetes mellitus, stroke, cancers, and chronic respiratory diseases. In 2019, health statistics showed that 73.41% of all deaths in Saudi Arabia were caused by NCDs (WHO, 2020).

A key aspect of NCDs is the modifiable behavioral risk factors, also called risky behaviors, such as tobacco use, bad eating habits, low physical activity, which consecutively lead to obesity, raised blood pressure, elevated cholesterol level, and eventually serious chronic diseases (WHO, 2020). According to the SHIS, the prevalence of obesity (35%), raised blood pressure (25.2%), and elevated cholesterol level (16.8%) is significantly increasing (MOH, 2017). The findings of SHIS call for more efforts to prevent chronic disease risk factors.

Although healthcare services are free in Saudi Arabia, 75.5% of the population never got their routine medical checkup and only utilize healthcare facilities when they become very ill (Moradi-Lakeh et al., 2016). A recent study revealed that the majority of Saudis, from both urban

and rural regions, have not made an appointment with a doctor in the past 12 months. It is clear that not all Saudis access and utilize their healthcare facilities (Alfaqeeh, 2017).

In spite of the free healthcare facilities in Saudi Arabia and the MOH initiatives to improve and promote health status of Saudis, there is not enough data to suggest any progress is being made with regard to their goals. This issue raises questions: What is happening? Why are Saudis not using all the services that the MOH has provided? Do Saudis know about these healthcare programs? Are these programs realistically accessible to the public? How do Saudis connect health information to their own health? The current research attempts to answer these questions by assessing the factors that may be affecting Saudis' health understanding and experience.

The Purpose of the Study

The prevalence of NCDs is remarkably increasing in Saudi Arabia (WHO, 2020). As previously noted, the MOH had made tremendous efforts to improve the population's health by providing a full range of educational, diagnostic, and therapeutic health services. Although the MOH conducted empirical quantitative research pertaining to tackle the primarily risk factors of NCDs, no known research in Saudi Arabia has attempted to analyze the lifestyle factors in the context of health attitudes and behavior. Therefore, the purpose of this qualitative case study is to explore and shed light on Saudis' health related attitudes and behavior; and furthermore, to understand the factors that make seeking and utilizing healthcare facilities challenging.

This research helps gauge a better understanding of Saudis' perceptions, thoughts, and feelings toward health in general. In addition, it will provide insight into the factors that underline and shape Saudis' attitude toward health practices. The intentions of the current research are to investigate the role of health consciousness in explaining Saudis' health attitude

and practice pattern. Furthermore, it will attempt to understand the central phenomenon of Saudis' health consciousness bounded in Saudi Arabia social context. This dissertation provides in-depth analysis of the factors that impact Saudis' health perceptions and experiences. Understanding Saudis' health attitude, behaviors, and consciousness is important step in informing health policies to improve Saudis' health in general.

Research Questions

This current research addresses the following questions:

1. How do Saudis experience and understand health?
2. How does this experience and understanding of health inform or shape health consciousness for Saudis?

Personal Motivation

From my professional nursing experience serving Saudi patients, I have witnessed Saudis' behaviors and practices toward health. Enlightened by my involvement with Saudis, I grasped how they were unaware of their health condition, unable of identifying health risk factors, and ignorant to their personal role in managing a healthy status. For instance, I was once working with an elderly man and trying to gather his medical history. When I asked if he suffered from any diseases and if he took any medication, he answered no. I discovered later that he was taking a medication that lowered blood sugars, which is only prescribed for patients with diabetes mellitus. However, the patient failed to identify diabetes mellitus as a serious disease. It was then that I realized this patient, and many other patients, thought that diabetes mellitus a normal condition and expected to happen with aging. In fact, most the patients I worked with denied expressing diabetes milieus as a disease; as they refer to the condition "sugar inconsistency." Further, Saudi patients failed to identify any risks associated with diabetes

milieus. My personal experience with Saudi patients left me curious to know whether or not Saudis comprehensively understand health and health issues. Therefore, this experience defined my purpose in finding a more objective and personal way to reveal Saudis' health awareness. Following my experience, it became evident that there is a need to understand how Saudis construct their individual and shared meaning around health. Moreover, it is essential to explore Saudis' overt behavior with regard to health. Therefore, my research addressed how Saudis define health, healthy lifestyle, and risky behaviors. As well, I investigated how Saudis' meaning of health influences their health attitudes and behaviors.

The Significance of the Research

A focus on health promotion intervention has been emphasized by healthcare policy makers in Saudi Arabia. Over the last decade, the MOH has integrated programs and projects aimed to alleviate the burden of NCDs risk factors. However, based on the latest report by SHIS, Saudis are not utilizing healthcare facilities. Furthermore, they are not engaging in health promotion programs. Accordingly, it is important to understand Saudis' health-related practices in order to identify why they are denying themselves of good health.

Insufficient research has been conducted regarding Saudis' health awareness and its relation to their health-related attitude and behavior. The majority of studies, conducted with regard to health attitude and behavior, have attempted to focus on the numerical data of specific health conditions and treatments. No qualitative research exists addressing how Saudis perceive the term "health," and in turn, how they connect health to lifestyle. The value of qualitative research is further explained by valuing individual narrative experience and presenting in-depth explanation of participants' thoughts, values, and opinions (Maxwell, 2005). Therefore, I used a qualitative case study approach to develop a more complete picture of Saudis' health attitude and

behavior. Understanding the ability and willingness of the person to change their lifestyle and behavioral habits is crucial to improving the health among the Saudi community and increasing lifelong wellbeing. In addition, building adequate evidence is an important step in determining the proper guidelines to improve the health care services and programs, which support Saudis' health and wellness. Health awareness comprises an individual's beliefs and actions with regard to health issues and problems (Hong, 2009; Hoque, 2018). Understanding health consciousness leads to understanding health attitudes and behavior. Thus, taking heed of Saudis' health consciousness is important to determine their response to health information. Investigating the role of health consciousness in explaining Saudis' health attitude and behavior is important in designing health interventions. This research is essential to understand the factors that influence Saudis' health behavior and their healthcare-utilizing practices to assist the MOH mission in building a healthy society in the country. By understanding the population's needs, the MOH in turn, will be able to deliver better healthcare services.

Definition of Terms

Health: a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Diabetes mellitus: a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar).

Non-communicable diseases: are chronic diseases that characterized with long lasting and slow progressing illnesses that are not transmissible directly from person to another.

Health attitude: set of emotions, beliefs, and behaviors toward health.

Health behaviors: actions individuals take that affect their health.

Risky behaviors: the act of engaging in any activity that potential cause harm and/or increase the risk of diseases as a consequence.

Compensatory Health Beliefs: beliefs that the negative effects of an unhealthy behavior can be compensated for, or “neutralized,” by engaging in a healthy behavior.

Health consciousness: having an active interest in one's health and the willingness to engage in health and wellness promoting behaviors.

Critical consciousness: in-depth understanding of the world, allowing for the perception and exposure of social and political contradictions.

Conscientization: the process in which individuals and communities develop a critical consciousness of their social reality through reflection and action.

Research Study Overview

This research was driven by an attempt to understand Saudis' health attitude and behavior. Investigating health consciousness is the heart to understand Saudis' health practices. The review of the literature revealed that Saudis are not utilizing the free healthcare services provided by the MOH. In addition, the health status of Saudis is alarming with an increase prevalence of NCDs. Recent developments in the country have heightened the need for improving health status of the Saudi population. Previous research has established that urbanization has negatively impacted Saudis' health lifestyle, in which is characterized by bad eating habits, low physical activity, and smoking. Previous published studies are limited to local surveys.

This qualitative case study provided an in-depth analysis of Saudis' health consciousness phenomena. A purposeful sampling approach was used to employ participants who were born and lived in Saudi Arabia; they are older than 18-years-old; and have a maximum variation of

sociodemographic background. I used a qualitative survey and individual interviews to gather a contextual data that capture Saudis' health perceptions and experiences. Additionally, I presented the influential social, cultural, and religious factors that impacted Saudis' health practices. The data, from a qualitative survey of 1618 responses and 18 individual interviews, revealed four main themes: health beliefs, health awareness, health motivation, and health barriers.

I adapted Paulo Freire's notion of *level of consciousness* to guide the thematic analysis approach and to develop a grounded theory model; Health Conscientization Model. The framework evaluated the degree of health consciousness which depended on the ability of individuals to intervene in their health reality in order to change it. In another words, Saudis' health consciousness is dependent on three aspects; (1) Saudis' awareness of their risky behaviors; (2) their analytic view toward health influential factors; (3) and their capability to change their health status. The Health Conscientization Model demonstrated a wall between these three aspects, that represents Saudis' detachment to their health reality. The diminution of the walls exemplifies higher level of health reality reflection. Thus, the ground theory model of this qualitative research revealed three level of consciousness including:

1. Magical health consciousness: In this level the wall is solid, as Saudis view their health in isolation.
2. Naive health consciousness: The wall in this level is partially open, as Saudis lacked awareness of their capabilities of changing health attitudes and behaviors.
3. Critical health consciousness: The wall is not existing in this level, as Saudis where able to challenge the health influential factors and kept a healthy behavior.

This research study offered a new understanding of Saudis' health needs that can be used to refine, improve, and strengthen the health services and programs in Saudi. The research findings

concluded that Saudis are not able to keep up with a healthy lifestyle as they failed to comprehend the multi-dimensions of health. Health policymakers, leaders, educators, and the Saudi community at large need to implement Health Conscientization Model and foster critical health consciousness that re-examines health risks considering the wider factors that impact their health. Critical health consciousness builds collective action addressing the health issue in Saudi Arabia.

Chapter Summary

This chapter outlined the historical background of the issues affecting Saudis' health status. The rationale for conducting this research study was presented as well as the purpose of the study. In addition, the two questions that guide the research process were listed. A brief overview of the study was demonstrated to describe the overall research process and analysis. The next chapter summarizes the literature review that set the stage for the current research.

CHAPTER TWO: LITERATURE REVIEW

Investigating health phenomena is a continuing concern worldwide (Brower, 2003). Achieving and maintaining healthy status in Saudi Arabia is a collective and context-specific endeavor (Almutari et al., 2014). It depends on Saudis' incorporation of healthy attitudes as an isolated entity, and while socializing. In addition, good health is largely within ones' control by practicing healthy behavior. There is substantial research on Saudis' health risk factors to guide health intervention plans (Khan, 2017; Sirois, 2015; Memish, 2014; Salam & Siddiqui, 2013). While these previous studies offer valuable insight, it is limited to quantitative findings without the concern of the consideration to the context in which health attitude and behavior occur. Adequate information concerning health attitudes and behavior in Saudi Arabia society is not available.

The current research examined Saudis' health related thoughts, insight, value, and awareness. It also addressed the factors that affect a Saudi citizen's health related attitudes and behavior, which has so far been lacking in the scientific literature. This work is a vital instrument in assisting policymakers to improve the health services in Saudi Arabia.

According to Creswell (2018), the literature review sets the framework of the study and provides the intellectual context of the ongoing dialogue about the topic of interest. This literature review provides a better understanding of Saudis' health attitude and behavior. Also included in this discussion are most relevant considerations from the literature to overcome health challenges in Saudi Arabia. The literature review is organized into six sections: (1) an overview of health-related attitude, behavior, and consciousness; (2) the impact of the 2020 pandemic on health attitude and behavior; (3) an overview of Saudi Arabia, including general information about the country, Saudis' healthcare system, and Saudis' health status; (4)

discussion and synthesis of research studies which focus on the major factors that affect Saudis' health attitude and behavior; (5) the gaps in the knowledge about health consciousness among Saudi citizens; (6) and finally discussion of the theoretical framework.

Health-Related Attitude, Behavior, and Consciousness

Investigating health behavior has become an international concern in recent years (WHO, 2015). The aim of health research is to expand the knowledge of health challenges, evaluate health policies, and improve health practices. To interpretate health challenges among any population one must (1) understand the meaning of health, (2) evaluate health motivations and challenges, and (3) assess health engagement practices.

The Constitution of the World Health Organization (WHO) defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, n.d., para. 1). Researchers defined attitude as “the predisposition of the individual to evaluate a particular object in a favorable or unfavorable manner” (Katz, 1967, p. 459, as cited in Kiely, 1980). More simply, attitude comprises an evaluation of a specific concept. Attitudes have a powerful influence over behavior. A positive health attitude is likely to be associated with consistent healthy behaviors (El Bcheraoui et al., 2015). Health behaviors are the actions that individuals, or groups carry out themselves. They entail the factors that determine and improve the quality of life as well as the challenges that may be experienced (El Bcheraoui et al., 2015). Therefore, it can be assumed that health behavior is all about the individual's perceptions towards the maintenance of health and health improvement. Hence, the way in which an individual responds to their health needs is determined by their attitude towards that need. Many factors hinder health behaviors including social norms, level of education, lack

of support, and cost of services (Mannava et al., 2015). Overcoming these factors require context specific strategies addressing overall health strengthening.

Researchers concur regarding the importance of examining the public's health awareness in order to regulate their health attitudes and behaviors (El Bcheraoui et al., 2015; Espinosa & Kadić-Maglajlić, 2018; Hong, 2009; Hoque, 2018). In this context, health consciousness resembles the individuals' self-awareness about their health, their behaviors in seeking health information, and their willingness to engage in health activities (Espinosa & Kadić-Maglajlić, 2018). Hong (2009) argued,

health consciousness indicates individual's comprehensive mental orientation toward his or her health, being comprised of self-health awareness, personal responsibility, and health motivation, as opposed to being related to a specific issue (e.g., smoking, exercise, healthy diet). (p. 8, para. 1)

Health consciousness is an essential aspect of one's health. It's a key factor in indicating health-related attitude and behavior (Hong, 2009). Individuals with high level of health consciousness have positive health attitudes towards health nutrition, physical activities, and accordingly live healthy lifestyles (Espinosa & Kadić-Maglajlić, 2018; Hong, 2009). Hence, individuals who avoid the engagement in risky behaviors (e.g., bad eating habits, smoking, sedentary lifestyle) are health-conscious individuals. Health consciousness impacts health perceived knowledge, beliefs, and attitude (Espinosa & Kadić-Maglajlić, 2018). Additionally, it predicts the behavioral intention toward engaging in healthy and/or risky practice (Hoque, 2018). The literature identified four dimensions of health consciousness, which are: (1) integration of health behavior (physical fitness, healthy eating habits); (2) attention to one's health (health alertness, self-monitoring of one's health, utilizing health care services); (3) personal health

responsibility (valuing healthy conditions); and (4) health information seeking (El Bcheraoui et al., 2015; Hong, 2009; Hoque, 2018). Indeed, health consciousness is a determinant of healthy lifestyle (Botchway et al., 2015; Espinosa & Kadić-Maglajlić, 2018). Understanding the public's general sense of well-being is vital in knowing how to address the public health needs.

The Impact of COVID-19 on Health Attitude and Behavior

The World Health Organization (WHO) declared on March 11, 2020, that Coronavirus disease (COVID-19) is a global pandemic. COVID-19 is a respiratory disease caused by the SARS-CoV-2 virus, it spread across several countries and affected a large number of people (WHO, 2020). Subsequently, many countries enacted "stay-at-home" orders and adopted strict quarantine measures to control and limit the spread of the virus. The implementation of COVID-19 curfew has impacted people's health behaviors (Knell et al., 2020). A recent study in Saudi Arabia reported that COVID-19 curfew has impacted the eating habits among the population (Mumena, 2021). The social and physical isolation were associated with increased number of meals consumed daily and the consumption of sweets and snacks. As a result, COVID-19 curfew led to a rapid weight gain for many Saudis. Furthermore, a number of studies have begun to examine the effect of "stay-at-home" orders on physical activity practices (Knell et al., 2020; Pu et al., 2020). The curfew has limited access to community services and therefore enforced a sedentary behavior such as prolonged sitting and watching TV, playing online games, and not participating in physical exercise. Pu et al. (2020) argued health consciousness is an important element to enforce healthy attitudes and behaviors and adopt healthy lifestyles through the pandemic. Health-conscious person is inclined to engage in healthy activity, and consequently stay healthy.

Saudi Arabia General Information

Saudi Arabia is located in Western Asia. It is the largest country of the Arabian Peninsula. According to the Central Intelligence Agency (CIA; 2020), the total land area is 2,149,690 km² (830,000 sq. miles). Saudi Arabia includes six geographic regions (Eastern, Central, Northern, Northwest, Midwest, and Southwest); these regions are embraced of 13 provinces that defined the country administrative structure (see Figure 1). There are three major metropolitan areas in which 78.4% of the population resides (CIA, 2020). The three biggest cities are Riyadh (the capital), Jeddah (the main seaport on the Red Sea), and Dammam (the main seaport on the Persian Gulf). The current population of the country is estimated to be 34.81 million as of July 2020, with the median age being 30.8 years. The population is characterized by many young people. Nearly 40.22% of the Saudi population is below age 25. The young population plays a huge role in the country's socioeconomic status, considering their essential role in the workforce. The life expectancy of the population stands at 76.4 years (CIA, 2020).

Figure 1*Map of Saudi Arabia.*

Saudi Arabia is a country that unified as a kingdom in 1932 (Tumulty, 2001). Prior to the discovery of oil, the economy of the country was limited. However, when the oil prospecting and exporting began in 1936, the status of Saudi Arabia's wealth changed dramatically. Investment in human capital has become a top priority for the Saudi government to ensure lasting growth and a knowledge-based economy (Nour, 2014). In 2016, Saudi Arabia's Crown Prince Mohammed bin Salman broadcasted a series of reforms and initiatives to transfer the country's economy through "The National Transformation Program (NTP) 2020" and "Saudi Arabia Vision 2030" (Vision 2030, n.d.). The programs were implemented as a roadmap to improve the economy of the country over the long term and to alleviate the country's oil economic dependency. The programs also aim to develop public services, thus enhancing the ability to

attend to the needs of the people in all sectors including transportation, housing, health, education, energy, and technology (Vision 2030, n.d.).

Health System in Saudi Arabia

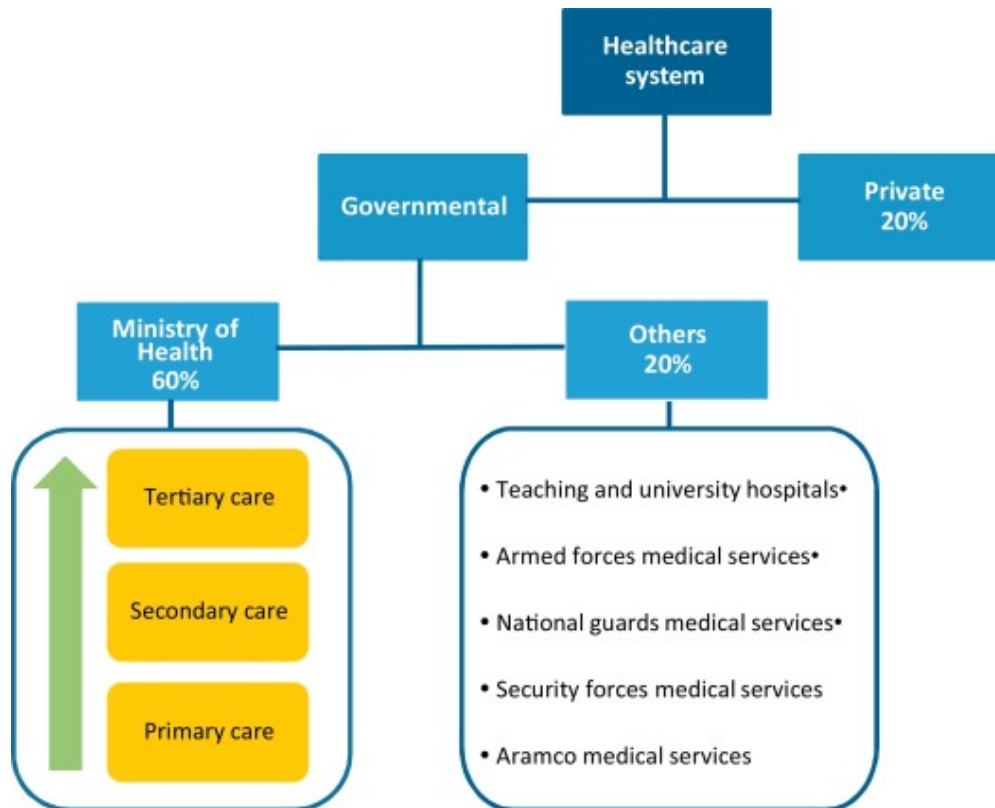
A healthy nation is linked to political stability, financial security, and social strength (Brower, 2003). Investment in human capital has become a top priority for the Saudi government to ensure lasting growth and a knowledge-based economy. During the period before the oil discovery, Saudi society was isolated and there was no standardized healthcare system. In fact, healthcare services were mainly based on traditional practices and medicines. The Saudi health sector transformed in 1950 with the establishment of the Ministry of Health (Almutari et al., 2014). At that time, the Saudi healthcare system witnessed a complete revolution as the government was able to establish the necessary organization of primary healthcare, hospitals, and research facilities.

The Royal Family's enthusiasm to improve the health field in Saudi Arabia showed in 1992 when the Kingdom issued the Basic System of Governance, including an article for healthcare (Almutari et al., 2014). Article 31 of the Saudi Constitution states "The State shall be solicitous for promoting public health and shall provide medical care to every citizen" (Saudi Arabia's Constitution, 1992; rev. 2013, p. 6/para. 9). The MOH is responsible for running the country's healthcare system; it is accountable for planning, managing, and financing healthcare services. Further, the MOH is committed to the goal of "Health for All (HFA)" in which all citizens have the right to free healthcare services in all public hospitals and clinics. The kingdom has ensured health accessibility to all its citizens; 60% of all healthcare services are provided by the MOH for all Saudi citizens (Khalil et al., 2018). Additionally, 20% of the healthcare services

are provided by more than 10 government agencies to its employees and their families. The remaining 20% is provided by private sectors (see Figure 2).

Figure 2

The Current Structure of The Healthcare System in Saudi Arabia.



Source. Adapted from Khalil et al., 2018.

The healthcare system has gone through significant improvement in a short span of time because of the need for healthcare among the growing population. The healthy economic profile of Saudi Arabia has positively impacted the population's standards of living and healthcare access. The government has given high priority to healthcare services to better serve its citizens. As a result, healthcare services are witnessing rapid growth in terms of quantity and quality (Alfaqeh et al., 2017). The healthcare sector budget is remarkably increasing by 8% to reach

172 billion Saudi Riyals in 2019, as compared to 159 billion Saudi Riyals in 2018. In fact, the healthcare sector received the third largest share, 15.6%, of the total budget expenditure.

In compliance with the National Transformation Program and the Saudi Vision 2030, the MOH launched several health initiatives in the sector of public health (MOH, n.d.). In excess of 80 essential medical care communities have been initiated all over the Kingdom, reaching 2,390 primary healthcare centers (MOH, n.d.). Additionally, the number of hospitals in the Kingdom of Saudi Arabia in 2019 added up to 494 with a capacity of 74,225 beds (Rahman, 2020).

Moreover, the MOH implemented strategies with an emphasis on public health accessibility, effectiveness, and equality of services (Sirois, 2015). It supports several education health campaigns that covered many important health topics. The health sector encountered the Vision 2030 initiative and consequently the MOH planned strategy is to improve and expand healthcare to meet the population needs of the population (Vision 2030, n.d.).

Saudis' Health Status

The burden of non-communicable diseases (NCDs) in Saudi Arabia is increasing year after year (MOH, 2017). In fact, WHO Health Indicator Report indicated that NCDs are responsible for 73.41% of all deaths in Saudi Arabia in the year of 2019 (WHO, 2020). The WHO reported in 2017 that 25.2% of Saudis population are affected by elevated blood pressure and 40.5% are on the borderline. In addition, 13.2% of the population are diagnosed with diabetes and 16.3% are pre-diabetes. This indicates that one in three Saudis are either diabetic or pre-diabetic. Furthermore, the prevalence of high cholesterol reached 16.8% of all population and 20.4% on the borderline.

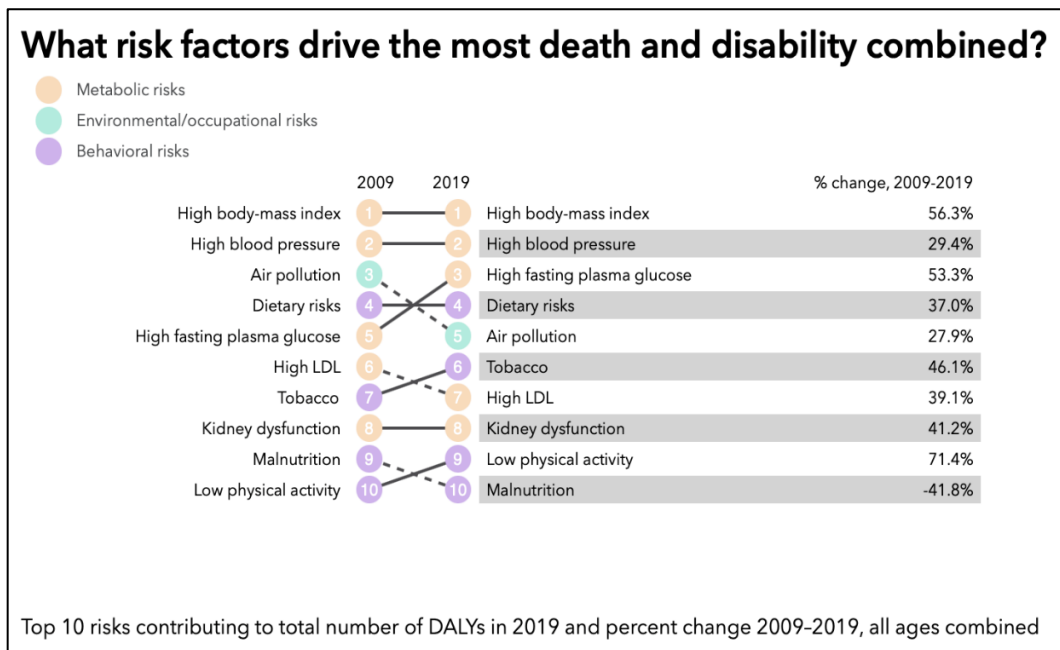
The most common health concern in Saudi Arabia is obesity, as the latest statistics showed high obesity prevalence rates of 35% as measured in 2016 (CIA, 2020). The country

ranked 14th in high obesity prevalence worldwide. The Global Burden of Diseases, Injuries, and Risk Factors Study in 2019 stated that overweight and obesity are the main risk factor of death and disability in Saudi Arabia (see figure 3) (Murray et al., 2020).

In addition, the Kingdom of Saudi Arabia World Health Survey (KSAWHS, 2019) reported that 93% of Saudis have insufficient intake of fruit and vegetables. In addition, 80% of respondents are insufficient in physical activity. Moreover, 13.6% mentioned they smoked. The MOH Survey of Health Information (2013) reported that 25.7% spent more than six hours per day sitting, and 13.9% spent more than six hours per day watching TV. Furthermore, 75.5% of the population never had a medical checkup. Likewise, 88.5% never had a routine checkup. The engagement in risky behavior and the absence of preventive care consideration is alarming in a free available health care system.

Figure 3

Risk Factors Contributed to Most Death and Disability in Saudi Arabia.



Source. Adapted from Murray et al., 2020.


Improving the State of Health in Saudi Arabia

In effort to tackle NCDs burden, Saudi Arabia is following WHO guidelines to reduce NCDs mortalities (WHO, 2020). Consequently, Saudi Arabia implemented measures to reduce harmful use of tobacco, unhealthy diet, and promote physical activities. The MOH has developed several health initiatives aimed at health improvement. To gain data about the health status of the population, The General Authority for Statistics GASTAT implemented the Demographic Health Survey (DHS) project (GASTAT, n.d.). The role of the project is to include about 50,000 families from 13 different regions for the sake of developing a precise database of the health status of citizens in Saudi Arabia, which can help the MOH in developing the right interventions. The report of the project results estimated the prevalence of NCDs and its risk factors. The most significant risk factors of NCDs in Saudi Arabia include obesity, high blood pressure, high level of cholesterol in the blood, poor eating habit, physical inactivity, and tobacco use. The study findings also showed that the Saudis' engagement of risky behaviors occur in clusters not in isolation. Accordingly, the MOH considered the patterns within these clusters of behaviors in planning health policies and implementing health intervention strategies.

Consequently, the MOH focused on public health programs and awareness campaigns targeting health promotion and education about various issues that relate to health (MOH, 2017). For instance, campaigns educate the public about NCDs as well as the various ways of avoiding them. The MOH has an active NCDs screening program offered in all primary care facilities. The MOH indeed tackled all NCDs risk factors by planning and implementing a focused program that (1) addressed the issue of smoking, (2) promoted action for obesity control, and (3) enhanced physical activity engagement. Figure (4) below summaries MOH health education activities (MOH, 2020).

Figure 4

Summary of MOH Health Education Activities.

Health Education Activities, MOH, 2019 	
Table 3-22	
Activity	Number
SEHHA Application	
Number of Registers	653,038
Number of Consultations	559,709
Overall Satisfaction (%)	91.84
Health Consultations 937	
Number of Telephone Consultations	2,577,570
Number of Twitter Consultations	25,664
Number of Twitter Followers	106,500
Average Duration of Waiting (seconds)	14.06
Overall Satisfaction (%)	96.44
Health Education Services	
Number of Visits to Health Education Clinics	550,500
Number of Active Health Education Centers	350
Number of Trainees of Health Education Practitioners	300
Interesting Groups	
Number of Groups	1,090
Number of Activities	3,621
Community Empowerment	
Number of Projects	391
Number of Teams	84
Number of Trainees of Health Practitioners to Empower the Community	172
Health Trainer	
Number of Beneficiaries	17,500

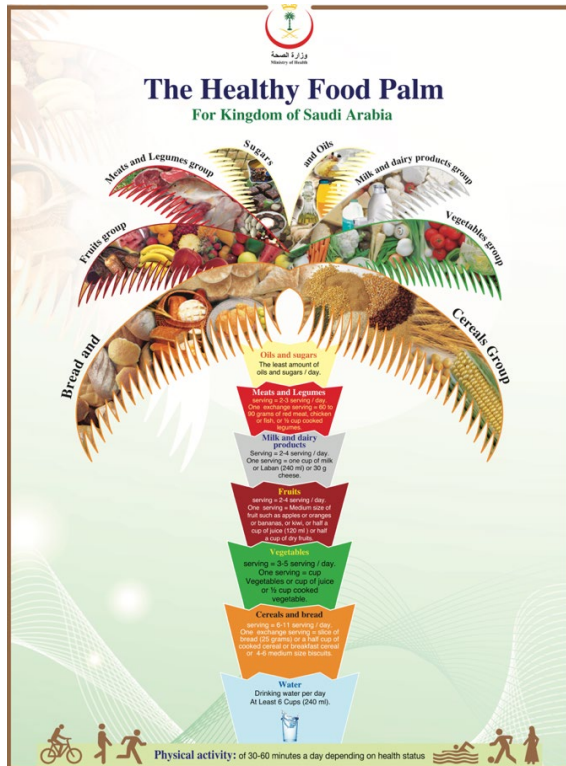
Source. Adapted from Ministry of Health Statistical yearbook, 2019.

The MOH health awareness programs presented clear, simple, health information in the form of an infographic so the information can be easily interpreted. Furthermore, in considering Saudi cultural competence in healthcare, the MOH integrated cultural preferences and concepts into health awareness provisions. For example, MOH inaugurated the dietary guidelines to suit Saudi culture and habits through promptly developing the “The Healthy Food Palm” (see Figure 5). The dietary guide shows the number of daily health proportions recommended in all meals covered by the palm design, which also highlights the importance of exercise alongside food balance (Al-Dkheel, 2012). The palm graph is well known to the community, such that Saudi

people of all categories accept it and memorize it. The shape of the palm is easy to understand, therefore, compliance with the dietary intake is increasing as a result.

Figure 5

The Healthy Food Palm.



Source. Adapted from Ministry of Health General Directorate of Nutrition, 2012.

Additionally, the MOH incorporates information technology in all aspects of healthcare as a way to accelerate the delivery of services, among other benefits (MOH, n.d.). An example of this technology initiative is the vaccinations reminder service, which is targeted to support the protection of children in addition to the rest of the community from different diseases. Through this program, the MOH is capable of reminding the members of the public about vaccination deadlines. Therefore, the members of the community can ensure they undergo proper immunization based on the ministry's guidelines and immunization schedule (Househ, 2016). The MOH uses phone texts as well as emails to remind people about the vaccination schedules.

In addition, the MOH launched “Health Mobile” in 2010, which is an interactive service via mobile phones that provides a daily text message to its subscribers that includes information about health (MOH, n.d.). The service is free of charge, which makes it a source of health knowledge that is reachable for all citizens. Indeed, the MOH has exerted great efforts to educate the public about health and to make healthcare services accessible to everyone (MOH, 2010).

Factors that Affect Saudis' Health Behavior and Attitudes

It is important to note that with the discovery of oil in Saudi Arabia the subsequent population growth increased per capita income and wealth (Moradi-Lakeh et al., 2016). This accelerated urbanization prompted significant lifestyle changes to the population. Urbanized environments encourage the consumption of manufactured food with less nutritional benefits and promote sedentary lifestyles with excessive use of motorized transportation (Moradi-Lakeh et al., 2016).

The MOH in Saudi Arabia is committed to improving the public quality of life by encouraging behavioral change in ways that accommodate the urban lifestyle and the constraints it imposes. Understanding factors that can affect health attitudes and behavior among Saudis provides the MOH with a defined assessment of the population's needs. Moreover, understanding the public health-related attitudes and behaviors helps to improve health education strategies, suggest some measures to expand health quality, and potentially, could decrease mortality among the Saudi population.

Socio-Demographic Factors

Many sources provide evidence that socio-demographic factors can affect health outcomes (Habib, 2018; Khan et al., 2017; Balkhy et al., 2010). Socio-demographic factors are the defined shared background information and characteristics about certain populations

(Guariguata et al., 2014). The socio-demographic context of Saudi Arabia's citizens is essential to any attempt that seeks to overcome the country's health challenges, as it helps to understand the magnitude of these variables effect on health. In the current literature, the socio-demographic characteristics include age, gender, education level, marital status, family size, and geographic distribution.

Earlier studies have explored several socio-demographic factors as determinants of health perception among the Saudi elderly population. The data collection for one such cross sectional study included a random sample of 60-year-old men and women from rural and urban areas across the Kingdom. Jarallah and Alshammari (1999) reported poor health practice among the illiterate, retired, divorced, and those who live in remote areas. Nonetheless, poor health perception is high in women compared to men among the elderly (Jarallah & Alshammari, 1999). These finding are consistent with the findings of another study Khan et al. (2017). The study showed a significant association between age and health attitude. The authors claimed older individuals oppose disease labels and view chronic diseases such as diabetes and hypertension as part of the normal, inevitable aging process that are not related to disease pathology (Khan et al., 2017).

Furthermore, Balkhy et al. (2010) revealed health-related attitude and practice toward the swine influenza pandemic among Saudi citizens. The demographic statistics of the study revealed some of the social and demographic dynamics that affect Saudis' health attitude. The study reported that highly educated individuals and married men had better knowledge of health and better health attitudes overall. Another cross-sectional study by Khan et al. (2017) on medication compliance among diabetic Saudi patients found significant rural-urban differences in health attitude. Urban populations were found to be more noncompliant with their medical

treatment plan in comparison with rural populations. In addition, this study provided further evidence that one's higher educational level is significantly associated with more positive health practice. Researchers also found women were more compliant than men. The study results align with another study by Salam and Siddiqui (2013), testing the socio-demographic determinates of health attitude and behavior among patients in Abha, Saudi Arabia. The cross-sectional study found that gender is a significant determinant of positive health behavior with women being more compliant with healthy food habits and exercising. These authors, too, argued that the participants' educational attainment played an important role in better health behavior.

Social Norms Factors

Social norms are collectively held beliefs among the society about what behaviors are considered appropriate and how one is expected to behave in a particular context (Al-Buhairan et al., 2015). Change and Sanfey's (2013) study showed that social norms constrain behavior due to precise neuro-computational processes that trigger social-interactive decision making. Hence, social norms carry an element of control or sanction that can create a feeling of fear or guilt if not followed. A consistent body of research has shown that health-related behavior is affected by the social environment. A more comprehensive understanding of social norms effects in the context of health attitude and behavior is needed. The social norms' themes for this review center around Saudi Arabia culture, religion, and family.

Culture

Culture refers to the patterns of ideas, experiences, values, and customs shared by a particular group of people or society (Kroeber & Kluckhohn, 1952). Culture gives the nation its identity as it is unique and varies from one society to another. The Saudi Arabian culture "is a rich one that has been shaped by its Islamic heritage, its historical role as an ancient trade center,

and its Bedouin traditions” (Saudi Embassy, n.d., para 1). The distinguished geographical location of Saudi Arabia made the country a crossing point of international trade lanes. Due to this, the uniqueness of Saudi culture has evolved over the years by adapting modernization and changing its values and traditions.

Numerous researchers agree that health must be seen through a cultural lens to be fully understood (Al-Shahri, 2002). Culture frames and shapes how people view health and illness. Recent research on the effects of culture on health revealed (a) beliefs about the causes of diseases, (b) sources of health-related information, (c) and preferences in utilizing medical services. In the tribal community, social norms and conservative beliefs have a powerful effect on people's lives. Multiple researchers found that Arab people are not fully aware of disease causes (Gilbert, 2008; Lovering, 2012). Based on their traditional view, illness or diseases have nothing to do with human behavior but are a result of factors that people cannot keep under their own control. Through an envious glare, an evil eye, or a mystical Jinn, people cause harm to another in the form of illness. The evil eye (human jealousy and hatred look) and the invisible Jinn (devilish creatures) are believed to cause harm that may come in the form of bad luck, injury, serious illness, or sudden death in Arab mythology (Lovering, 2012). Suffering from supernatural harm is experienced due to being affected or influenced by negative energies. The Saudi people believe that children, pregnant women, and newborn babies are most vulnerable to evil eye compared to the rest of the population. In this manner, when taking care of them, Saudis use spiritual and natural medicine and seek healers' opinion rather than looking for professional medical services. Therefore, appealing to the spiritual agents as well as conducting prayers to God and avoiding the people with evil eyes were some of the means that could be used to prevent such illnesses (Gilbert, 2008).

Although modern medicines are accessible, many Saudis rely on herbal remedies. Common remedies incorporate the utilization of roots, leaves, seeds, honey, and olive oil (Memish et al., 2014). Weatherhead and Daiches (2015) showed that Arab people desired a spiritual or religious leader (Imaam) and/or traditional healer to diagnose and treat their condition. The authors outlined that Arab people tend to look for health-related information according to a “continuum of need” in the order of first getting advice from friends and family, then from spouse’s family, then from a religious leader or traditional healer, and lastly from a medical professional (Weatherhead & Daiches, 2015).

Even with the introduction of modernized improved healthcare and health education, the use of culturally traditional treatments is still ongoing in Saudi Arabia (Memish et al., 2014). Some of the areas in which traditional healers specialized include herbal medicines, realignment of dislocated bones, and cupping. Cupping (Hijama) traditionally was used in China, Egypt, Greece, and Rome to ease the pain of many health conditions (Lovering, 2012). It involves the applying of particular cups on skin to create local suction. Hijama is a wide-spread practice in Arab society. There are two types of suction cups, the dry and wet (involve small insertion of the skin to draw “bad blood”). Cupping is usually harmless, but there is a risk of infection if not practiced with proper hygiene protocols (Lovering, 2012). However, the practice of unsupervised traditional healing procedures may cause harm. For example, traditional healers practice “Al Kowie,” cutaneous cautery, that involve the burning of a stick or knife until the point that it was red-hot then used on the areas that are believed to be affected such that the patient can feel relieved (Memish et al., 2014).

Religion

Religion is a crucial element of an individual's way of life. Religious beliefs mold and frame behavior and attitude as it influences the way individuals communicate, understand, and conceptualize their surrounding (Croucher et al., 2017). The teaching and law of Islam are driven from the Holy Quran and the Hadith (record of Prophet Mohammed's teachings). Saudi Arabia is a Muslim country. Understanding Islam and Muslims can contribute much toward achieving the ultimate goal of understanding health-related practices and beliefs of Saudis.

Islam in Saudi Arabia is not only a religious ideology, but it also guides the moral law of the country and works as a social system embracing every aspect of peoples' lives (Vogel, 2000). In all the things that the Muslims do, they incorporate religion. This aspect allows them to do things accordingly since they have the obligation to keep their relationship with their God. A sign of respect and good behavior is an indication they are working to ensure the relationship, which they have with God, is maintained and that they do not go astray.

The Islamic culture has strong tenants that are tied to health (Lovering, 2008, 2012). Maintaining good health has been given a priority in the Islam religion because it is viewed as a spiritual need. Health for Muslims is perceived as a gift from God; therefore, Muslims are required to preserve their health by engaging in healthy practices. Islam provides guidelines on how Muslims are supposed to take care of their health in the Quran. This implies that Muslims follow the instructions as they are provided in the Quran (Gilgun, 2005).

Islam has a lot to dictate in terms of attitude and health behavior. According to Hassanein et al. (2017), there are many Islamic teachings about proper maintenance of a healthy status. This incorporates keeping up tidiness and legitimate cleanliness, practicing good eating habits, staying

away from substances that hurt the body (tobacco and alcohol), engaging in physical activities, and getting enough rest (Lovering, 2008, 2012).

Indeed, Islam stresses the importance of maintaining good health and offers ways to cope with illnesses (Lovering, 2008). The Quran commands that Muslims be aware of healthy eating habits. Muslims are encouraged to eat proper and nutritious foods for them to remain healthy and strong. For instance, consuming food in moderation is mentioned in the Quran: “eat and drink and do not commit excesses; indeed, He does not love those who are excessive” (S., 2008, Quran verse 7:31). Furthermore, Prophet Mohammed has advised against overeating as identified by the Hadith: “Don’t indulge in over-eating because it would quench the light of faith within your hearts” (al-Mustadrak, 2003, p. 81). In fact, Islam emphasizes moderation in every aspect of life.

Based on these beliefs, Muslims have a spiritual obligation to maintain their health; therefore, it is important for them to incorporate their religious beliefs into therapy (Lovering, 2012). Maintenance of good health is a spiritual obligation of Muslims. This implies they have to do everything possible to ensure they have good health at all times (Shosha, 2012). In that matter, they do not have any personal attitudes towards health, as maintaining good health is a way to be spiritually relevant.

Another fundamental element of Islam faith is the belief in destiny. This is called qadar and is believed to be preordained by God (Lovering, 2008). According to Muslims, God is the ultimate healer, He is the absolute transcendent creator. Al Shahri (2002) stated that Muslims view illness and death as a part of life, therefore, they accept illness and death with patience, meditation, and prayer (as cited in Lovering, 2012). According to the qadar principle, Muslims accept diseases as things that come from God. Therefore, illness is considered to be a test of faith from God, and any cure or lack thereof is predestined (Mohamed et al., 2015).

Nonetheless, Islam clarifies that Muslims should consider their choices and their actions toward staying healthy. The Prophet Mohammad said: “Allah did not send down any disease but that He also sent its cure” (Sunan Ibn Mājah, 2018, Hadith 3438). The concept of qadar can influence Muslims’ insight of illness and medical treatment options. Although, Muslims are strongly encouraged to seek treatment and care, some misunderstand this concept and may choose to ignore seeking treatment and preventive measures in the trust that they are accepting Allah’s fate and destiny (Mohamed et al., 2015). On this manner, the Muslim community is connected by its faith. Spiritual needs may take over physical needs. For instance, mental health may be ordinarily seen as happening by God's will. Accordingly, a strict religious reaction is frequently looked for, including reciting the Quran, fasting, repentance, and praying (Weatherhead & Daiches, 2015).

Family

Family is the fundamental unit of the social institution that holds and transfers culture and religion (Baiocchi-Wagner, 2013). Aristotle argued in his Politics that family is the foundation that builds the state:

The family is the association established by nature for the supply of men’s everyday wants ... when several families are united, and the association aims at something more than the supply of daily needs, the first society to be formed is the village ... When several villages are united in a single community, large enough to be nearly or quite self-sufficing, the state comes into existence (as cited in Loptson, 1998, p. 19, para. 3).

Families shared a sense of mutual disposition to honor of the family name, that manifested by the living up to socially prescribed ideals of honor (Baiocchi-Wagner, 2013). In other words, the ability of individuals to live the rules provided by the society is what defines the esteem of their

families. People who belong to a family, share a sense of strong identity (Baiocchi-Wagner, 2013). Hence, they have always shared a strong bond that made them feel protected as people of the same lineage.

Family dynamics can have substantial power that impacts one's health attitude and behaviors (Baiocchi-Wagner and Talley, 2013). The family environment includes the habits shaped and practiced by the family that form a lifestyle pattern. The family bond and communication style affect the way an individual reacts to diseases, utilization of health services, and overall caring for health status (Baiocchi-Wagner and Talley, 2013). Researchers support the significant role of family to manage childhood obesity (Sahoo et al., 2015). Sahoo et al. (2015) concluded family enforces eating habits that include food selection, fast food consuming, and amount of food intake. Therefore, focusing on family interventions is an important way to manage and decrease childhood obesity and bring to the forefront a healthier society.

Saudi Arabia is a family-oriented society. The family in Saudi is believed to be the primary source of identity and represent a key focus of individual loyalty ("Cultural Homogeneity and Values," n.d.). Due to massive urbanization and industrialization, family structures in Saudi Arabia have been experiencing changes. The family is becoming nuclear rather than extended or multigenerational, especially within big cities. However, most relatives remain close and usually live within the same neighborhood and the social bonds among them are still strong. Even though the nuclear family is strictly the father, mother, and the children, the relatives' opinions in everything are considered important.

The Saudi family is usually organized around a senior man (the grandfather, father, uncle), and this individual is responsible for the welfare of all the family members (Long, 2005). The elderlies in the family are highly respected; therefore, they take the position of advisor to all

the family members. This is because of the perceived level of wisdom, experience, and their hierarchal position within the family unit (Lovering, 2012). The father, the mother, and older children are respected in descending order and the older have the greater decision-making authority than the younger members. The father in the Saudi family appears to be authoritative like any other family in the Middle East (Long, 2005). Although fathers are believed to play a major role in decision-making, mothers also play a greater role—more hidden but equally influential—in making decisions that affect the whole family.

The health status of Saudis is affected by family behavior in Saudi Arabia. This is because, in most cases, people communicate with the family to discuss any health concern and/or confirm some information they have received regarding health (Matsumoto, 2001). This communication can be the reason behind the negative and positive health attitudes. In fact, the family concerns in health decisions take precedence over individual (Kemp, 2006). Families in Saudi Arabia are closely connected. Therefore, it is evident the relationship among family members is important as it influences their health behaviors and health attitudes.

The Research Gap

The research gap entails some of the things missing from the breadth of literature in this area of inquiry conducted by scholars. Researchers can use research gaps as the basis of determining their research objectives, aims, as well as designs (Marshall, 2011). This section points out some of the problems encountered in the extant research. The main research gap in the presented literature review is that there is no known study that assesses the understanding of health among Saudi citizens. Furthermore, there is no known study that establishes the connection between the health knowledge and health related actions within the Saudis' customs and beliefs. Such a study would be useful to determine the next best steps to deal with the health

issues and concerns in Saudi Arabia. Although research has illuminated health issues among Saudis, no prior studies to date has examined health consciousness among Saudis and its role in predicting Saudis' health behavior. Therefore, the lack of comprehensive assessment of the health consciousness makes it clear why the MOH health promotion initiatives are not effective in controlling health issues in Saudi Arabia.

Another gap is there is a lack of qualitative studies that determine the factors that affect health behavior and attitude among Saudis. A qualitative research design provides an opportunity to discover the intricacies inherent to social, cultural, environmental discourse. Most of the studies conducted determine different issues that relate to health, but not the specific attitudes and behaviors. Therefore, with such a gap, it is important that any research one would wish to conduct on the health behaviors be a qualitative design that determines the factors behind the attitudes and behaviors according to Saudis themselves. Understanding the public perception of health information and overall health consciousness would assist public health agencies to pinpoint exact knowledge gaps, which will lead to developing effective educational programs to increase the health awareness and expand healthcare facilities utilization among the Saudi population.

Literature Review Summary

Health attitude, behavior, and health status are certainly associated with each other. The goal of this literature review was to explore the healthcare system in Saudi Arabia and the MOH initiatives to improve the health status of the public. In addition, the literature aimed to evaluate some of the factors responsible for Saudis' health attitudes and behaviors.

Saudi Arabia is undergoing major changes in all sectors. The health provision witnessed significant improvements as the government increases the sector budget yearly to support new

healthcare services and projects to better serve its citizen. The review further evaluates the work from the healthcare system of the Saudi Kingdom to the different initiatives the MOH has developed to improve the health of the public. However, a number of reports shows there are many health issues still arising among Saudis including NCDs.

From the reviewed literature, it is clear socio-demographic factors indeed affect the health attitude and behavior of Saudis. Many researchers support that elderly men, the illiterate, divorced, and those living in remote areas have more negative health perception and reported poor health practice. In addition, the aspect of social norms of Saudi people certainly determines their health-related attitudes and behaviors. The social norms factors have been divided into three themes concepts including culture, religion, and family roles, which all determine the ways of life of Saudis.

Among Saudis, there is a widespread cultural belief that diseases are caused by factors that cannot be controlled or prevented, such as the evil eye. For that, most Saudis ignore utilizing health services and using pharmacological drugs. Instead, they are more likely to address traditional healers and use natural remedies. Likewise, previous research revealed the powerful impact of Islamic beliefs on health attitude and practice among Saudis. Although the Islamic teachings promote healthy lifestyle and encourage seeking medical help when needed, most Saudis accept illness as their faith and destiny from God. For that, they seek other options than medical interventions such as spiritual healing treatment. Moreover, the literature revealed how family communication has a significant impact on individuals' health attitude and behavior. The family unit in Saudi Arabia is closely connected to each other. They share and communicate all health concerns with the elderly figure in the family and take their opinion with regard to health issues and treatment plans.

The current literature review also uncovered the research gaps that exist in this topic. According to the review, there is limited research that assesses the knowledge and understanding of health among Saudis. Additionally, most of the research that reports health attitude among Saudis are quantitatively studied. Therefore, the gaps in the literature open doors for new qualitative research.

This literature review of the health behavior and attitude has allowed me to offer a comprehensive perspective to answer the questions: Why do Saudis not use all the services the MOH provides? Do Saudis know about those health programs? Are they realistically accessible to the public? Do Saudis link the health information to their own health? and What are the barriers and factors affecting Saudis health attitude? In addition, the literature pinpoints the importance of my study to the Saudi Arabian audience and members of the public as a qualitative study that assessed the overall health consciousness of Saudis, and in turn explained the health-related attitude and behavior of Saudi citizens.

Theoretical Framework

To provide complex and comprehensive conceptual understandings of Saudis' health consciousness phenomena, I analyzed my findings using a theoretical framework. The theoretical framework serves as the structure guide that supports the entire dissertation inquiry to answer the main research questions (Creswell, 2018). According to Creswell (2018), the theoretical framework has an essential part in the research process: (1) it permits the researcher to intellectually define the phenomenon of interest, (2) it implicates the data analysis and interpretation process, and (3) it generates the final outcome of the research. This qualitative case study was guided by the critical consciousness theory notion of *level of consciousness*.

Based on the literature review, Saudis' health attitude and behavior are affected by their beliefs. In this case, their beliefs, which are determined by their religion, family roles, culture, and other practices, all determine their health behaviors. To investigate Saudis' health consciousness, I intended to uncover the emergent themes among the core views and shared discourse of Saudis' health related attitudes and behavior. Through the critical consciousness theory, I was able to deduce some of the reasons why Saudis might have different health attitudes and behaviors. Ultimately, by using this framework, I was able to understand how Saudis' health attitude and behaviors can be changed to improve their health.

Critical Consciousness Theory

Paulo Freire (2000), a Brazilian educator transformed the pedagogy of education with his revolutionary idea of critical pedagogy. Freire's goal was to empower the public by eradicating illiteracy from its main root. He strived to understand the social, economic, and political factors that contribute to social injustice. In his book, *Pedagogy of The Oppressed*, Freire (2000) formed a theory of oppression and the basis of liberation. Freire emphasized the need to liberate oppressed people from their oppression. He upheld a belief in people's abilities to empower, change, and transform their world.

In Freire's (2000) view, the key to liberation is raising critical awareness. The oppressed must overcome their false consciousness of world reality and search for the oppression structures and causes. According to Freire, consciousness is often affected by social factors, economic and political context, and by cultural perspective. Because of this, people tend to create their own struggles when they are not actively looking for reality. Therefore, oppressed people should take an active role to fight oppression and change their reality. Freire (2000) held "the awakening of critical consciousness leads the way to the expression of social discontents precisely because

these discontents are real components of an oppressive situation” (p. 36). To awake the critical consciousness, Freire started by identifying the oppressed level of consciousness of reality. The process of critical consciousness involves in-depth understanding of the role of race, gender, social class, economic, and political factors.

Freire (2000) identified three levels of consciousness: (1) magical consciousness, (2) naïve consciousness, and (3) critical consciousness. Each level involves different cognitive attitudes entailing the beliefs, knowledge, thoughts, and interpretation of one's reality. First, at the level of magical consciousness, people accept their reality as it is. They believe it is controlled by an outside force, such as gods. As a result, they act and obey without self-reflection or questioning power and privilege dynamics (Freire, 2000). At this level, people avail of magical explanation to their live situation. Secondly, people in the level of naïve consciousness have a more detailed understanding of their reality as they can address surface level issues. Yet, people at this level are characterized by an oversimplification of their problems. They are not able to work through the main systemic issues causing their problems. In that level, people are convinced that they're incapable of changing their reality (Freire, 2000). Thirdly, when people reach the level of critical consciousness, they can begin to distinguish their notion of the self from the outside world, helping them to understand that they are capable of changing their realities. Thus, people can reflect and address issues in systemic ways. Overall, critically conscious people can look at reality and recognize the social, economic, political, and cultural contradictions. At this level, “people will begin to perceive why mythical remnants of the old society survive in the new. And they will then be able to free themselves more rapidly of these specters” (Freire, 2000, p. 159).

Furthermore, Freire (2000) argued critical consciousness is not simply awareness and knowing, but it must also include action and effort to change. He identified the concept of conscientization as the process of developing critical understanding of reality through reflection and action. To Freire, conscientization is “deepening of the attitude of awareness characteristic of all emergence” (p.109). To attain critical consciousness, individuals must (1) identify, understand, and reflect on the underlying systemic forces of oppression and inequality and (2) take initiative to make the needed changes to overcome their struggle.

Critical consciousness theory has been used to address disparities and inform an appropriate critical pedagogy. Incorporating Freire's (2000) three levels of consciousness allowed me to explore Saudis' ways of thinking, understanding, and analyzing their health reality. The *level of consciousness* notion demonstrates the external and internal factors which have shaped and formed Saudis' health understanding and experience. By applying this concept to my research, I gained in-depth understanding of Saudis' consciousness of their health reality and the factors that impacted their health status. I was also able to investigate how the level of health consciousness impact health-related practices.

Chapter Summary

This chapter demonstrated the background of Saudis' healthcare system. It also discussed and analyzed relevant studies to better understand Saudis' health experiences. In addition, I highlighted the literature gap in which the current study contributed to. The latter section of this chapter sought to illustrate the significant of the theoretical framework. In the next chapter, I present the contextual framework of the study and the methods.

CHAPTER THREE: METHODOLOGY

The central aim of this research is to interpret the phenomenon of Saudis' health consciousness in which they understand health, practice healthy activities, and seek healthcare facilities. Healthcare in Saudi Arabia is seen as a "human right," and therefore, it is free of charge to all Saudi citizens. The Ministry of Health developed health literacy promotion policies and implemented many health awareness projects to the public. Yet, unfortunately, the data pointed out that most Saudis do not utilize primary healthcare services and only seek medical care when needed (Moradi-Lakeh et al., 2016). Additionally, the burden of non-communicable diseases (NCDs) increased over the decade (MOH, 2017). Several factors were associated with the increased prevalence of NCDs including: bad dietary habits, insufficient physical activity, and low rate of regular screening. Tackling the common risk factors of NCDs is an urgent priority to ensure the population's health. Previous research revealed that health consciousness impact health perceived knowledge, belief, and behavior (Botchway et al., 2015). Health consciousness embraces individuals' health responsibility, health practices, and health information seeking and usage (Hong, 2009). To date, there are no studies in the Saudi literature that examined Saudis' health related to attitude, behavior, and consciousness. My case study research was informant by the health consciousness concept, as well as my own interest in examining and understanding Saudis' health related attitude and behavior. The study's main questions were: (1) How do Saudis experience and understand health? and (2) How does this experience and understanding of health inform or shape health consciousness for Saudis?

In this chapter, I describe the research paradigm, approach, and design used to

achieve the purposes of the study. I also outlined the research methods and tools used for data collection, the process of the qualitative data collection and analysis, reliability, challenges and limitation, and the issues related to the study's ethical considerations.

Research Paradigm

The design of any research study begins with the selection of a paradigm, which represents the framework, values, beliefs, methods, and approach of data analysis (Creswell, 2009). The aim is to understand the phenomenon of health consciousness and explain the participants' behavior by exploring their natural setting and their interaction with each other. Thus, a natural fit for this study was to be conducted from within the interpretive/constructivist paradigm. According to Creswell (2018), The goal of interpretive/constructivist research is to trust and rely on the viewpoint of the subject being studied. The researcher must put emphasis on the participants' interpretation of the world around them as they construct meaning "through interaction with others (hence social construction) and through historical and cultural norms that operate in individuals' lives" (Creswell, 2018, p. 25).

Research Approach

With the determined interpretive/constructivist paradigm, a qualitative research approach was proposed for this study. The inductive nature of the qualitative design allows the researcher to develop a framework of the underlying structure of experiences that appear in the data (Merriam, 2016). Qualitative studies are effective in acquiring the culturally sensitive information of values, beliefs, and behaviors (Creswell, 2018). It investigates the depth of the phenomena and provides a rich comprehensive understanding of the idiosyncrasies associated with the phenomena. Merriam (2016) stated, "qualitative researchers are interested on how people interpret their experience, how they construct their world, and what meaning they

attribute to their experience” (p. 6). From this stance, this study aimed to elicit and understand how participants construct their individual and shared meaning around health. Since this research was exploratory in nature, the process of allowing meaning to emerge from the participants supports a qualitative method of inquiry. The qualitative design allowed me to “make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 1994, p. 2).

Research Design

The qualitative case study method was chosen to guide this study’s data collection, analysis, and interpretation. Merriam (1998) identified qualitative case studies as “an intensive, holistic description and analysis of a single instance, phenomenon, or social unit” (p. 2). I aimed to gain insight and to discover how the participants derived and constructed meaning about health from their surroundings or experience, and to emphasize how their meaning influences their health-related attitudes and behaviors. Case study methods aided me “to answer the how and what questions, while taking into consideration how a phenomenon is influenced by the context within which it is situated” (Baxter & Jack, 2008, p. 556). According to Yin (2009), case studies are appropriate to study a real-life phenomenon in depth and in context, “especially when the boundaries between the phenomenon and context are not clearly evident” (p. 18). Likewise, Merriam (1998) specified case studies allow the researcher to gain “description and analysis of a bounded phenomenon” (p. xiii).

For this study, the phenomenon under investigation is Saudis’ health consciousness that impacts health-related attitude and behavior. The case is bounded by several contexts, the participants themselves, their experiences in seeking health information, their experiences engaging in health activities, their family’s perspective, the social norms, and Saudi society.

Since the phenomenon is not isolated from the context, qualitative case studies provide in-depth data that allowed me to retain meaningful answers to the research questions. I investigated the phenomenon of health consciousness from its foundational roots, which are the participants' lived everyday experiences. Through this approach, I gained holistic and meaningful understanding of Saudi's health consciousness phenomena (Yin, 2009).

Population and Study Sample

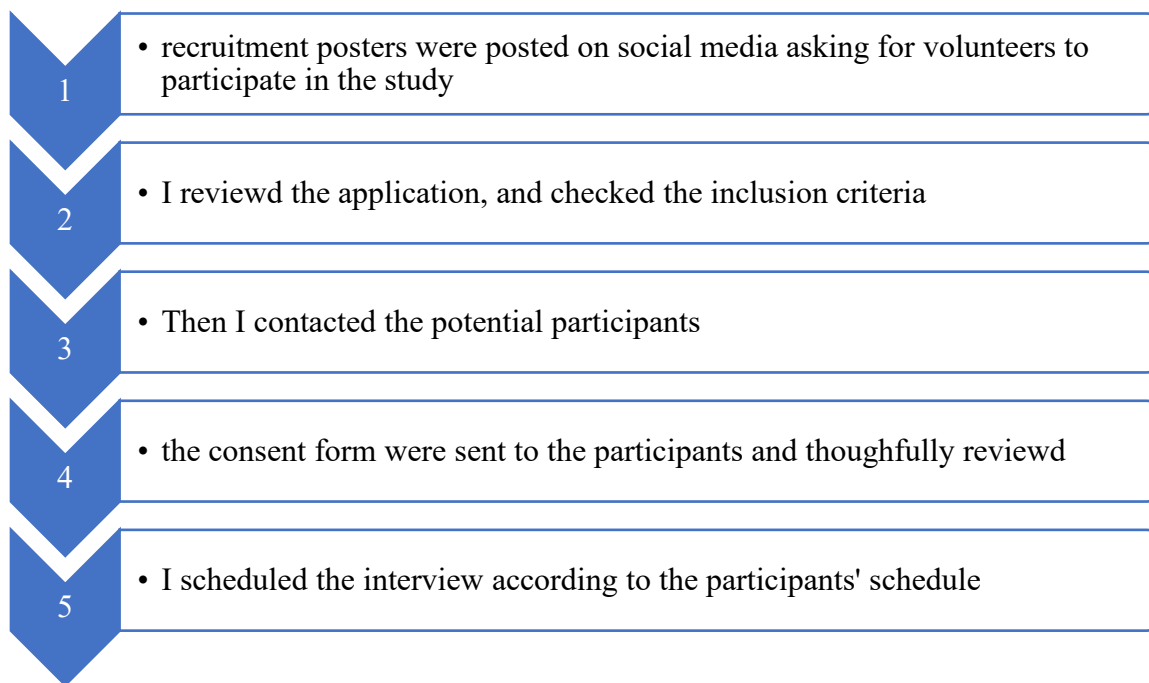
Since I intended to discover, understand, and gain insight from a sample who provide the best insight into the phenomena of interest (Merriam, 2016), purposeful sampling was the ideal way to employ participants. Maxwell (2005) expressed purposeful sampling as the "selection strategy in which particular settings, persons or activities are selected deliberately in order to provide information that can't be gotten as well from other choices" (p. 88). The sample for this case study was not intended to be representative of the whole population; however, it was designed to develop a qualitative understanding of a diverse group of people. For that, I used maximum variation sampling strategy to capture comprehensive perspectives relating to the phenomena (Patton, 2015). According to Patton (1990), the maximum variation sampling is a purposive sampling technique that includes participants "as different from each other as possible capturing and describing the central themes or principal outcomes that cut across a great deal of participant or program variation" (p. 172). Using the maximum variation sample allowed me to investigate the individualities of each case as well as patterns shared across the variation.

In order to achieve a thick, rich descriptive for the case (Merriam, 2016), the researcher must select participants with potential to offer rich information about the phenomenon being studied. Therefore, I included participants based on the following criteria: all participants had to: (1) be born and lived in Saudi Arabia, (2) be older than 18-years-old, and (3) have a maximum

variation of sociodemographic background to include all the extremes in the population. Thus, to better understand the participants' cultural idea, thoughts, and perceptions, the participants were selected from different generations including: Millennials, Generation Z, Generation X, and Boomers. Moreover, to provide diversity among the participants, the sample was selected from different geographical areas in Saudi Arabia, both urban and suburban. Further, I ensured equal representation of gender and marital status. The purpose of this sampling plan was to maximize the value of the research data. The process of selecting the population is outlined in Figure (6).

Figure 6

Sample Selection Process.



The qualitative sample sizes sought to be large enough to obtain sufficient data to effectively address the research questions. The goal of this qualitative research was to reach saturation. Charmaz (2014) stated saturation occurs when new data do not add any additional perspectives or information. Therefore, I continued to collect data from new participants until I reached data satisfaction, where there was nothing new learned about the research topic.

Additionally, I followed Charmaz's suggestion (2014) to stay "open to what is happening in the field and be willing to grapple with it" (p. 115).

Data Collection Language

Language is the primary way of communication; through language people can express their emotions, feeling, thoughts, ideas, and opinions. Language is a key aspect in qualitative research as it allows the participants to exemplify their sense of self in a way that the "social world is interpreted, understood, experienced, produced, or constituted" (Mason, 2002, as cited by Santos, 2015, p. 135). Using the participants' preferred language during data gathering phase was critical to capture the participants' hidden language expression. Arabic is the mother tongue for Saudis and is the official language in Saudi Arabia. Therefore, I was determined to gather the data in Arabic language to allow the participants to freely express themselves. Santos (2015) summarized the literature on qualitative cross-languages research. He reported five timing points of translation in cross-languages research which include: 1) prior to data collection, 2) at data collection, 3) during data preparation, 4) during data analysis, and 5) at dissemination of findings. As the main researcher, I am fluent in both Arabic and English languages. I started by writing the questions in English, then reviewed it with my chair Dr. Roulis to ensure the effectiveness of the questions. After that, I translated the questions myself to Arabic and had them reviewed by a professional translator to ensure accuracy. In this research, I aimed to seek "meanings in subjective experiences" (van Nes, 2010, p. 313). Thus, conducting cross-language research supported the cultural sensitivity of this qualitative research.

To ensure the trustworthiness of my research, I needed to ensure the credibility and the accuracy of the interpreting data. I was determined to take culturally sensitive approach to the participants' responses. For that, I hired a Saudi translator who shared the same background as

the participants, understood the hidden meaning of the language spoken, and was able to convey the message of the participants within its cultural context. There are some linguistic expressions which exist in multiple languages; however, they could be perceived differently as they have different meanings across different languages (van Nes, 2010). To convey the true meaning of the message, not a word-to word-translation, I used idiomatic translation process (Al-Amer, 2016). During data analysis and finding steps, I followed Al-Amer's (2016) recommendations to overcome the challenges of translation and to ensure the credibility of the data. In that essence:

1. The translation of the metaphors was bounded within the cultural context of the participants.
2. The translation of verbatim quotes conveyed the feeling and emotions of the participants.
3. I stayed close to the data, kept records of each steps, revised the data many times to maintain a rich description of the participants' experience.

In the following section, I discuss the translation process and describe the credibility measurements.

Data Collection Methods

As claimed by Marshall and Rossman (2011), "case study, the most complex strategy, may entail multiple methods-interview, observation, document analysis, even survey" (p. 56). Using multiple data sources of evidence, also called triangulation, build a robust case study research (Yin, 2009). Triangulation ensure comprehensive results that reflect the participants' view truthfully and precisely. Yin (2009) and Stake (2006) concurred triangulation is essential to case study reliability. For gaining in-depth insight into the phenomenon, I collected the data using individual qualitative surveys and interviews.

Qualitative Survey

In qualitative research, surveys investigate variation in populations, not distribution; the aim is to determine the population's perspective of the topic of interest, not to establish frequencies, means, etc. (Jansen, 2010). The survey consists of open-ended questions that allows participants to use their own words to describe their feeling and thoughts (Fink, 2009). Using these types of data collection methods aided me in obtaining valuable, complex knowledge about the topic and adding validity to the data (Yin, 2018). Questions intended to measure four criteria that have consistently appeared in previous studies for measuring health consciousness include: (a) integration of health behavior (physical fitness, eating habits); (b) attention to one's health (health alertness, self-monitoring of one's health); (c) health information seeking and usage; and (d) and personal health responsibility (El Bcheraoui et al., 2015; Hong, 2009).

The survey contained 10 mainly open-ended question to be able to quote the words of the participants (See Appendix C). I included a statement regarding the aim of the survey, I also added a note to encourage the participants to express their thoughts in the language and accent they prefer. I conducted the survey using Qualtrics web-based survey tool. It was open for six weeks to ensure getting enough rich data. I advertised for the survey in my own social media accounts, specifically Facebook, LinkedIn, WhatsApp, Snapchat, and Twitter. Also, I asked people to share the link with their friends and family. The eligible survey's responses were 1618 in total.

Personal Interview

The interviewing technique enabled me to understand how the participants build a meaning to the phenomena, as it "is most consist with people's ability to make meaning through language" (Seidman, 2013, p. 13). By interviewing, I aimed to investigate participant's health

experience and how their meaning of health influences health attitudes and behaviors. I used a semi-structured interview protocol (See Appendix D) to provide a framework and guide for the interview direction, which, at the same time, ensured some flexibility. The protocol served as a checklist to ensure all key points are addressed, while helping me to be clear and focused (Patton, 2015). The interview questions were guided by Patton's (2015) guidelines. They incorporated open-ended questions that focus on experience, behavior, opinion, value, feeling, knowledge, sensory, and background subjects. The interviews were held virtually using the Zoom online video conferencing tool. Zoom is a cloud-based videoconferencing platform that offers convenience and cost-effectiveness way of communication (Archibald et al., 2019).

With participant approval, the interviews were audio taped using digital media to ensure a complete transcript (Merriam, 1998). Additionally, I took notes during the interview to internalize the important information being said and accordingly follow up on new topics not covered with the initial protocol. According to Charmaz (2014), the researcher should continue gathering data until they reach a point of saturation, which is the point when no new themes or emerging ideas are found. In term of participant recruitment, I aimed to interview participants until I reached satisfaction and saturation of data. To that end, I interviewed 18 participants with different sociodemographic backgrounds. This number of interviews provided me sufficient "opportunity to identify themes of the case as well as conduct cross-case theme analysis" (Creswell ,2018, p. 157). To accommodate the participants' needs, the interviews were scheduled according to their free time. The individual interview time ranged between 16 to 45 minutes, with an average time of 20 minutes. To build a good rapport with the participants, I explained to them the purpose of the study, the procedure to protect their confidentiality and privacy, and their right to withdraw from the study at any time.

Data Analysis

The aim of qualitative data analysis is to “find substantively meaningful patterns and themes” (Patton, 2015, p. 5). During this qualitative study, I sought to investigate the participants’ context, attitude, behaviors, stories, experiences, and interactions to clarify and describe the phenomena of health consciousness. I intended to “make sense of (or interpret) the meanings others have about the world” (Creswell, 2018, p. 8). The way of doing so is to look at the data inductively with an open attitude to obtain meaningful information. In this case study, the analyses were based on the grounded theory approach, in which initial codes were rearranged and merged into broader categories with no specific themes from the literature. According to Creswell (2018), “forming a code or categories represents the heart of qualitative data analysis” (p. 184). Coding is the process of breaking down the data into reoccurring themes and labels. The analysis process was dynamic and continuous. I followed Creswell’s (2018) case study analysis method to “develop naturalistic generalization” of the emerging data (p. 191). Creswell (2018) suggested to break down the data into smaller segments and analyze emerging themes. Therefore, I first organized the data in files. Second, I read through and highlighted interesting information and made border notes. Third, I assigned abbreviation codes and placed them next to the results I found. Fourth, I organized several codes, with the same common idea, in a bigger theme that represented broad units to the codes. Fifth, as the patterns developed, the key findings appeared and I summarized the data capturing the participants’ insight. Finally, I construed the data significant findings. I describe below the detailed process of analyzing the interview and the survey data.

Survey Data Analysis Process

1. I read and reviewed all the responses in the participants language.
2. Then, I stated initial coding by writing words on the sides that describe the participants' experience.
3. Given the high number of responses I received from the survey (1618 responses), I conducted the analysis in the Arabic language following Creswell's (2009) data analysis process described above.
4. I translated the themes into English Language myself. Then, it was reviewed by a professional translator. We, together, reviewed the research purpose, questions, data from the interviews, and the emerging themes. Accordingly, I changed some wording to maintain the integrity of the research.

Interview Data Analysis Process

1. The interviews were transcribed by professional transcribers then reviewed by me to ensure accuracy. I compared the recording with the transcript many times before moving to the next phase.
2. The initial phase of the analysis started at the day of the interview as I was keeping notes of the participants thoughts, feelings, and emotion.
3. I matched my notes to the transcripts.
4. After that, the transcripts were translated to the targeted language (English), by a professional translator. Then, it was reviewed by me. I encountered the different structure of both Arabic and English languages. The process required careful attention to maintain the voice and tone of the participants.
5. I followed Crerwell's (2007) data analysis process described above.

Trustworthiness of Data

It is important to scrutinize the trustworthiness of each phase in the qualitative research including data collection, analysis, and discussion. Merriam (2016) argued, “the researcher must present insight and conclusion that ring the truth to readers” (p. 238). In my research, I established rigor and trustworthiness by various strategies that maintained the reliability of the data. Correspondingly, I used triangulation, member checking, and peer review techniques. Reliability is the degree in which the results are consistent and repeatable (Maxwell, 2015). By data triangulation, we can confirm the reliability of emerging findings I identified within the data by using both interview and survey methods. Triangulation refers to the use of multiple sources to collect data. I used both survey and interview methods. While conducting the interviews, I used some similar questions from the survey questions to compare the data result. Thus, I am confident of the study conclusion. Moreover, the credibility of the research refers to confidence in the truth of the research finding (Maxwell, 2015). Credibility is achieved by presenting truthful and correct interpretation of the participants' view. I used member checking strategies to ensure the reliability of my research. I asked each participant to read through the interview transcript to verify their statements and confirm the accuracy of the data. In regard to the validity of the qualitative research, it depends mainly on the researcher's efforts to evaluate the accuracy of the research process (Maxwell, 2015). To achieve validity, additionally, I used a peer-debriefing strategy to strengthen the reliability of my findings. I worked with a doctoral candidate from Saudi Arabia who understood the context of my research. Together, we discussed the process of the study, then she read my research and provided feedback. I noted her comments and adjusted my report. Overall, throughout all the research process, I stayed honest and transparent, as I attempted to present the true picture of the case study.

Ethics and Confidentiality

The interaction between researchers and participants in qualitative studies may be ethically challenging (Yin, 2018). Therefore, it is essential to formulate specific ethical guidelines to ensure the welfare of all the participants. Prior to participant recruitment or data collection, I sought the approval for my research plan from the Institutional Review Board (IRB) of University of St. Thomas (See Appendix A). The IRB assessed all potential risks that might impact the participants as a result of their involvement. Moreover, I distributed consent forms among the participants that included all the information needed to make an informed decision about participating in the research study (see Appendix B). The consent included the scope of the research, the fact they were free to participate, and the benefits and risks of participating (Yin, 2018). The participants were assured they could stop the interview or decline to answer any question at any time

Furthermore, I kept hard copies of survey and transcripts in a confidential and protected place, and only authorized individuals are able to access it. As for electronic data, I secured all digital form of transcripts, notes, recordings with password protection on my computer. To ensure privacy, I masked the participants' identities by using pseudonyms. At the time of transcription, I assigned the participant a different name and removed any link to their actual name or any other pertinent data. Further, using the Zoom platform aided me in protecting the participants' data as it provided secure recording without the use of a third-party software application. Moreover, before hiring the expert translator, she signed a confidentiality agreement to ensure the data were treated safely. I removed all personally identifying information from the transcript to prevent the disclosure of participants' personal information. I will preserve confidentially and privacy to my respondents even with any future use of this research data.

Before publishing the research, I will destroy all hard copies of research notes, transcripts and delete all electrical recordings and digital form of notes, transcripts, and any other related documents.

Personal Bias

The researcher plays a major role in the process of conducting qualitative research, as their own bias, view, thoughts, and values impact the research results (Merriam, 1998). Correspondingly, Creswell (2018) suggested the researcher must thoughtfully and openly identify their own personal biases, values, and backgrounds to prevent any prejudice. At an early stage, before developing my research questions, I outlined my personal biases, culture, background, and experiences, which includes the following:

- I am Saudi, familiar with the participants' culture.
- As I was living in Saudi Arabia, I was exposed to population health literacy.
- I worked as a registered nurse in three different hospitals (two different cities) in Saudi Arabia.
- Part of my job was to assess patients' health attitude and behaviors.

Outlining my personal bias allowed me to separate my personal view of the matter from the participants' view. Additionally, I have been separated from the field for eight years now, so I was able to avoid prejudice. While conducting the data, I avoided asking any closed-ended question that directed and steered particular responses. Instead, I was open and flexible, to highlighting the participants' view, value, and beliefs. I did not allow my personal experience, beliefs, subjectivity, and prejudices to influence the participants' responses and views. Following the inductive thinking and approach of qualitative research, I stayed open to allow the participants view direct the study result.

Chapter Summary

In summary, this chapter presented a comprehensive description of this study's research methodology. This qualitative case study research obtained in-depth understanding of Saudi's health related attitude, behavior, and consciousness. The participant sample was selected based on purposeful strategies. I conducted the data collection using two methods: survey (using Qualtrics web-based tool) and interview (using Zoom platform). In total, I received 1618 responses from the survey and conducted 18 personal interviews. Reliability was accounted for through triangulation, member checking, and peer-review measures. The chapter also highlighted the ethical considerations, privacy, confidentiality, and my personal bias. The next chapter presents a discussion of the findings with specifics that support and explain each finding.

CHAPTER FOUR: FINDINGS

The primary purpose of this study was to explore adult Saudi's health perceptions and experiences. The following overarching research question informed the study:

1. How do Saudis experience and understand health?
2. How does this experience and understanding of health inform or shape health consciousness for Saudis?

I used a qualitative case study design to examine Saudis' health related thoughts, insight, and awareness. In addition, I investigated the factors that impacted Saudis' healthy practices. I collected the data using two methods, which are individual qualitative surveys and interviews. Using multiple data collection methods enabled me to capture the complexity of Saudis' health consciousness phenomenon. I analyzed the data using a ground theory approach. Thus, I ensured that study findings are grounded in participants' experiences. In this section, I describe the findings of the qualitative survey and interviews by highlighting the voices of the participants in both research tools. I captured the participants' knowledge about health in general and thoughts about the factors associated with their utilization of healthcare facilities and engaging in healthy activities.

Survey Findings

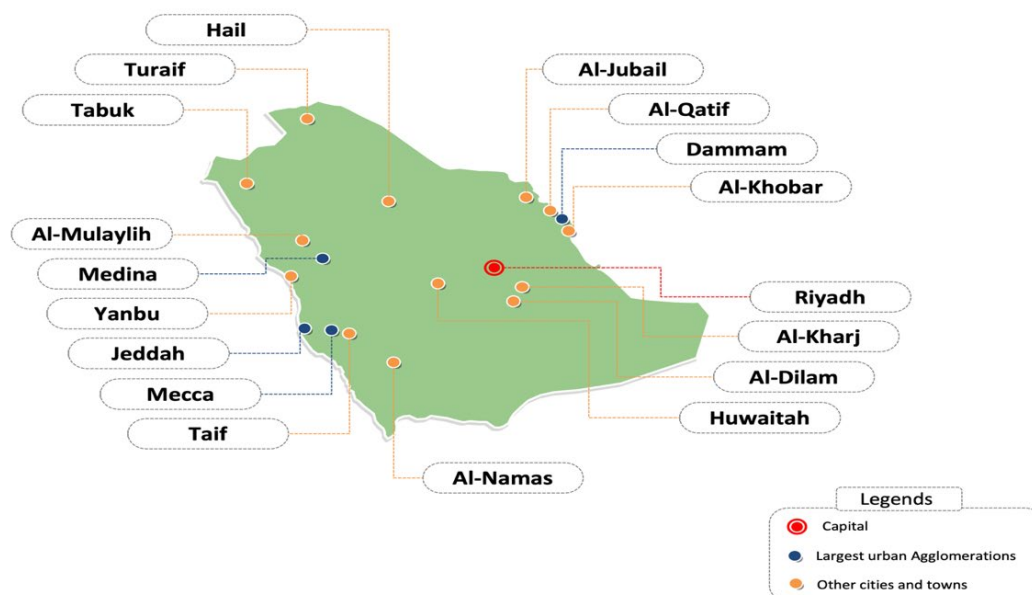
My goals for the survey were to gather more information about Saudi health consciousness by examining four variables that have evolved consistently in the literature. These variables are: (a) integration of health behavior (physical fitness, eating habits), (b) attention to one's health (health alertness, self-monitoring of one's health), (c) health information seeking and usage, and (d) personal health responsibility.

Survey Participants

I conducted the survey of Saudis' perceptions of health and healthy activities between August 23, 2020, and October 3, 2020. I used Qualtrics, a web-based survey tool, to conduct survey research. I invited people to respond to my web-based survey using my own social media accounts, specifically Facebook, LinkedIn, WhatsApp, Snapchat, and Twitter. I asked all individuals who received the survey invitations to share it with their friends and families. After six weeks of distribution the survey, I received 1779 responses. I screened the responses to ensure the participants met the research criteria. Then, I excluded 161 surveys as they were filled by people with non-Saudi nationality. The final total number of participants of the survey was 1618. The participants reported from all the five geographic regions of Saudi Arabia, including: Riyadh, Al-Kharj, Al-Dilam, Huwaitah in central; Tabuk, Turaif, Hail in northern; Al-Jubail, Al-Qatif, Dammam, Al-Khobar Eastern; Jeddah, Madinah, Makkah, Taif, Yanbu, Al-Mulaylih in western; and Al-Namas in southern provinces (see Figure 7).

Figure 7

Map of Saudi Arabia with Corresponding Sample Collected from Five Geographic Regions.



Demographics

A summary of the demographic characteristics of the participants in this study survey are presented in Table 1. The study sample for this investigation consisted of 1618 adults recruited from Saudi Arabia. The sample of respondents included 54.67% men (n=972), and 45.33% women (n=806). The ages reported on are segmented into four age ranges: 18-24 (n= 76), 25-45 (n= 996), 54-64 (n= 516), & 65+ (n= 191). The majority of respondents were in the age group 25-45 (55.99%), which mirrors very closely to the age percentages of the population. Concerning marital status, 79% were married, 11.94% were single, 5.91% were divorced, and 2.82% were widowed. As to education level, 0.37 had no formal education (n= 7), 3.66% reported to have less than a high school certificate (n= 63), 15.74 have high school diploma or equivalent (n= 282), 53.78 got their Bachelor's degree (n= 958), and 26.46 have a Master's degree /Doctorate (n= 465). The response rate was higher for those with college and higher degrees.

Table 1*Characteristics of the Sample*

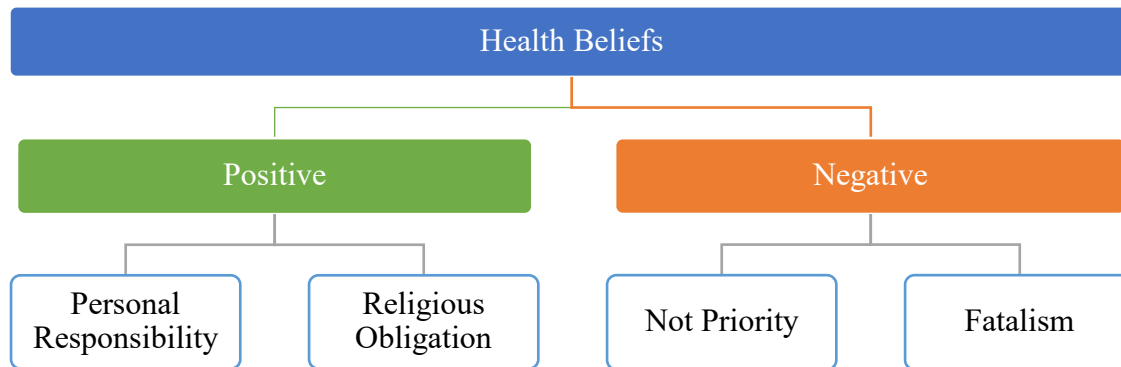
Demographic Categories	Frequency	Percentage
Gender		
<i>Woman</i>	730	45.15
<i>Man</i>	887	54.85
Age Range		
<i>18-24 years</i>	65	4.02
<i>25-54 years</i>	892	55.13
<i>55-64 years</i>	482	29.79
<i>65 years and over</i>	179	11.06
Marital Status		
<i>Single</i>	191	11.83
<i>Married</i>	1281	79.32
<i>Divorced</i>	96	5.94
<i>Widowed</i>	47	2.91
Level of Education		
<i>No formal education</i>	6	0.37
<i>Less than a high school certificate</i>	59	3.66
<i>High school diploma or equivalent</i>	254	15.74
<i>Bachelors</i>	868	53.78
<i>Master's degree / Doctorate</i>	427	26.46

Survey Findings

The qualitative data analysis sought to identify the main themes and sub-themes regarding Saudis' health consciousness and its impact on their health-related attitudes and behaviors. The survey respondents gave answers about their own beliefs and values of health in general; their knowledge about the importance of physical fitness and nutrition; their practice and engagement of health self-care; and their trustful health information sources. The data analysis process revealed four themes including: health beliefs, health self-management, health information seeking trend, and utilization of healthcare resources. These themes represent the dimensions of health consciousness among Saudis.

Theme 1: Health Beliefs

Health beliefs are what individuals think about health in general, what represents good health, and how they reflect on the causes of illness. Health beliefs impact health behaviors and health outcomes (El Bcheraoui et al., 2015). The first section of the survey focused on the meaning and value of health. I asked the participants to share how they understand health concepts, how they value their health status and how they make decisions related to their health. The participants of this study reported both positive health beliefs and negative health beliefs (see Figure 8).

Figure 8*Theme One Description.*

Positive health beliefs were associated with high levels of self-efficacy, motivation, and awareness of the importance of health. Two factors were found associated with Saudi's positive health beliefs, which are sensing personal responsibility to health and having a religious obligation to health. The majority of the participants (75%) had a positive attitude towards health. Many believed health is a personal responsibility. Personal responsibility of health means all individuals must be held responsible for their health-related choices by taking control of their health and lifestyle. Participant 11 said, "my health is my choice whether to live happy with good health or live in pain suffering from bad health issue," also participant 93 stated, "a person's health is his/her most valuable asset, when health is lost everything get lost with it." Participants 999 explained he is solely affected by his health choices, he explained, "it is my own responsibility to take care of my health to enjoy the rest of my life in good health and wellness." Additionally, participant 166 affirmed "if I didn't care for my health, no one will do so. I must do it myself!"

Additionally, many felt health is a personal responsibility to ensure productivity in society, decrease dependability, and improve the quality of life. Participant 3 stated "for the sake of my family and society I must care of my health." In more detail, participant 469 said "health is

a kind of human capital. So, ones must take care of it to live a good quality life and participate in building and supporting society.” Similarly, participant 76 said “I am responsible to my health to avoid being burden on myself, family and society.” Adding to that participant 55 specified, “take care of your health as you take care of your money, in both you will give you the joy of life”

Moreover, participants expressed health is the greatest blessing God has given humankind and it is their duty to take care of it. Thirty five percent of the participants believed the preservation of health is a religious duty, and a way of worshiping God. “Health entrusted to us by God, therefore we are obligated to keep our health well in all physical and psychological aspects” said participant 88. Similarly, Participant 1612 shared,

As Muslims we are asked to care of our health and protect it. In fact, Prophet Mohammed indicated that on the Day of Judgement God will us ‘how did you care of your health’ and we must be prepared to answer.

Participant 372 believed health is a gift from God as he stated

I am convinced that my good health is gift from God as Prophet Mohammed says, “Second to faith, no one has ever been given a greater blessing than health,” For that as a way to thank God for his generosity, I take care of my health to show God how I appreciate his greatest gift.

Furthermore, participant 995 said

A person has one life and one body throughout his journey in life, God asked us to take care of our body health, so it is natural and logical to preserve this body health as much as possible, as it is the only vehicle in this world through which he will reach God willing, to his final residence and to meet the Creator.

Other participants acknowledged the importance of keeping a healthy body to assure effectiveness of religious activities like praying, fasting, and pilgrimage. Participant 78 reported, "I always pray to stay in good health, restore my body energy, protect my hearing and my vision so that I can take properly worship God." Likewise, participant 650 stressed health is the main preservation of life, as she stated, "only healthy human beings that can properly implement God's law in human life."

On the other hand, 25% of the participants were fixed on negative health beliefs which affect their engagement in healthy activities in return. Negative health beliefs were associated with self-doubt and low motivation to participate in healthy activities. Twenty percent of the participants declared health as a not priority and they would rather enjoy their lives than thinking and reflecting on their health. For instance, participant 843 stated

it is possible that a person cares about his health and lives a healthy lifestyle in all aspects, but then dies in a car accident within seconds. I much prefer to live my life in length and width as well.

In addition, some participants felt they do not have time to think about health and change their behavior. Participant 1002 fixed her mind on living in the moment and indicated "thinking about health matters tires me, I would rather enjoy my life before it is too late." For participant 47, health is not on the priority list as other duties come first. He reported "family obligation and work tasks come before health."

Fatalistic belief is another negative health principle identified by the some of the participants (5%). This fatalism is the belief an individual's health outcome is destined by a higher power in which individuals have no control over it. Previous studies showed this religious belief may inhibit healthcare utilization, demotivate engaging in healthy activities, and lead to

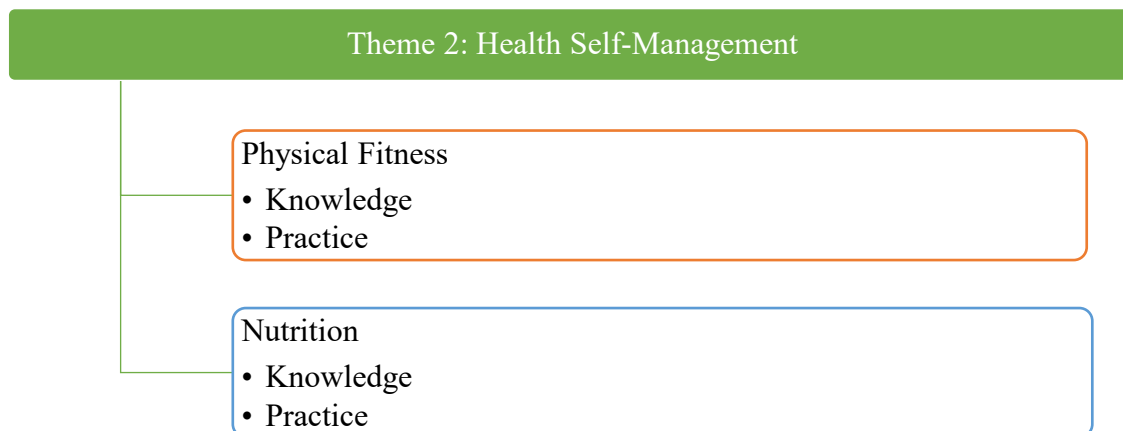
poor health. Participants 2, 72, 208, 721, 1035 each quoted from Quran: “say, nothing will befall us except what God has decreed for us.” In detail, participant 1178 explained, “I believe in fate, in good and bad, the message is clear it is all up to God and I must not challenge his will.” Besides, as participant 92 affirmed, “life is short, I can’t waste it in thinking of health problems that I may encounter. We all going to die at the end.”

Theme 2: Health Self-Management

Health self-management emphasizes personal responsibility of health. It can be explained by what individuals do to control and manage their own health. Extensively, health self-management involves the decisions to engage in healthy lifestyle choices. Healthy lifestyle is linked to improved and increased quality and longevity of life. The second section of the survey focused on the knowledge and practice of the participants in regard to healthy nutrition and physical fitness. I asked the participants to explain how food and exercise affects the body, and then I asked about their eating and exercise habits. This theme presents the factors that encouraged the participants to make informed decisions about care, engage in healthy behaviors, and describe the barriers to self-care (See Figure 9).

Figure 9

Theme Two Description.



Physical Fitness. I examined the participants' level of knowledge about the health benefits of physical activity and the risks of inactivity. All participants strongly agreed physical activity is good for health. Participants based their knowledge to their Islamic faith and common inspirational quotes. Participant 1122 mentioned:

healthy behavior is what Islam asks them to follow, and Islam clearly encourages Muslims to engage in physical activity. The Hadith of prophet Mohammed says, "teach your children swimming, throwing arrows and riding horses" ... many other verses from Quran and Hadith indicating and urging the importance of physical fitness and to keep good health.

Moreover, the participants stated positive fitness quotes showed them the importance of being physically active. Thirty-three different participants said "a sound mind in a healthy body" which is a well-known motto in the Saudi culture adopted from the Greek culture. This phrase is commonly used in supporting the importance of physical exercise in general well-being. Other health and fitness quotes expressed by the participants were "if you don't use it, you will use it," and "the blessing bestowed by movement."

Although not all of the participants identified the specific benefits of physical activity for health, some provided detailed benefits. A large number of the sample stated physical activity is the source of energy that benefits internal organs. Participant 1479 commented, "exercising give the body energy to get rid of waste, improves circulation, and boost vigor and vitality." Participant 14 agreed and added, "it improves the performance of body functions, burns fats, and gives positive energy." Moreover, participant 109 explained, "the more physical effort you do, the more you will preserve your general physical energy".

Another benefit of physical activity identified by the participants is muscle and bone strengthening. Participant 1551 explained,

during exercise, the stored fat in the body is broken down and produce fuel for muscles, this will escalate the work of the lung and increase the amount of oxygen in the cells of the body which will strengthening the muscles of the body.

Participant 9 said, “physical fitness buildup strong muscles, maintaining the strength of joints and ligaments, helps maintain healthy bones and avoid osteoporosis.” Adding to that, participant 5 argued, “exercise is crucial for building strong bones at young age, and when we are older it is necessary to maintain and improve bone strength.”

In addition, participants correctly identified the relation between physical activity and disease prevention. For example, participant 28 stated, “physical fitness reduced the incidence of chronic conditions as diabetes mellitus, high blood pressure, and high blood cholesterol.”

Similarly, participant 38 said, “regular exercise has great effect on lowering triglycerides and bad cholesterol and increased the good cholesterol.” Also, participant 52 stated, “exercise protects the body from many diseases, especially heart disease.” Moreover, participant 99 explained in detail that “fats accumulate in arteries that supplying the heart with blood and sometimes cause clog and block the blood flow. However, regular exercising burns the accumulated fats and promote good blood circulation”

Furthermore, the participants of this study reported different ways of how exercise can improve their physical health. For example, participant 173 argued, “exercise slow aging and increase life span,” and participant 63 explained, “physical energy enables a person to live with a healthy body, regardless of age.” Adding to that, participant 1701 said, “a not physically fit person looks older and suffer from health problems appose to physically fit one.” Participant

231, argued physical activity “improves energy levels and boost[s] sexual activity.” Similar to that, participant 509 reported “exercise increase[s] the joy of physical intimacy.”

Participants reported other advantages of physical activity including psychological benefits. To some participants, exercise controls weight which enhances their self-esteem. Participant 150 explained “from my experience good body shape increase confidences, as for years I suffered from social withdrawal and depression till I start exercising.” In addition, participant 372 clarified how exercising boosts mood “it produces chemical in the brain that will increase the pleasure hormones, which will reduce stress and anxiety.”

Moreover, the participants reported the importance of a balanced lifestyle. They agreed physical activity alone will not make a difference in health status if not combined with other healthy habits. As participant 357 said, “in my opinion, physical fitness is important but only will work with good eating habits.” Participant 201 reported “exercising is important without excess or negligence.” Another participant, 1346, explained “over-exerting could cause health issue including heart and arteries damage and might lead to injuries.”

In regard to the duration of beneficial exercise, most of the participants agreed it should be 30 minutes long. The most popular exercise practiced by the participants was walking. In fact, some of the participants reported not all physical activity is exercise. Participant 358 argued, “our ancestors were more physically active than we are, yet they did not care about exercising.” In detail, participant 1270 explained,

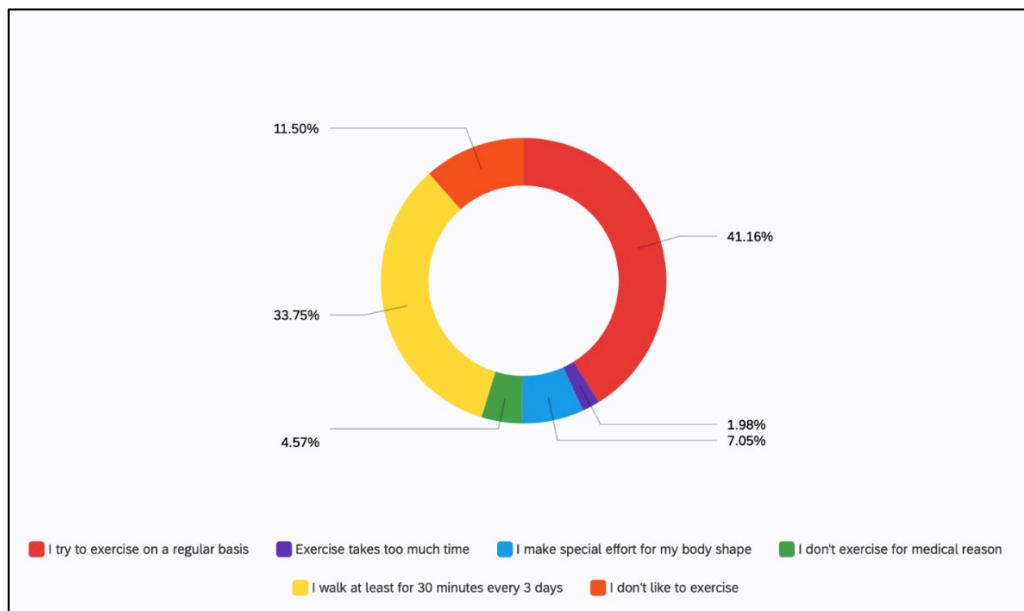
fitness is very important without hardship, setting a time for it, or going to the gym. I just move around and do the things I love, such as gardening. To me the most important thing is not being lazy and sitting still for long time.

Further, participant 1465 said, “I consider praying an act of physical activity. It has been observed that many elderly people have maintained their joints strength and flexibility, reduces joint pain as a result of their prayers.”

In terms of the participants' exercise habits, 74.91% reported they try to exercise on a regular basis and/or walk for at least 30 minutes every three days (see Figure 10). In addition, 7.05% reported they stay physically active for the sake of having a good body shape. The remaining participants stated they do not exercise because they suffer from a physical condition (4.57%), and/or they dislike exercising.

Figure 10

The Participants Exercising Habits.



All of the participants were familiar with many of the benefits of exercise, yet there are factors that inhibit them from practicing regular exercise. The most common challenge identified by the participants was maintaining the motivation to workout. Participant 1267 said, “exercise is very important, but I have a high tendency for boredom!” Another barrier identified by participant 68 is the cost and time issues, as she explained “getting a gym membership cost [is]

high, and even if I managed paying the monthly fees, I need to find time through the day to actually go and use the facility.” Moreover, the participants reported the environmental factors were the reason for not being physically active. As participant 1295 explained, “the weather is bad, its either too hot or too cold or too dusty to exercise.”

Eating Habits. In the survey, I first assessed the participants’ knowledge about the relation between health and food, then, I examined their trends of dietary habits. Of the 1618 participants, only four reported they are not aware of the direct effects of food on body health. Participant 873 stated “I don’t know, some people say food effect on health is a myth.” The remaining participants were able to identify specific health benefits of food.

Healthy food, as reported by 85% of the participants, is vital for optimal health. The participants reported food is the body’s fuel that keeps it alive. Participant 68 said, “scientific evidence proves that food is our main source of energy. Therefore, its quantity and quality have a direct effect on a person's physical and mental health.” In addition, participant 965 outlined, “good food gives the body what it needs in order to be able to perform all its functions to the fullest.” Further, participant 1498 narrated food enhanced brain function, as she explained, “with food the body stays active, strong and fully energized. Without food, the body's ability to perform many of its functions change leaving us feeling worn down, tired, and weak.”

The participants also indicated diet plays a vital role in overall growth and development for both children and adults. Participant 1011 said, “regardless of your age, food will supply the body needs with vitamins, minerals, proteins, and good fats.” Also, participant 83 clarified, “children and teens need the right food to grow muscle and body tissue. As for adult and older adult, a good nutritious diet help preserve muscle and bone strength.” Moreover, participant 775 explained the relation between food and body functions as “a chain connected to each other, the

more one eats proper food, the better his body functions.” Participant 978 concluded, “food has crucial influence on physical, psychological and spiritual health. It affects growth, muscle and bone strength, skin and hair, mood and memory, etc.” Adding to that, participants 627, 1019, and 1225 expressed “you are what you eat!” By this notion, the participants explained how food directly affects health.

Furthermore, 15% of the participants identified how food impacts the immune system. Participant 1009 said, “The key to healthy body is good nutrition, as bad diet weakens immune cell activity to fight viruses and bacteria leaving the body vulnerable to diseases.” Likewise, Participants 38, 862, 1429, and 1148 said, “food is a double-edged sword” describing its effect to either cause or a cure disease. The participants were able to list specific diseases related to poor nutrition. Participant 1322 believed, “food high in sugar causes diabetes and high cholesterol, which leads to heart problem.” Likewise, participant 532 stated, “healthy food benefits the body, prevent and decreases the risk of health issues. The opposite is true, unhealthy food causes health problem. For example, fatty food causes high blood cholesterol, sugary food feeds cancer cells.” The participants argued certain dietary patterns boost immunity and reduce the risk of diseases and vice versa. Participant 349 said, “certainly, there is a relationship between food and health. When a person doesn't eat well, he becomes susceptible to diseases. So, a person must eat healthy balanced meals to preserve health.”

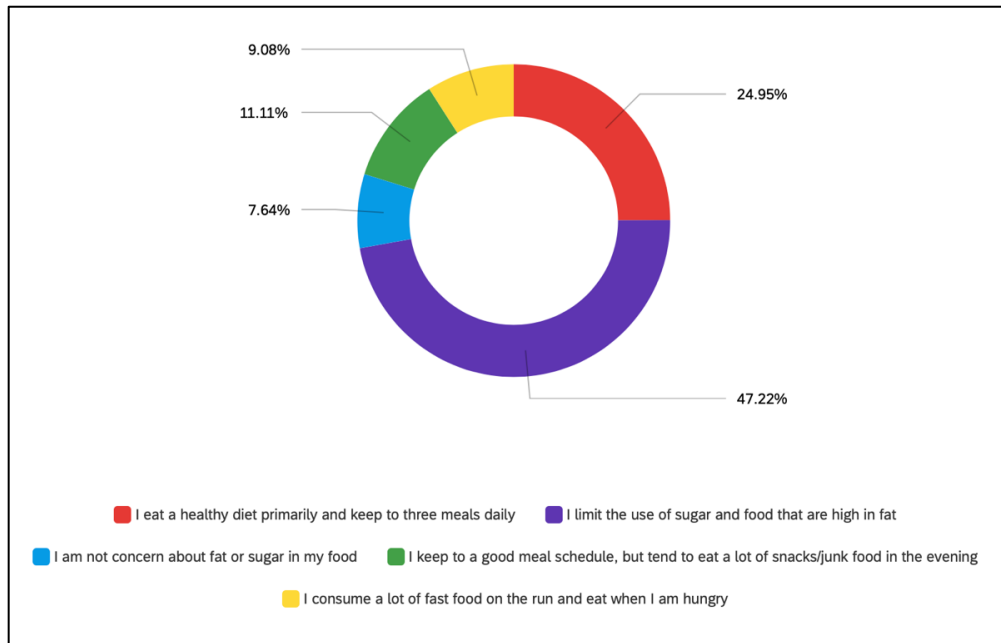
Almost all of the participants were able to identify the importance of healthy food, both in terms of quantity and quality. Participant 1618 said, “when choosing food to eat, we must look for food that contains vitamins, minerals, fats and proteins. We must defer from choosing food that contains sugar, bad fats, hydrogenated oils, starches, white flour and salts.” Additionally,

participant 331 said, “healthy food is all about balance and right proportions. Our diet must include fruits, vegetables, whole grains, and fat-free milk diary.”

Ninety-five percent of the participants relayed connected their knowledge to Islamic beliefs, as they reported many sayings of Prophet Mohammed. In fact, 544 participants pointed to the Hadith “No man ever filled a vessel worse than the abdomen. It is enough for him to eat a few bites that strengthens his body. If he likes to have more, then let him fill a third with food, a third with a drink and leave a third for his breathing,” to explain their perception of satiety behavior. According to the participants, Islamic faith embraces concepts and models of a healthy diet. Participant 167 said, “as Muslim, I must obey God and Prophet Mohammed’s recommendation of healthy diet plans to become healthy and happy.”

On the other hand, 4% of the participants reported weight loss as their main motivation to eat healthy. Participant 269 said, “I eat healthy food because it helps me control my weight.” Similarly, participant 650 stated “eating balanced food and avoiding fatty food is very important to avoid obesity and overweight.” The remaining 1% declared past experience influenced them to follow a healthy diet. Participant 1005 specified “from my experience, food has a great impact on health. I had polycystic ovary syndrome, I followed a strict healthy diet and I recovered without using any medication!” Likewise, participant 1072 said, “I found out that bad food, which is high in saturated fats and sugars, degrades my health, tired me out, and makes me ill.”

In terms of the participants’ eating habits, the majority were paying attention to healthy eating. About 47.22% of the participants reported they limit the use of high sugar and fatty food (see Figure 11). In addition, 24.5% expressed they eat a healthy diet and eat three meals a day. The remaining 27.83% of the participants cannot keep a healthy diet.

Figure 11*The Participants Eating Habits.*

Among the participants who identified the benefit of eating healthy food, 492 reported they tried and could not keep up healthy eating habits. The main barriers were cultural and social contexts. Culture impacts diet choices and food preparation. The participants reported eating raw vegetables and fruits in the course of a meal is uncommon in Saudi. Participant 411 said,

we, Arabian Gulf, eat rice and meat daily! Our consumption of fruit and vegetable is below recommendation because we are not used to it. Comparing to Middle Eastern, who eat vegetable and fruit daily and consume a lot of olive oil, they are healthier than us.

Adding to that, participant 371 said, “I’m inclined to customs and traditions, I believed that natural and traditional foods are better compared to the ‘trend’ healthy food everyone is talking about nowadays!” Moreover, the participants argued food choices differ in quality and quantity based on the situation; one cannot keep up a healthy diet in some situations like parties and holiday gatherings. Participant 852 explained,

I try to eat healthy as possible, but it's difficult due to social customs. For example, I gather with my extend family ever Friday over a big meal, I find myself force to eat fatty food as its unacceptable to bring my own food!

Likewise, participant 641 affirmed, "unfortunately, our eating habits are very bad. In social gathering we overeat mindlessly."

Theme 3: Health Information Seeking Trend

Seeking health information is the way in which individuals obtain information about their health, risks to illness, and health promotion activities. Obtaining health information is an important component to health consciousness as it shows how individuals take an active role in management for their own health. The healthcare workforce was the most common source of health information reported by 30% of the participants. In fact, 42 participants expressed "doctors are the best resource for reliable health information, because health field is their specialty." The participants narrated physicians are reliable sources for health information, especially with the current revolution of the internet and social media. Participant 65 said, "nowadays all people can post things on the internet you can't tell which is right and which is a myth. I say trust your doctor not the internet!" Adding to that, participant 775 said, "I rely on doctors as the distinction between reliable and unreliable sources is difficult in these times with the evolution of social media." The participants also indicated they seek the advice of dietitians and nutritionists to maintain healthy behaviors. Participant 778 stated "dietitians are the best source to learn about healthy eating and healthy living." Likewise, participant 503 explained "I explored a lot and found out that only nutritionists promote health and manage diseases. From my experience, I consider them as a reliable source. They helped me achieved a specific health-related goal by changing my eating habits."

Furthermore, 19% of the participants engaged in health information seeking via the internet. The internet, as noted by the participants, offers widespread easy access to a variety of health information. Participant 630 alleged, “with the internet, information retrieval is easier now than ever before, I can find any information at any time.” Also, participant 893 indicated, “I search online for health information, because I can find a quick answer for any question I have.” Also, the participants like the anonymity and confidentiality of obtaining health information on sensitive topics. Participant 894 explained, “to be honest, I can’t discuss some health issue with any health professional, so I search online!” The participants access online health information in two ways: 1) searching directly for health information via Google web search engine, and 2) searching in federal government health websites, such as PubMed, CDC.gov, Medline, WHO.gov, and MHO.gov. Most participants trusted all health information obtained from Google. Participant 1362 expressed “Google knows everything.” The data revealed that only a few participants were more careful when searching for health information and only trusted government supported specialized health websites. Participant 667 stated, “I only trust reliable medical sources specialized medical like PubMed, and medical centers website like Mayo Clinic and Johns Hopkins.”

Moreover, 15% of the participants reported they use social media as a venue for finding health-related information and advice. They used different social media platforms, including YouTube, Snapchat, Twitter, WhatsApp, and Instagram. Participant 1540 argued, “social media offers many advantages in term of data availability, ease of access, and low cost.” The participants explained the health-related information obtained from social media is clear, precise, and easy to understand. Participant 1578 said, “I’m not a doctor! I don’t understand medical terminology, people in social media post simple information.” Likewise, participant 17 said

“reading research article takes time, I get bored easily. Health information posted on Twitter is short and straight to the point.” Additionally, the participants drew attention to the emotional support they get from social media. Participant 107, who suffers from a chronic disease, stated, “I use YouTube to look for health information related to my health issue, I like to hear other people’s personal experience.” In detail, participant 159 explained, “I follow health and fitness account on Instagram, it’s nice way to exchange information and find a support group to share health concerns.”

On the other hand, 13% of the participants receive their health information from mass media. The participants described the television to be a credible source of health information. Participant 1286 said: “I trust ‘Good Morning Arabs Show’ it airs on MBC (biggest channel on the middle east) their programs are being reviewed by many people and the Channel hold a responsibility to all information they provided.” The participants agreed printed media presents updated health information. Participant 1294 stated “I don’t actively look for health information, but I keep up with the new health evidence from newspaper and magazine.”

About 6% of the participants rely on government health agencies to find health information. Participant 1330 explained, “The Ministry of Health because it is the source responsible for citizen health.” The participants specified the Saudi Ministry of Health and Saudi Food and Drug Authority to be the solely trusted source for health information. Participant 721 justified, “my country's Ministry of Health; because it is the official source for the name of health.” Adding to that, Participant 378 explained, “governmental health agency provides health awareness to the public, I trust it because it is an official entity with no profitable interest.”

The remaining 9% of the participants stated they do not look for health information from official and/or specialized sources. They would rather take health matters into their own hands

than take a risk by trusting health organizations and professionals. Participant 1400 held, “honestly, at this time, there is no reliable source of health information.” Likewise, participant 771 said, “the conflict in health information is increasing, as each doctor driven by his/her personal interest. I don’t know who to trust!” Also, participant 842 stated, “unfortunately, there is no credible source for health information due to information contradiction in some cases. So far, I've had the common sense to take care of myself.” Furthermore, the participants reported they trusted their family and friends to obtain health information. Participant 335 explained,

to be honest with you I have lost faith of all resources. If we talk about government officials, they tend a lot of times to fake some data just for political reasons. When it comes to most doctors, they tend to fake just to promote some foods and diets ... I personally use my guts feeling to get the reliable sources...otherwise there are few very few Drs whom I know personally. Lastly, I trust what my wife says.

Additionally, participant 317 said, “Mom, because she is always right!”

Theme 4: Utilization of healthcare resources

Utilization of healthcare resources is the use of health services provided for the public by individuals for the purpose of preventing, managing, and curing health problems. Utilization of healthcare resources is a crucial element to understand health consciousness. In this survey, I evaluated the underlying patterns of utilization of healthcare facilities. I also examined the value of seeking healthcare from the perspective of the participants. The results yielded two main themes: (1) high perceived need to seek healthcare facility, and (2) low perceived need to seek healthcare facility.

High Perceived Need to Seek Healthcare Facility. The majority of the participants (79%) acknowledged the importance of annual check-ups. In fact, 173 participants expressed

“prevention is better than cure,” and 64 participants stated, “an ounce of prevention is worth a pound of cure.” These slogans show the importance of prevention care. The participants reported health screenings can help detect or prevent serious diseases and health problems before they can become major. Participant 1 said, “regular checkups can potentially identify health issues before you know something is wrong.” Adding to that, participant 120 explained, “it helps avoiding complexity of simple medical conditions.” Moreover, the participants specified regular checkups enhance emotional well-being. Participant 1363 expressed, “regular screenings can find silent diseases like cancer at early stage before it has a chance to spread. In short, seeking medical care gives you self-confidence.” Also, participant 1193 reported, “routine visit to the doctor makes me feel less anxious about my health.” The data revealed four factors that scientifically impacted the participants to utilize healthcare facilities including: age factors, past experience, privilege, and family dynamic.

Age Factor. Several participants indicated age as an indicator to seek healthcare services. However, there were conflicting opinions regarding the age in which individuals should start following a routine health check-up. Some believed only elderly people who are above 60 need health screening to manage their condition, as aging is a major risk factor for many chronic and inflammatory diseases. Participant 1167 argued, “there are many age-associated diseases, as aging affect the function of body's cells and tissues and organs.” Also, participant 627 expressed, since I am over sixty years old, I believe that I must take care of my health, get routine check-ups and visit my doctor when I'm not feeling well. By doing this I can enjoy the rest of my life and avoid health problems that may be the cause of my physical disability, God forbid, and become a burden to those around me.

Adding to that, participant 1249 explained, “older people need to have at least one medical checkup a year to adjust their lifestyle according to their health status.” About 41 participants, whose age range was 65 and above, seek and utilize healthcare facilities regularly; they all stated, “I’m old, I need to take care of my health.” On the other hand, other groups of participants had a different opinion about age and health check-ups. They believed individuals should start annual check-ups and screenings at 35-40 years old. As participant 96 said, “common health concerns start to show after turning 35.” Additionally, participant 1455 stated, “preventive health check-up important for age groups over 40 years old.”

Past Experience. The incidence of a serious health event impacted the participants’ value of healthcare, which led them to seek and utilize healthcare services more often. As participant 946 said, “I encountered a health problem due to my negligence of my health. I’ve learned the hard way to take care of my health and not to wait for the symptoms to appear to treat it.” Also, participant 95 said, “I had a heart attack, it was a scary experience that taught me to follow up with my doctor and do regular screening.” Participants who are at high risk or suffer from chronic conditions reported higher rates of utilizing healthcare services. For example, participant 278 expressed, “my turning point happened after being diagnosed with breast cancer, I truly realized the importance of regular check-up.” Additionally, participant 562 said:

I have the mature awareness to deal with some health problems, especially the one that I previously suffered from. I had a benign tumor on my back at that time I wasn’t careful about my general health not to my lifestyle habits. I realized after that, at the age of 43, that I needed to go back to my teenage, twenties days and take more care, eat healthy, exercise more often, and do regular check-up. My general health is excellent now. I seek medical care when I have concerned and when I don’t, just to be extra careful.

Privilege. The participants also identified their ability to utilize healthcare services as a form of privilege. To them, medical educational privilege prepared them to understand the factors that influence health status and therefore they utilize healthcare services. Participant 264 said, "I work in the health sector, so my knowledge reflects on my behavior; I'm careful about my health." Also, participant 120 expressed, "as a medical practitioner, I have fair information on health issues and how to take care of my health." Further, participant 335 explained, "I'm a luckily man, well educated. I know what's good and what's bad for my health. I do regular checkup to stay ahead of my health."

Other participants only expressed their work position as a sign for knowing the importance of health checkup. For example, participant 997 said, "I'm a nurse." Furthermore, the participants' work-related benefits are another form of privilege in seeking healthcare facilities. Apparently, some workplaces require and offer their employees an annual physical checkup. It provides the worker with the opportunity to take responsibility to manage their own health. Participant 222 said, "I'm a fighter pilot, the nature of my work requires a medical examination that must be performed every 6 months." Also, participant 10 said, "I do regular medical examination because my job requests it to ensure that I'm fit to handle the job."

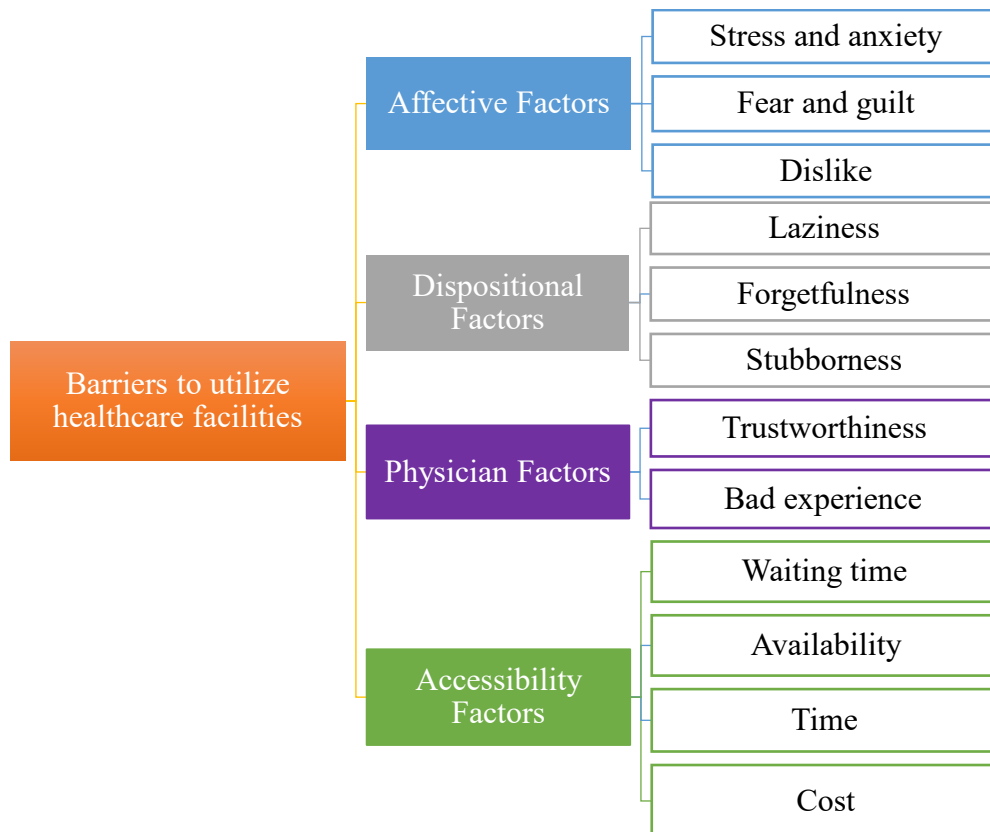
Family Dynamic. Some participants reported social support from parents and spouses had a positive effect on enhancing the use of health services. As participant 1046 described, "I grow up seeing my mom doing that, she is healthy and doesn't suffer from any chronic condition. So, I learned from her and I following her routine." Also, participant 1062 said, "I've learned from my family the value of health and the responsibility to take care of such a gift." Adding to that, the participants expressed their significant others influenced their decision to

utilize healthcare facilities. As participant 203 said, “my wife schedules the doctor’s visit, and that the only reason I do seek medical care.”

Challenges with Optimizing Healthcare Resource Utilization. Although, 79% of the participants acknowledged the importance of regular check-ups, 96.4% do not seek healthcare facilities. From the data, it is evident the participants’ health-related attitudes do not match their actions. Participant 1042 said, “Although I know it is important to have regular check-up, I do not do it!” The participants reported many challenges with optimizing healthcare resource utilization outlined in Figure (12).

Figure 12

Barriers to Utilize Healthcare Facilities.



Affective Factors. Emotional factors convey a wide range of different feelings. The participants reported negative emotions such as stress, guilt, and resentment affected their

healthcare service utilization behavior. Many participants experience stress, anxiety, and worry while waiting for medical test results. Participant 1061 said, "thinking too much about the medical tests results makes me anxious because it might turn my life upside down."

Additionally, participant 1166 stated, "I remember feeling worried waiting to find out the results from a breast mammogram. I don't want to cause stress to myself it's a disease by itself." Other participants found the experience of a doctor's visit generally anxiety-provoking. As participant 177 expressed, "I feel stress on the way to the doctor's office, while sitting in the waiting room, and when the doctor preforms physicals. It is unpleasant experience overall!" Moreover, some participants claimed fear of receiving bad news interdicted them from seeking medical care. For instance, participant 107 said, "I fear of the unknown." and participant 1465 said, "I am afraid I do any examination then finds out that I have a serious illness. This feeling terrifies me."

Furthermore, the participants reported fear of medical procedures. Participant 368 stated, "I don't like needles, my fear prevented me from getting flu vaccine." Also, participant 1003 said, "I fear the pain of specific procedure." Other participants, who suffer from medical conditions, reported they fear the prognosis of their diagnosed condition. As participant 286 claimed, "I'm afraid they might say my diabetes is worse and switch me to needles treatment." Also, participant 773 stated, "I suffer from multiple sclerosis, so I expect the doctor to tell me bad news. I would rather enjoy my life than worrying about my condition." Moreover, some participants do not utilize healthcare facilities to avoid feeling guilty about their lifestyle choices. As participant 82 said "Because I know that I am failing to take care of my health. If I found out I'm sick, I will balm myself." Likewise, participant 1001 expressed "I feel guilty." Lastly, some participants reported they simply dislike hospital and clinic settings. Participant 70 expressed,

from my perspective doctor's visit makes me depressed, anxious, and dispirited that it makes me sick. This is my opinion and I apply it in my life. I am now 60 years old, thank God, I don't do regular check-ups.

Additionally, participant 160 argued, "I dislike hospitals, I dislike the smell, the environment, everything!"

Dispositional Factors. Dispositional attributes explain an individual's behavior. Some internal characteristics such as laziness, forgetfulness, and stubbornness influenced the participants' behavior regarding healthcare utilization. Many participants reported their laziness impacted their health. As participant 1063 said, "I know I must do a regular check-up, but I'm just lazy to make the call and schedule the appointment." Other responses, such as participants 1152, 1207, 1340, and 1356, only expressed "laziness" for their excuse not to seek healthcare facilities. Furthermore, participants reported being absent-minded led them to forget to schedule regular check-ups. Participant 58 shared, "I'm a very forgetful person. What can I do, this is me!" Also, participant 715 stated, "annual screening is very important ... oh, I always forget!" Surprisingly, some participants expressed their stubborn personality prohibited their engagement in healthcare services. As participant 493 said,

taking care of my health requires changing my entire habits like eating, exercising, and sleeping. On top of that I have to keep up with regular check-up. This is so difficult to get used to. I don't have the commitment capability to do that. I will never go unless I suffer from serious condition, at that time I must change everything.

Physician Factors. Stronger physician-patient relationships are linked to better health outcomes. In contrast, distrust of physicians and encountering bad experiences with physicians negatively impacts healthcare utilization patterns. Some participants reported physicians are

financially oriented and therefore they do not seek medical care. As participant 24 said, “doctors are looking to make a huge profit, they are not interested on the overall health of the community.” Likewise, participant 15 explained, “doctors usually promote specific medications just to make money, these medications have no proven benefits and sometime are harmful.” Participant 634 stated, “when I do regular a check-up, the doctor run many un-necessarily test and procedures just to benefit the clinic and of course benefit him!”

Other participants reported they do not trust doctors' treatment regimens. As participant 31 said, “doctors exaggerate health problems and prescribe unnecessarily medications.” Likewise, participant 34 said, “doctors always misdiagnose women with depression and prescribe anti-depressive medication for muscle pain! I don't trust their judgment.” Moreover, the participants who perceived a bad experience stopped reaching out for medical care. As participant 513 argued,

from my personal experience I don't trust doctors because one time I visited my family doctor and she told me I have diabetes. I was upset and frustrated because diabetes doesn't run in my family. The doctor was really mean, bad approach, had bad communication skills. Then, I asked for second opinion and meet another doctor who told me I am fine I have no diabetes. So, from that time I stopped visiting the family doctor clinic.

Other participants felt they are being ignored by physicians. As participant 1063 said, “I went to a doctor with many concerns hoping that he can help. He was busy, overlooked my symptoms completely, and prescribed Panadol.” Unexpectedly, some participants reported physicians refuse to do regular checkups for patients with no symptoms or no previously diagnosed medical condition. As participant 636 said, “I'm 19 years old, when I visit the family doctor clinic no one

takes my concerns seriously and refuse to do a medical check-up for no reason.” Likewise, participant 262 explained,

although I believe in the importance of a regular medical examination, but I find it difficult to go to a health center. One time I went to do regular checkup, the doctor asks me “what do you want,” so I answered. He looked at me and said, “just check your body?” As he was waiting for me a to give a specific concern and reason to visit. So, I doubt that many health practitioners have health awareness to initiate an examination to ensure the safety of the individuals and ultimately the health of our community. Doctors are not accepting the idea of conducting a comprehensive medical examination for someone who doesn't suffer from any medical condition, I'm not sure why maybe they are busy, they think it's a waste of time, or they are not used to it.

Accessibility Factors. Accessibility refers to the ability of an individual to reach healthcare services; it involves availability and affordability. The way healthcare organizations deliver efficient care greatly impacted the participants' utilization of healthcare services. Long waiting times for care were commonly reported by the participants. In fact, 24 participants expressed “waiting time exhausts me.” Another aspect of accessibility to healthcare services is the shortage of primary care doctors. As participant 680 stated, “I want to do checkup, but I can't find a family doctor, specialized doctors won't perform it.” Likewise, participant 1482 argued, “I want to do it, but the system is so complicated. I don't know how and where to locate doctors and clinics that preform annual check-up.” Moreover, the participants reported they struggle allocating time for medical care. In fact, 15 participants expressed, “I'm too busy.” Additionally, participant 1270 stated, “I don't have time for annual check-up, I'm busy with my work and family obligation.” Furthermore, the cost of annual physicals negatively impacted the

participants' utilization of health services patterns. Participant 814 said, "regular check-up is very important, yet not everyone can afford it." Likewise, participant 1309 argued,

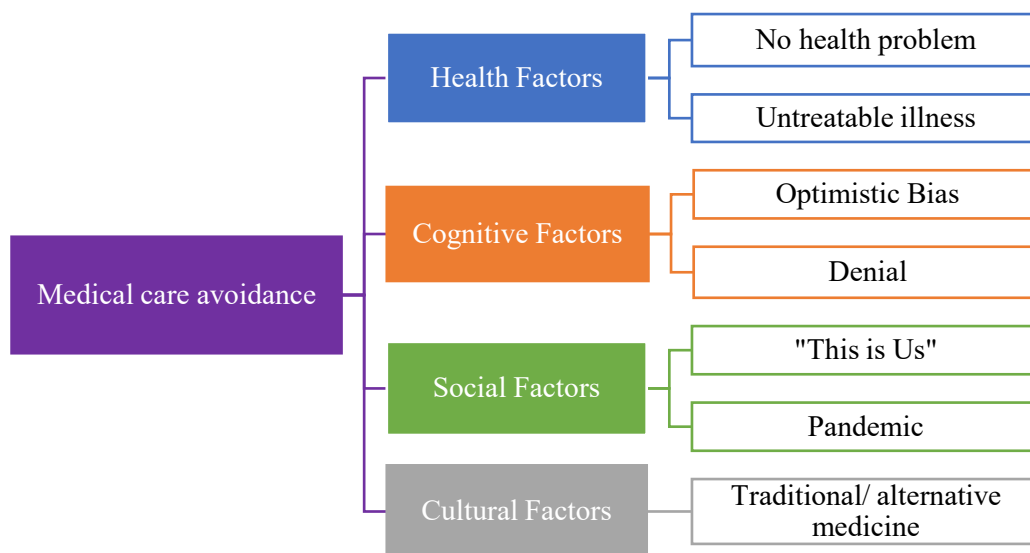
private hospitals are not an option for someone like me (without health insurance).

Government hospitals do not do regular checkup, they offer doctor visits, but the procedures are long. For example, if I want to schedule an appointment at a government hospital, the earlier I can get is in two months.

Low Perceived Need to Seek Healthcare Facilities. About 21% of the participants denied the importance of annual check-up. Avoiding medical care reflects negatively on health status, as it increases morbidity and mortality associated with both chronic and acute diseases. Therefore, understanding the factors associated with medical care avoidance is crucial. According to the data, the participants avoided medical care for many reasons including health, cognitive, social, and other factors (see Figure 13).

Figure 13

Medical Care Avoidance.



Health Factors. Individuals' medical conditions impact the utilization of medical care services. Participants who do not suffer from any health issues reported low need to seek medical care and do annual check-up. In fact, nine participants stated, "I don't need medical care, I'm healthy!" Likewise, participant 808 stated, "checkup is for sick people, I'm young and healthy it's not important for me." Moreover, it was noted participants who suffer from untreatable conditions (autoimmune diseases) denied the importance of medical care. Participant 1179 said, "it's my strategy to dealing with life. I'm diagnosed with Behcet's diseases, doctors can't cure it! I live by the motto 'Don't worry and enjoy life.'" Also, participant 1270 explained, "I see no use of regular checkup, even if you get infected with some virus or diagnosed with medical issue, because doctors can't help."

Cognitive Factors. The cognitive characteristics of the participants indeed impacted the utilization of health care services. Some participants just deny the importance of medical care services without giving any explanation. As participants 34, 168, 1031 expressed, "it's not important." Moreover, a pattern of optimistic bias was found among the participants, in which they believe they will never experience a negative health event. For example, participant 36 reported, "I believe in my immunity system, it will fight all diseases and I will never encounter any negative health issue." Also, participant 771 explained, "I trust my body, I feel thinking positive reflects on my overall health."

Social Factors. Social norms and social issues indeed impact healthcare utilization. Many participants referred their avoidance to medical care as a socially accepted behavior. As participant 528 said, "it's our society culture." Likewise, participant 1247 explained, "neglect is our truth." Additionally, participant 109 said, "I don't do regular checkup and to be honest this is the ugly truth in all Arabs country, we are way behind in caring for our health." Furthermore,

two participants identified Covid-19 pandemic as a social issue affecting their healthcare utilization. As participant 1280 stated, “corona is an evidence of the trivial needs of healthcare services, doctors can’t assure well health.” Likewise, participant 278 stated, “every year we hear about a new disease, corona virus is causing so much problem because we are giving it so much attention.”

Cultural Factors. Some participants reported favoring other options than healthcare facilities. For instance, a group of the participants prefer traditional medicine use. As participant 1375 said, “I trust traditional medicine, I tried it and it is very effective. I’m 50 years old, I don’t suffer from any chronic condition, because I drink herbal tea every morning that boost my immunity” Likewise, participant 948 argued, “alternative medicine has all the correct information that a person needs for his health. Alternative medicine has proven beneficial experiences with many health issues.” Additionally, participant 661 explained:

traditional medicine you don’t need to pay doctor’ visit anymore. Just follow this regimen: honey with warm water every morning, along with seven grains of nigella seed, to will protect you from upper respiratory diseases. Seven dates with yogurt, to enhance the health of the body. Adding garlic, onion and pepper, to boost immune health. Eating green ginger, olives, and yogurt protect you from all serious diseases.

The participants reported a connection between traditional medicine to their culture. As participant 241 said, “I highly value our culture. The home remedies that we are used to in our culture is in fact the ancient root of modern practice.”

Interview Findings

I conducted personal interviews to further understand and explore the phenomenon of Saudis' health consciousness. I investigated how the participants build meaning around health, and how their health beliefs influence their health attitudes and behaviors. The interviews incorporated open-ended questions that focused on health-related experiences, behaviors, opinions, values, and feelings. I used a semi-structured approach that allowed flexibility. Thus, I was able to ask probing and follow-up questions based on the participants' responses to gain a deeper understanding

Interview Participants

I conducted the interviews between September 16, 2020, and October 15, 2020. All were held virtually using an online videoconferencing platform. Since I used purposeful sampling, I intended to include participants with different demographics characteristics to get a wide range of perspectives relating to the case study of Saudis' health consciousness. Thus, I was actively looking for participants from different age groups, genders, geographic locations, marital statuses, and educational backgrounds. I was able to do so by:

1. Contacting friends and family that I know personally.
2. Asking my friends and family to connect me with people.
3. Opening my social media account to the public and posted a participants' recruitment poster.

I intended to interview participants until I reached satisfaction of data. My initial plan was to interview participants for an hour to one hour and 45 minutes, however the first four individual interviews' time ranged between 20 and 35 minutes. Research awareness is relatively new in the Saudi society. I found Saudi participants were not exposed to qualitative research nor the process

of in-depth interviews. Time was a big challenge for the participants as they were very particular on how much time they could offer me. After reviewing the data on qualitative research challenges in Arab countries, I concluded that time challenges are due to cultural patterns of communication (Hawamdeh, 2014). The participants were not aware of the importance of their thoughts, beliefs, and values. In addition, due to the conservativity of the society, the participants had a heightened sense of privacy where they avoided discussions of personal life and opinions with "strangers." Consequently, I interviewed more people until I reached satisfaction of data. In sum, I conducted 18 interviews with Saudi adults who were born and raised in Saudi Arabia and held distinctive demographic characteristics. The shortest interview time was 16 minutes and the longest interview lasted for 45 minutes.

Demographics

Table 2 provides a profile description of the participants. The study sample represents equal frequency of gender (men (n=9), women (n=9)). The participants reported from four geographic regions of Saudi Arabia, including: Riyadh, Al-Kharj in central (n= 8); Al-Jubail, Al-Khobar in eastern (n=2); Jeddah, Makkah, Taif in western (n=6); Arar in northern (n=1); and Najran in southern provinces (n=1). To ensure confidentiality of the participants, a description of each specific geographic location was not included within the table. To get variety representation among the study sample, I selected participants from different age groups including: 18-24 (n=4); 25-54 (n=7); 55-64 (n=4); 65 and above (n=3). In addition, I have included participants with different marital statuses: single (n=6); married (n=5); divorced (n=5); and widowed (n=2). Moreover, I intended to interview people with different educational backgrounds including, medical (n=4) and non-medical related fields (n=14).

Table 2*Profile of Study Participants*

Pseudonym*	Gender	Age Group	Marital Status	Educational Background
Adnan	Man	18- 24	Single	Non-medical related
Conan	Man	18- 24	Single	Medical student
Haidi	Woman	25- 54	Single	Medical related
Harron	Man	25- 54	Divorced	Non-medical related
John silver	Mans	55- 64	Married	Non-medical related
Johnny Bravo	Man	25- 54	Single	Non-medical related
Majid	Man	65 and above	Married	Non-medical related
Maroco	Woman	25- 54	Single	Non-medical related
Ms. Menshen	Woman	65 and above	Widowed	Non-medical related
Naruto	Man	25- 54	Divorced	Medical related
Ms. Safa	Women	65 and above	Widowed	Non-medical related
Om Al-keer	Woman	25- 54	Married	Non-medical related
Om Fares	Women	55- 64	Married	Non-medical related
Remi	Women	25-54	Divorced	Non-medical related
Sally	Woman	18- 24	Divorced	Medical related
Sindibad	Man	55- 64	Married	Non-medical related
Sonbul	Man	18- 24	Single	Non-medical related
Yasmina	Woman	55- 64	Divorced	Non-medical related

*Pseudonyms were created to ensure the confidentiality of the participants.

Interview Findings

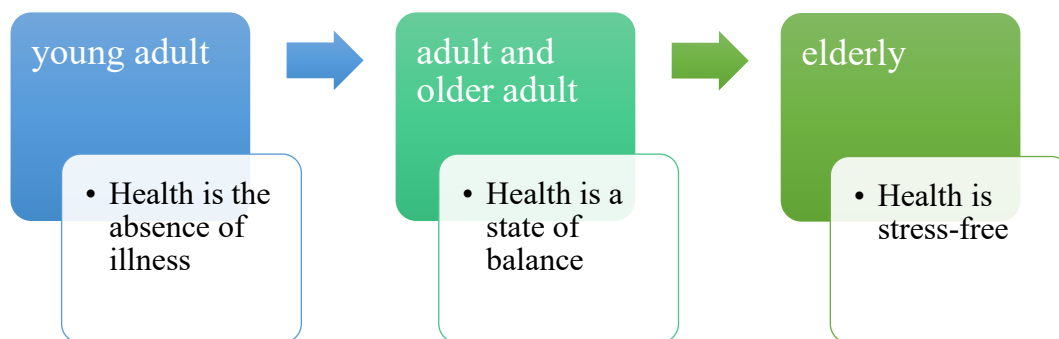
After the iterative analysis of transcribed text from 18 personal interviews, I organized participants' statements in clusters of meaning that represented seven themes; health beliefs, healthcare seeking preference, health-related knowledge and practice, factors associated with unhealthy behaviors, motivations in upholding healthy behaviors, the role of MOH, and the role of COVID-19. These main themes were expanded throughout subthemes, which described the themes in detail, conveying the essential meaning of the participants' health-related attitudes, behaviors, and consciousness.

Theme 1: Health Beliefs

In my interviews, I investigated the participants' thoughts, ideas, and opinions about health. Age played a huge role in how they comprehended meanings to health (see Figure 14). For instance, all young adults described health as the absence of illness, adults and older adults' participants reported health as a state of balance, elderly participants emphasized health as stress-free. Other participants gave different interpretations of health based on their own experiences.

Figure 14

Age Factors in Health Beliefs.



Health is the Absence of Illness. All young adult participants declared that health is the absence of any disease, syndrome, impairment, infirmity, or pain. Adnan reported, “I think health is when all my organs work the way it supposes to do, health is not being sick.” The

participants defined disease as a barrier to active lifestyle, since it would prevent one from coping with all daily life demands. Sonbul said, “health is being physically free of pain, not taking medications, and able to do anything without any help from people or medical devices.”

Further, Conan explained:

People who are diagnosed with any health issue for example diabetes, they lack good healthy because they rely on medication, their diet is limited, and they cannot be free from this condition.

Health beliefs for young adults showed greater emphasis on the evaluation of others. They stressed the role of clinical diagnoses and intervention as a measurement of good health. It is important to note that these young participants, who I interviewed, reported no past health issues.

Health is a State of Balance. Adults and older adult participants defined health as the equilibrium between different variables. They emphasized health as a balance between internal harmony and harmony within the physical and the social environment. Some participants reported health is the connection with the environmental factors and lifestyle. To Maroco, health is the balance between personal activities and community resources. She explained: “Health is what I do like eating well, working-out, sleeping enough time at night. Also, health is where I go. I mean the availability of medical care services like hospital, preventive and rehabilitation centers.” On the other hand, other participants reported health as the ability to adopt and self-manage within the social practice context. Om Fares, for example, envisioned health as “self-care, and the ability to participate in society ... it is how individual is presented in the society, looking good and performing good.”

Moreover, health, to the participants, is the capacity of a person to adjust to the impacts from their environment to the degree that the person could tolerate and resist. When the adjustment is over, health diminished. Naruto stated:

Health is when individual have a work-life balance by managing different activities and daily habits. In general, most people spend their day between home and work, so to make their lifestyle healthy they should, for example, go to a gym, eat healthy, sleep well. I consider health is the ability to find the time to do that within the busy life work schedule.

Failing to do so, the disease occurs as a natural consequence.

Middle-aged and older adults showed a greater emphasis on preventive-maintenance behaviors which one can do for health (influence health). Equally in emphasis is the conventional role of performance in which one can do for health (functional capacity).

Health is Stress-Free. Health meanings of elder participants showed less emphasis on the absence of illness. They specified health as a state of mind. They believed the onset of mental and emotional distress affect the body's physical function. On the other side, focusing on mental wellness increases resilience and improves coping with physical illness. Ms. Menshen said "health to me, as they used to say long time ago, a healthy body in a healthy mind. This is the golden role I follow." She went on describing her experience as she chooses to live with peace of mind.

I am 70 years old, never suffered from any health condition, never been hospitalized, never used antibiotics medication. I don't get worry about anything. Simply, I don't care! I just lost money from an investment I made online, I decided not to let this affect my mental health. Being sad, mad, angry, and thinking a lot exhaust my energy to live healthy life.

Similarly, Ms. Safa said “I believe a healthy body in a healthy mind. I focus on mental health as I believe it reflect on the overall health of the body.” Ms. Safa, furthermore, explained that people follow unhealthy lifestyles as responses to stress and mental breakdown. “Stress is linked to unhealthy habits such as smoking, lack of excursive, bad eating habits, bad sleep routine, any many other things ... these bad unhealthy habits would affect the body physical health.”

According to elder participants, positive psychology reflects the core health of the body. They defined health as the unity of soul and body. This broad definition encompasses the participants' own experience of their life.

Various Interpretation of Health. Other participants described health from their perspective based on their background and life circumstances. For example, Majid envisioned health as the creature of habits. He explained:

To me health is a regular strict routine, for example, one must sleep, eat, workout, use the bathroom, shower, and socialized at the exact time every day. I consider health as a clock timer that we must follow to be healthy.

His interpretation of health came from his military experience and the habit of using time management technique. On the other hand, John Silver, a general manager, viewed health as being free of commitment. He said:

I try to follow specific certain routine, but it was not good for me. I concluded that health is the avoidance of every dependence, such as depending on coffee at morning, depending on friends to have fun, depending on vacation to be relaxed, or even keeping a rigorous routine. Health is fixability, changing, and adopting. Health is the satisfaction of personal capability; in another word it is accepting the self and its abilities.

John Silver is inspired by *The Seven Habits of Highly Effective People Book* by Stephen R. Covey. His understanding of health is affected by the concept of self-satisfaction that Covey wrote in his book. Overall, the participants' work/educational backgrounds clearly impacted their own interpretations of health. Participants have different perceptions regarding health based on their education levels, work experiences, and health status.

Theme 2: Healthcare Seeking Preferences

The ways people seek health has a major influence on their health-related practice, that encompasses the activities the people undertake to maintain good health, to prevent health issues, and/or to cope with their health needs. Simultaneously, while interviewing, I asked the participants to share their trusted health information recourses and their healthcare preferences. The data analysis revealed that health education backgrounds influenced the participants' health seeking behaviors. Most of the participants, who do not have a medical educational background, reported that social media and simple internet searches were the main trusted health information resources. For instance, Om Al-keer declared, "I find a lot of information using google, then I start to filter the result by the look of the website." Nonetheless, participants with medical related educational backgrounds used certified journals and websites to find health information. This indicates that education plays a vital role in predicting the health information seeking preferences. Conan detailed "I learned from my medical school how to search for trusted health information." Moreover, Sally expressed her concerns

People take information from social media and that's very wrong, most of the time the accounts who posts health information post things for advertising. People need to pay attention and only seek health information from licensed individual with health background.

In regard to healthcare preferences, all of the participants consumed some kind of herbal remedies or dietary supplements. In fact, they considered herbal medicine as their first option to try when they feel sick. Conan conveyed, "I'm embarrassed to admit it, even though I'm in the medical field, I do use herbal medicine and believe in its effect." Predictably, older adults and elderly participants were more knowledgeable how to consume herbal remedies. John Silver declared, "in our culture, we eat honey at morning to boost our immune system. We drink herbal tea at night to improve breathing, prevent and treat cough, and enhance sleeping quality." Moreover, several participants provided detailed reasons for preferred use of herbal remedies, including long-term illness and disappointments of failed conventional treatment. Yasmina expressed, "peaking from my experience western medicine good to diagnose the disease, but herbal and alternative medicine provide treatment." Likewise, Majid justified the preference of using natural vs toxic drugs. He explained, "I feel like it's [drug medication] a chemical material and it have side effect for the human body, so I don't like it, so if we have something alternative it's better especially when it's natural."

Theme 3: Health-related Knowledge and Practice

Health knowledge is mainly the facts, information, and skills perceived regarding health. On the other hand, health awareness is the comprehensive perception of health knowledge to the degree that it affects one's health practices. To investigate Saudis' health consciousness, it was important to evaluate their basic health knowledge and practices. For that, in their interviews, I asked the participants to list factors that influence their health status, if there were any. In addition, I asked the participants to rate their health and justify their rating. In essence, I was able to compare the participants' health knowledge and practices.

The participants mainly reported individual behaviors as a determinate of health. The main health-influencing factors described by the participants were: eating habits, physical activity, and tobacco use. The complexity of this theme is further explored in a detailed description within the sub- themes.

Eating Habits. All 18 participants identified numerous health benefits, such as having more energy, boosting immunity, preventing several chronic diseases, and boosting mood. However, most of them (n=12) did not follow a healthy diet. Om Al-keer, for instance, expressed “you are what you eat,” as she described the importance of eating nutritious food in order to be healthy and fit. Likewise, Johnny Bravo specified, “Food is our source of power and health, but it is more complex than following a healthy diet. One must eat balanced meals, in terms of quantities, type of food, and the timing of the meal.” However, later on, the participants reported their own eating behavior where it conflicted with their knowledge. For instance, regardless of Om Al-keer’s knowledge about the disadvantage of fatty food she later admitted enjoying eating it. She said, “one must avoid fat and oily food as it associated with many diseases ... I do eat fried food.” Moreover, Johnny Bravo rated his health “bad” because he follows an unhealthy diet. He explained, “I love drinking soft drinks, its sugary but delicious ... probably the only veggie I eat is the lettuce and tomato inside a fast-food burger ... I can’t keep up with eating schedule, I eat one big meal a day.” Nonetheless, six participants reported maintaining healthy eating habits by choosing a variety of food types, reducing fat, salt, and sugar, and avoiding fast-food. It is worth mentioning that four of these participants have a medical-related background. Sally voiced, “my studies in nutrition major played a big role in my life, it positively affected my daily habits and health behavior.” As well, Conan said “I am pursuing a medical degree, I need to work on myself before being able to inspire other people to take care of their health.”

Furthermore, the other two participants, who kept a healthy diet routine, changed their unhealthy habits after the occurrence of an emergency health issue. Ms. Safa explained how a previous health experience helped her keep up with a healthy diet.

I got really sick last year; it was scary. My doctor told me that the only way to improve my pain is to follow a strike healthy diet. So, I did, it been about nine months since I ate fried food ... I really miss it, but it's not worth the pain.

In this case, the educational background and previous health experience played a vital role in keeping healthy diet habits.

Physical Fitness. All the participants correctly identified the importance of physical fitness in maintaining good health. Yasmina identified the relation between physical activity and disease prevention. She said, "It is proved that exercise reduce the incidence of chronic diseases. I don't know how, but exercise helps to lower blood pressure, decrease bad cholesterol in the blood, and maintain blood sugar level." Sonbul discussed the risk of inactive lifestyle, he asserted, "If you don't keep up a regular exercise routine, you will have weak bones. That will increase your risk of falls and developing osteoporosis ... in short, no fixability means no health." Despite that all participants were familiar with the benefits of regular physical activity; the percentage of physical inactivity is high among them (73%). A vast majority of the participants contradicted themselves when they explained the importance of physical activity, yet their reports showed they are not physically active. In fact, the participants did not engage in regular physical activity beyond the basic movement needed for daily life activities. Harron stated:

I do move around inside the house; I don't lay on bed all day. I'm not living a sedentary lifestyle ... I do set for long to watch TV, but I do move and help myself, like I get up and get water. ... well yeah, I don't really exercise, it's a commitment I'm not ready for.

However, five participants do keep up with a regular exercising schedule five days a week.

Interestingly, two of these participants reported being physically active at a young age. John Silver described his experience as thus:

I started exercising at age 15, I'm now 55 years old and never I ever stopped exercising for any reason, unless I had a health issue and the doctor advised me to take it easy. It's a habit of mine.

Om Fares shared a similar view expressing "I started exercising at a young age and I kept the habit till now." It appears that early experiences influence health-related behaviors.

Furthermore, the remaining three participants, who engaged in regular exercising, held a medical related degree. Naruto explained "I know it's [physical fitness] important, so I do it for the sake of my health." Overall, these results indicate educational background played a vital role in keeping healthy activities.

Tobacco Use. Eleven out of the eighteen participants reported that smoking harms all organs in the body, causes many diseases, and negatively impacts the general health status. This result is somewhat counterintuitive as those 11 participants (seven men, four women) reported that they enjoy smoking on a daily basis. Harron explained:

I'm smoker, but I know smoking is bad. My lung is probably black with no healthy tissue or whatever. I sometimes have shortening of breath, but nothing really serious. I know its harmful for my body and has many side effects on the long run. ... I know it's very bad, you can tell from the scary tobacco packaging warning messages.

The participants had different smoking experiences, five had attempted more than once to stop smoking, six participants believed they would stop smoking when the right time comes, and one is not planning to stop smoking. Of particular concern is the continued increase in smoking among Saudis even though they know it's dangerous. Adnan conveyed:

we are not aware of the real dangers of smoking, yes "they" says smoking cause cancer, but yet we don't know how ... maybe when I grow up in my 30s, I would be mature and would really know and understand the bad effects of smoking then will stop.

Moreover, all women participants identified the bad effects of smoking but justified their smoking behavior as "not dangers" smoking. Ms. Menshen said, "I only smoke hookah, blow the air; no tobacco goes into my lung." Similar to that, Yasmina expressed "It's only one hookah a day or twice ... I'm not heavy smoker!" Indeed, the participants dangerously underestimated the health risks associated with smoking. Within the findings, I could not establish a distinct difference between demographic groups and smoking practices.

Compensatory Health Beliefs and Behaviors. As noted above, participants are quite knowledgeable about the consequences of poor dietary habits, lack of exercise, irregular sleep patterns, and over-consumption of nicotine. Many participants attempt to adopt a healthier lifestyle. However, many of these attempts remain unsuccessful. Harron said, "I think of my health a lot, I even thought of giving up my night work so I can have time to exercise, and exercising might be a reason to quit smoking." The data reveal that the participants experience some sort of cognitive dissonance or mental conflict that occurs when the pleasure of indulging in a desired behavior stands in struggle with the possible negative long-term health effects. To avoid this mental conflict, the participants use certain types of beliefs to avoid guilt feelings. This phenomenon is also known as compensatory health beliefs (CHBs). CHC are beliefs that

engaging in risky behaviors can be recompensed by engaging in healthy behaviors afterward (Amrein, 2017). The nature of CHBs can best be illustrated with what Sindibad expressed:

The bad habits than I'm attached to are smoking and not exercising. It is bad for my health, but I do follow healthy diet, so my health is not depraved. I don't add sugar to my cup of tea or coffee, I don't suffer from diabetes, so I can have sugar if I want, but I don't. I even don't eat candy, chocolate bar, or very sweet cakes.

This belief enabled Sindibad to keep smoking but not feeling guilty about it. Interesting to note that all participants shared this belief to neutralize all types of unhealthy behaviors. Participants described healthy behaviors they engaged in after emotionally eating to compensate for their overconsumption. Sally said, "I like donut. it's very oily very sugary, but I like it. So, what I do is that I eat donut. Then later I count my calories. Or plan a diet plan for the coming month."

Sally rationalized her unhealthy choices because by planning healthy ones. Similar to that, Haidi stated:

it's ok to eat junk food as long as I go to the gym and get enough exercise ... we can eat chocolate to treat ourselves after a long day, we then can drink lots of water to clear the sugar from our blood.

Haidi believed she can compensate for unhealthy behaviors with healthy ones. Thus, having CHBs is dangerous if actual compensation does not occur, or if actual compensation is not realistic.

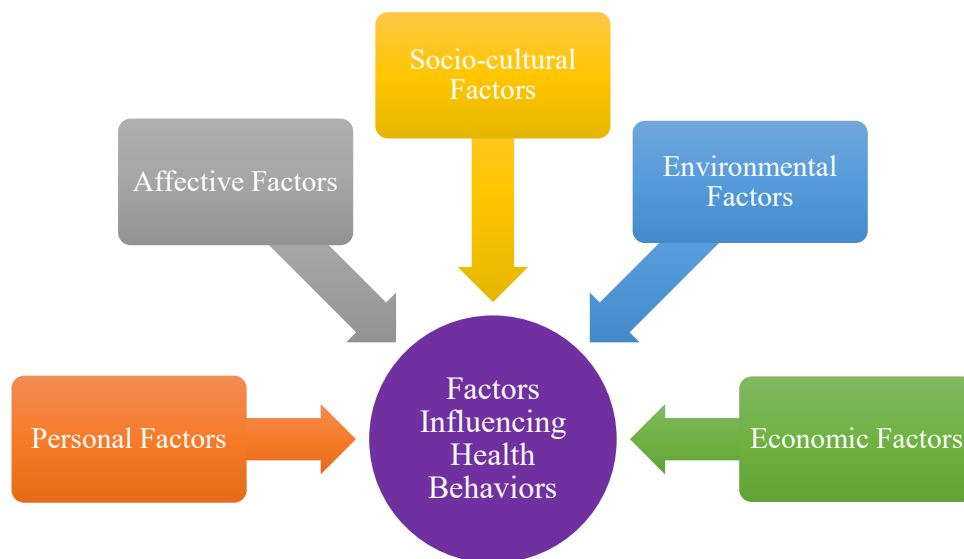
Theme 4: Factors Associated with Unhealthy Behavior

The study findings indicated participants health-related knowledge was fairly accurate. However, their health-related knowledge and practice is juxtaposed. It is evident the participants' health-related attitudes do not match their practices. That raises the question, why do Saudis

engage in unhealthy behaviors such as poor diet choices, physical inactivity, insufficient sleep, and smoking? Given the deleterious health effects of these unhealthy behaviors, investigating the factors associated with it is imperative to understand Saudis' health consciousness. Many factors impacted Saudis' health lifestyle including, personal, affective, socio-cultural, environmental, and economic factors (see Figure 15). It is the interrelationships among these factors that determine individual and population health.

Figure 15

Factors Influencing Health Behaviors.



Personal Factors. The participants' decisions to embrace unhealthy behaviors are influenced by personal factors such as a participants' role, priority, preference, and habit. Age played an important role in this subtheme. Young adults perceived their age as indicator for being healthy and therefore they ignored engaging in healthy activities. Adnan expressed, "I think I'm way too young to be very careful. It's time for me to enjoy my life to the fullest." Likewise, Sonbul stated, "at young age one can try everything even if it is risky, we will learn as

we grow up.” Indeed, young adults do not prioritize their health since they do not believe negative consequences will happen to them.

Moreover, adult participants acknowledged their busy life and role as the barrier to be healthy. Remi perceived her role as a working mother to be the main factor that prevented her from taking care of her health and engaging in healthy activities.

You have to understand that I'm not careless, I know its harmful, but I'm a busy woman.

Keeping up with my work, home, kids, social life. I forget. I don't have time to stop and reflect on my health behaviors.

Additionally, older adults highlighted their life role, as the head of the family, influences their health concern priorities. Om Fares stated,

I make sure that my kids and grandkids eat healthy and never skip a meal ... I don't eat breakfast, I have only one meal a day, but I make sure that we have breakfast every weekend when all the family is gathered ... I think about my family health more than I think about my health. It is my role as the mother.

It appears that time is a major barrier for adults who already struggle with busy family and work schedules.

Furthermore, elderly participants described their engagement in unhealthy behaviors as a habit. Majid expressed:

I think a lot about my health, the problem that I don't apply what I know... I don't know why I don't exercise, but for sure I know that it is difficult to start now ... I know people who were able to change their lifestyle at older age. The problem that I don't do anything about changing my habits. I wake up at 4:00 am every day, I have enough time for walking, but unfortunately, I don't!

Elderly participants acknowledged changing unhealthy habits can be hard, takes time, and consumes much effort.

Affective Factors. The data showed affective factors as putative determinants of why participants engage in in unhealthy behaviors. Three affective patterns were reported by the participants including: core affect (being curious and feeling of greatness); mood (bored); and emotion (stress and joy). Many participants reported they have engaged in unhealthy behaviors initially because they were curious and/or wanted to sense the feeling of greatness. Sonbul expressed, "I initially start to smoke because I wanted to know how it taste." Similar to that Johnny Bravo said, "I liked the feeling it [smoking] gives me. I found it so pleasurable"

Other participants expressed their emotional connection to specific unhealthy behaviors. For example, Om Al-keer expressed her joy and excitements emotions that associated with unhealthy behavior. She said, "I do eat fried food for recreational reasons. It is delicious and I enjoy it the most." To the contrary, Naruto retains unhealthy behavior as a way to mask any uncomfortable or difficult feelings. He emphasized, "smoking relieves anxiety and tension. When I smoke my stress goes away."

Furthermore, a vast majority of the participants described their mood as a trigger to engage in unhealthy behavior. Ms. Menshen reported she smoked to get rid of boredom.

I set alone in the living room, there is nothing to do and no one to talk with. So, I find myself fixing my hookah, and staying up all night watching TV shows. What else would I do? I just want to entertain myself.

Similarly, Yasmina said "I don't know why I smoke, I guess I have nothing better to do."

Socio-Cultural Factors. The data reveal that forces within the culture and society impacted participants' health-related behaviors. The participants described that cultural

influences lead to habitual consumption of certain foods and in certain cases can lead to restrictions. Food is a central part of gathering and parties, it represents an effort to please guests. Haidi described how healthy food can be perceived, within the Saudi culture, as being cheap since healthy food comes in small quantities.

the culture forces us to eat rice and meat ... even if we want to eat healthy food, when we gather it is not acceptable to have healthy food choices, it doesn't consider hospitable. In fact, people will think we can't afford buying food. Cultural food comes in large portion and presenting it in our gathering means we are gracious hosts.

Likewise, Ms. Safa described how the visual effect of cultural food is intimately linked to the acquisition of food, she expressed, "we [Saudis] eat with our eyes." In addition, some participants argued dietary habits and choices are affected by the cultural view of healthy food. Sindibad stressed that food habits develop at an early stage.

Our eating habits are shaped by our parents. Our parents' views of what represents a healthy food are shaped by society. Here in Saudi most people perceive a heavy baby as a healthier baby and feed accordingly to achieve such an outcome. As a result, most kids now suffer from obesity. ... we would've been healthier adults now, if we ate healthy food at a younger age.

Furthermore, many participants reported social pressure affects their health behaviors in various ways. Some participants admitted they smoke only because all their friends and family do so. Conan expressed his feeling as being pulled in two directions: "I want to quit smoking, but I fear that I will be left out from the group." Other participants expressed that peer pressure causes them to make poor decisions that impact their sleep pattern. Sonbul said, "my friend stays out too late and I can't change that."

Another major social factor uttered by the participants was the social support. According to the participants the absence of social support negatively impacts the participants health-related behavior. Majid expressed, “my wife keeps me healthy, when she is not around, I eat fast food ... if my wife doesn't schedule my appointments I wouldn't bother to check up on my health.” Likewise, Harron asserted that social isolation is the reason for his unhealthy behavior.

I live alone and this impacted my food choices. I don't feel like cooking healthy food only for me ... I don't feel like going to a good restaurant and eat healthy things. I just pick up any fast food and eat then sleep. Maybe if I had someone to share the experience I would react differently; we would motivate each other to exercise and to engage in other healthy activities.

Environmental Factors. The weather has been identified as a perceived barrier to participation in physical activity. The adverse weather conditions in Saudi can curtail the decision to exercise outdoors. Saudi Arabia has a desert climate characterized by extreme heat during the summer, and extreme cold in the winter. Ms. Menshen claimed the weather in Saudi force her to be inactive. She explained:

I want to exercise every day, if the weather here permits it. It is very hot; you can even stand out for 10 minutes. When I travel to Egypt, I exercise every day. I walk for hours, while enjoying the weather and the nature.

Additionally, the effects of weather may interact with pre-existing disease conditions such as asthma, to exacerbate effects on physical activity. Ms. Safa stated, “we get a dust storm every now and then, I can't go out for walking I already have asthma.”

Furthermore, the participants reported the elements of the physical environment are powerful determinants of their health behaviors. The physical structures of the environment

include buildings, open spaces, footpaths, cycle lanes, parks, and trails. Sally emphasized the physical structures as she explained that no spaces were designated for outdoor activities. She said:

There is no sidewalk, no lane designated area for biking. The overall commute structure doesn't permit outdoor activities. For example, I cannot reach to the supermarket without going by a car passing the highway. There are no bridges that connect the streets for me to walk or bike.

Likewise, Adnan stressed the importance of developing a supportive environment to achieve population-wide improvements in physical activity levels. He held, "I wish I can find a place to bike ... Every neighborhood must have a park where everyone can go and exercise."

Economic Factors. Some participants related their unhealthy behaviors to their economic status. Participants with economic disadvantage reported they were unable to easily eat a healthful diet or provide such to their families. Haroon said, "healthy food is way too expensive, one meal of healthy food worth 10 meals of fast food." Similarly, economic factors can constrain healthful behaviors such as physical activities. Maroco claimed she was not able to easily exercise as she cannot afford gym membership.

Gym membership cost a lot, and I can't afford it. I don't know why they overprice it.

Plus, even if I managed and got the membership, I have to pay for each class separately ... I can't buy the machine to exercise at home.

Theme 5: Motivation in Upholding Healthy Behavior

Although the majority of the participants did not keep up with more than two healthy behaviors, they all reported that they plan to change their behaviors. The participants described both extrinsic and intrinsic motivations. Understanding the motivational factors is critical to

progress from short-term goals to lifestyle changes. The participants expressed some slogans that illustrate the importance of improving healthy behaviors. Sindibad expressed, "prevention is better than cure." The data revealed that demographic factors played a vital role on this theme.

All elder participants stated they view taking care of their health and engaging in healthy activity represents an act of worship. To the participants, worship is woven into the daily life not only confined to a holy place. Ms. Menshen believed physical activity represents a gratitude to God. She explained

God gave us bodies to move them. We are required to save our bodies from all harmful things to show God that we are thankful. I try to move around, and I really want to actively exercise to stay healthy and be able to pray well.

Furthermore, older adult participants conveyed that it is their duty to engage in healthy behaviors. John Silver described how being healthy represent taking responsibility for his life. He said:

my main role in this life is to be healthy. Most of the people that I know are smoker, when they are gathering, I avoid going, and even if I went there, I set near a window or don't stay for a long time. It's not my choice I have to take care of myself.

The participants expressed as they have the power to control the personal, it is their moral responsibility to engage in healthy behaviors.

Interestingly, divorced women described engaging in healthy activity improved resilience and reduced stress. Engaging in healthy activities helped the participants to withstand, recuperate, and grow in the face of stressors. Remi affirmed that physical fitness is one pathway toward resilience. She clarified, "regular exercise induces positive physiological effects. I don't know how to explain it, but I feel that I'm good and everything will be good."

Further, young adult participants identified a relationship between body image and healthy lifestyle habits. Engaging in healthy behaviors, such as physical activity or following a healthy diet, is associated with better body image and that leads to positive self-esteem. Johnny Bravo explained he engages in physical activities before traveling to be fit and more attractive. He explained “when I exercise, I lose weight and that’s give me sense of pleasure by looking good and sensing acceptance by others.”

Moreover, participants with socioeconomic advantage expressed the availability of recourses as their main motivator to engage in healthy activities. For example, Naruto, a physician who lives in a big city, expressed no struggle in finding healthy food and pay to gym membership. He explained:

following a healthy diet is not hard for me, good foods are available everywhere. I don’t have the time to cook but I subscribed for healthy meals delivery. I get three meals and three snacks package every day. Very convenient!

Theme 6: The Role of the Ministry of Health

Some participants pointed out the role of the Ministry of Health (MOH) in promoting and protecting the health and wellbeing of Saudis. They suggested some plans to improve MOH services and enforce a healthy society. Majid expressed his frustration with MOH programs. He stated:

I blame MOH for the public health ignorance. Nowadays kids have access to fast food. They consume a lot without knowing how dangerous it is. Then they grow up with many diseases. MOH must apply policies that prohibit the trade and consumption of fatty and sugary food.

Furthermore, Sally emphasized the importance of establishing a nutrition assessment and recommendation plan for the public. Sally proposed that MOH should advertise for a body composition analyzer scan in their primary clinics as it assists individuals in understanding the importance of healthy diet practices. Thus, achieving a lasting dietary behavior change among the public. Sally commented, "These machine [body composition analyzer scan] provide a personalized nutrition plan. It provides people with actual facts about their own body therefore, they would relate to it and definitely they will change their behaviors."

Theme 7: The Role of COVID-19

Four participants reported health behavior changes during the COVID-19 pandemic and subsequent quarantine orders in the time period between March and June 2020. As a result of restricted access to community resources, the participants experienced negative health behaviors as they were not able to adhere to recommended health behavior guidelines. Adnan expressed his struggle to keep up with regular physical activities due to the closure of fitness facilities and the disruptions of daily routines. He expressed, "I found myself slipping into sedentary behavior." Moreover, Haidi voiced COVID-19 pandemic negatively impacted her sleep pattern and anxiety level. She explained:

I would say covid-19 affected us 100% psychologically. We are constantly worrying about germs and monitoring our symptoms. I keep checking if I can smell things, taste things, if I have fever, etc., so mentally these things affect us in a bad way. I can't sleep well.

Even though the participants did not follow neatly a healthy lifestyle, COVID-19 made it worse as there is potential for health crises related to risky behaviors.

Findings Summary

In this chapter, I presented the findings of the study. These findings are based primarily on themes that emerged from the data analysis of 1618 survey responses and 18 interview transcripts. The results of the study were discussed in two parts that correspond with the data collection methods. Data in the first section (survey findings) focused on the participants' perceptions of and experiences with health to improve lifestyle. In the area of data collection, participants described: (a) what health means to them; (b) how they comprehend health-related knowledge; and (c) who they trust to seek health information. In the area of data analysis, participants described: (a) how often they utilize healthcare services, and (b) what barriers prevented them to utilize healthcare facilities. The demographic variables had no significant relevance for predicting the health beliefs of the participants. Table 3 shows a summary of all emerged themes and subthemes of the first section.

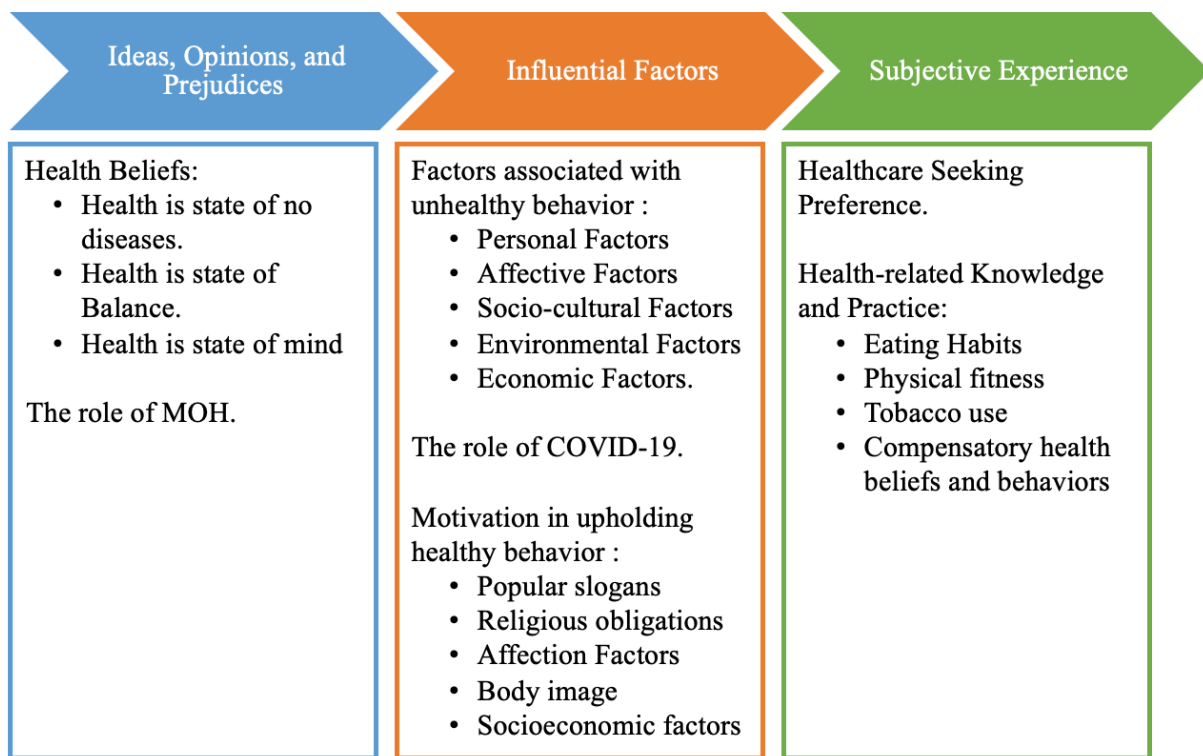
Table 3*Survey findings: Emerging themes and subthemes.*

Theme	Subthemes	Proportion	Representative quotes
Health Beliefs	<i>Positive value</i>	75%	health is a kind of human capital. So, ones must take care of it to live a good quality life and participate in building and supporting society.”
	<i>Negative value</i>	25%	“life is short, I can’t waste it in thinking of health problems that I may encounter. We all going to die at the end.”
Health Self-management	<i>Physical Fitness</i>	100%	“regular exercise has great effect on lowering triglycerides and bad cholesterol and increase the good cholesterol.”
	<i>Nutrition</i>	99.8%	“food has crucial influence on physical, psychological and spiritual health.”
Health Information Seeking Trend	<i>Healthcare provider</i>	30%	I say trust your doctor not the internet!”
	<i>Internet</i>	27%	“with the internet, information retrieval is easier now than ever before, I can find any information at any time.”
	<i>Social Media</i>	15%	“I’m not a doctor! I don’t understand medical terminology, people in social media post simple information.”
Utilization of healthcare resources	High Perceived Need	79%	“it helps avoiding complexity of simple medical conditions.”
	Challenges	96.4%	“I don’t have time for annual check-up, I’m busy with my work and family obligation.”
	Low Perceived Need	21%	“checkup is for sick people, I’m young and healthy it’s not important for me.”

The second section (interview findings) focused on how the participants derived and constructed meaning about health, and how their meaning influenced their health status. Participants described a variety of health-related knowledge, practices, and challenges which were then analyzed and grouped into seven categories: (a) health beliefs; (b) health seeking behavior; (c) health-related knowledge and practice; (d) factors associated with unhealthy behaviors; (e) motivations in upholding healthy behaviors; (f) the role of the Ministry of Health; and (g) the role of COVID-19. These themes explained the essence of Saudis' health experience. The themes identified in these responses are presented in figure (16).

Figure 16

Interview findings: Emerging Themes and Subthemes.



Chapter Summary

To that end, experiences of the participants demonstrated that they have a general idea of what is necessary for a healthy lifestyle. Yet, they lack awareness of their health knowledge. Hence, the participants lacked motivation to keep a healthy lifestyle. In the next chapter, I provide a theoretical framework to discuss the themes that emerged from this study. I also specify a comprehensive analysis of my findings, as well as recommendations for further practices and research.

CHAPTER 5: DISCUSSION AND SUMMARY

In this final chapter I summarized and reflected on the study's findings. Additionally, I analyzed the findings in light of relevant literature and theoretical framework. Using grounded theory approach, I constructed a new model and expressed its implications for practice. In this chapter, I also outlined limitations of the study, and formulated suggestions for future research. Then, I concluded with my personal reflections on the research journey.

Expenditures on health are the main focus of the Saudi Arabian government. It is considered as an investment in human resources by contributing to productive capacity, improving growth and ensuring feasible development (Brower, 2003). The changes in the socioeconomic status of Saudi Arabia have negatively impacted the population habits upholding sedentary lifestyle (Rahmman, 2020; Khalil et al, 2018; Aljoudi et al., 2015). As a result, the prevalence of NCDs and its risk factors are significantly increasing year after year (MOH, 2017). To tackle NCDs issue, the MOH endorsed an action plan to promote health awareness, detect chronic disease, and prevent NCDs complications. Despite the MOH efforts, the literature showed that Saudis do not utilize healthcare services and do not adhere to the health promotion programs (Moradi-Lakeh et al., 2016). In addition, the prevalence of obesity, raised blood pressure, and elevated cholesterol level is notably increasing (MOH, 2017). While the MOH approach focused on health awareness in promoting healthy lifestyle, they did not assess the general health awareness of Saudis and the factors that impact Saudis' health-related practices. Consequently, the current study expanded upon existing research by exploring Saudis' health attitudes, behaviors, and consciousness. The purpose of this qualitative exploratory single case study was to explore how Saudis are conscious about their health in terms of action and practice. By investigating Saudis' health-related attitudes and behavior, I was able to understand Saudis'

perceptions, thoughts, and feelings toward health. Further, I highlighted the factors and barriers that underlined and shaped Saudis' health-related practices. Using a case study methodology under a constructivist-interpretivist paradigm, I conducted a qualitative survey with 1618 responses and 18 individual semi-structured interviews with adults who were born and lived in Saudi. The guiding research questions were:

1. How do Saudis experience and understand health?
2. How does this experience and understanding of the health inform or shape health consciousness for Saudis?

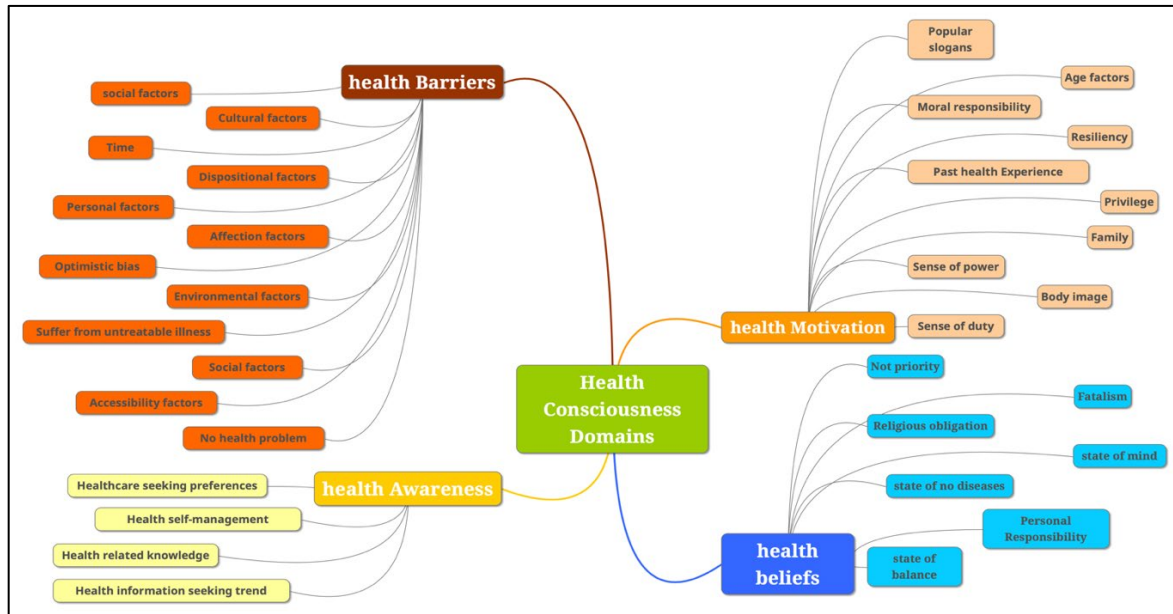
Thematic Analysis

Participants identified various perspectives of health; however, common patterns and themes developed as I analyzed the data. The inductive analytical process enabled me to analyze the participants' own words and reflect on frequently reported patterns (Creswell, 2009). In fact, four themes and five subthemes emerged from the survey responses. In addition, the interview analysis revealed seven themes and thirteen subthemes. These themes explained the essence of Saudis' health understandings and experiences. Through the data finding report section, I organized the themes based on the data collection methods. However, in this section, I merged the themes from the survey and the interview with similar attributes together underlying their commonality to create a complex comprehensive analysis. This thematic analysis explored the nature and nuances of how Saudi people understand and experience health. Accordingly, this study ultimately provided four main themes: health beliefs, health awareness, health motivation, and health barriers. Figure (17) below illustrates the thematic analysis mind-map I used to combine both the survey and the interview findings. The mind-map showed how I connected all

themes and subthemes (from both data collection results) into four key themes that addressed how Saudis' experience and understand health.

Figure 17

Thematic Analysis Mind-map.



The first theme, health beliefs, presented how Saudis construct value and meaning of health. A vast majority of the participants evaluated health as personal responsibility. Nonetheless, some participants held a negative view of health. They believed health exists in isolation to influential factors. Moreover, similar to the WHO health definition (WHO, n.d., para. 1), the participants acknowledged health as the absence of disease and disability; the capacity to participate in work, family, and community; and the sense of well-being in many domains including physically, psychosocially, and spiritually.

The second theme, health awareness, determined Saudis' health knowledge in term of both healthy and risky behaviors. Additionally, it explained Saudis' health engagement behaviors, as well health management behaviors. Consistent with the literature, this research found participants preferred alternative/herbal medicine (Memish, 2014; Lovering, 2012). In

terms of health information seeking behaviors, Saudis trusted social media as a source of reliable information on health issues. Furthermore, participants correctly identified the relation between healthy lifestyles and disease prevention. Yet, many participants failed at maintaining a healthy lifestyle. The data clearly presented a dichotomy between Saudis' health-related knowledge and practice.

The third theme, health motivation, investigated the extent to which health motivation predicts health attitudes and behaviors. The data revealed factors that motivated Saudis to uphold healthy behaviors including socio-demographic factors, personal factors, and family and support dynamics. The participants conveyed both inner and external dynamic forces which energized and oriented their behaviors to maintain healthy lifestyles. Surprisingly, the majority of respondents agreed that popular slogans and mottos hold a powerful positive effect to maintain healthy activities. The most common slogans reported by the participants were "prevention is better than cure," and "an ounce of prevention is worth a pound of cure." In addition, this research result ties-in well with previous studies wherein religious impact health behaviors (Lovering, 2008; 2012). As many participants express health as a spiritual obligation.

The fourth theme, health barriers, discovered what prevents Saudis from following a healthy lifestyle. Prior studies have noted that the social norms of Saudis definitely detect their attitudes and behaviors related to health (Sanader, 2012). In this study, the participants described many influential factors that impacted their decisions to engage in healthy behaviors. The main factors underlying risky behaviors were: personal beliefs; affective prejudice; socio-cultural, economic, and environmental elements; and the healthcare delivery system. Interestingly, distrust of the healthcare system was observed to be relatively high among the participants.

These negative beliefs definitely impacted the participants' behavior and led them to engage in risky activities.

Theoretical Analysis

To further analyze and interpret my findings, I adapted Paulo Freire (2000)'s notion of *level of consciousness*. Such a theoretical framework clarifies, and underscores dynamics related to the findings. Using *level of consciousness* framework allowed different lenses through which to view my findings and provide insights about Saudis' health consciousness. The initial utilization of this theory was to understand the phenomenon in-depth and in context. Further, I analyzed my findings using grounded theory approach to generate a model that explains Saudis' health attitude, behavior, and consciousness. According to Creswell (2018), a grounded theory approach "generates a general explanation (a theory) of a process, an action, or an interaction shaped by the views of a large number of participants" (p.83). By exploring the process of how health awareness develops, I was able to gain a comprehensive and meaningful understanding of Saudis' health consciousness. Thus, I generated a model that is grounded in the data that gathered from participants of this study.

Paulo Freire's Notion of *Level of Consciousness*

Central to Freire's book of *Pedagogy of The Oppressed*, was the problem of the "oppressed consciousness." Freire attempted to understand how the oppressed looked at the world and at themselves within the context of their social norms. Thus, he understood what drove their behaviors. Freire (2000) argued that if people are not conscious of their reality, they become ignorant to resisting oppressive norms, and the result is lasting inequity. According to Freire, consciousness is also influenced by social conditions, economic backgrounds, and cultural perspectives. Therefore, to overcome oppression challenges, the oppressed must actively

search for reality truth by reflecting on their beliefs, culture, fears, and motives. Freire explored how awareness and desire for change developed. He claimed that awareness is achieved thorough understanding of the world comprehensively and reflecting to the social and political context. Freire aimed to empower the oppressed and eradicate illiteracy to challenge oppression and improve the conditions of oppressed people. Freire (2000) pointed to the process of becoming aware of the roles one's race, gender, social class, physical ability, and so forth perform in the society. He meant to create a sense of social, political, and cultural awareness on account of his belief that through awareness one can work and change the world.

Freire (2000) aimed to teach the oppressed to challenge the oppression by discovering themselves as human beings, finding their roles as members of a community, and as the creators of their destiny. His philosophy was based totally on overcoming alienation. In his work, Freire organized a popular movement to eradicate illiteracy. He emphasized the power of knowledge and awareness to defeat oppression. Freire specified that oppression exists within a culture that lacks critical consciousness. Therefore, Freire first examined the oppressed process of becoming critically conscious of their own personal and social reality. Whereafter, he empowered them to act upon their social, economic, and political factors to change their reality. Freire (2000) described three stages of consciousness: (1) magical consciousness, (2) naïve consciousness, and (3) critical consciousness. Freire defined these levels of consciousness as the ability to consider the world objectively, and to produce potential change at individual and community levels. Each level explains how the oppressed perceive reality and become conscious of ways to critically deal with it. In the first stage, magical consciousness, people perceive themselves as absolutely helpless to do anything about their status. At this stage of consciousness people blame inequality and oppression to luck, fate, and/or higher power "God." In the second stage, naive

consciousness, people have a more thorough awareness of their truth. However, they are persuaded that they are powerless to alter their reality. They oversimplify the problem of oppression, and thus they are not able to work through the main systemic issues causing their problems. In the third stage, critical consciousness, people can reflect on reality and understand the influential factors. They look beyond cultural reasons for inequality and oppression focusing on structural and institutional explanations. Thus, people who reach critical consciousness believe they are capable of changing their reality truth. Critical consciousness is a key principle to act against oppressive systems.

Freire (2000) claimed that the oppressed have been alienated from their culture. He implied that problem posing thinking and self- reflection would lead to actions that transform their reality and actualize their behavior taking responsibility for their lives and decisions. Therefore, Freire encouraged fostering critical consciousness culture to identify, understand, reflect, and act on the foundational reasons of oppression. Indeed, Freire focused on the process of “conscientization,” which is the development of critical consciousness. Conscientization refers to the efforts taken in order to identify the underlying systemic forces of oppression and inequality.

Health Conscientization Model

This study aimed to understand the role of health consciousness and how it plays a significant part in predicting Saudis' health attitudes and behaviors. The literature revealed that health-conscious individuals actively integrate healthy habits into their everyday lives, continuously attend to their health conditions, actively seek health information, take responsibility for their health, and are driven to remain healthy (Espinosa & Kadić-Maglajlić, 2018; Hong, 2009). Health consciousness has an interacting effect on perceived health

knowledge, acting upon health beliefs, and predicting the behavioral intention to improve health status. In this essence, health-conscious individuals are actively reflecting on their health (their beliefs, culture, fears and motives) and are involved in improving their lifestyle (their reality truth).

The theory of *level of consciousness* is pivotal to the current study because it aided me in recognizing the cognizance influences that affect Saudis' health-related practices. It also permitted me to explore Saudis' ways of thinking and reflecting upon their health reality. By viewing the results through the lens of Freire's (2000) *level of consciousness*, I started to make the connection between the concepts of health perceived knowledge, habits, attitudes, and behaviors. I was actively looking for answers to the following questions: How do Saudis process their health knowledge? How does their knowledge affect their attitude and behaviors? How did Saudis reflect on their habits? How have their habits affected their attitude and behaviors? and, ultimately, what are the Saudis level of health consciousness?

The grounded theory analysis highlighted the participants' level of consciousness, in which they acknowledged their own privileges, social responsibilities, and cultural challenges. Notwithstanding their ability to think and reflect contextually and systematically to improve their health. The grounded theory analysis underlined the way Saudis view their health challenges, analyze health risk factors, and engage in health improvement activities.

Through the lens of the Health Conscientization Model, I explained Saudis' levels of health understanding and personal action toward health practices. A variety of perspectives were expressed in regards Saudis' health awareness. I observed a pattern of consciousness levels among the participants including magical, naïve, and critical health consciousness. The pattern explains how Saudis addressed the effects of personal, social, cultural, environmental, and

economic factors on their health knowledge and habits. Additionally, the degree of consciousness in each level depended on how Saudis drew an awareness of the influential factors and how they acted upon them to enhance their health status.

By adapting Paulo Freire's notion of *level of consciousness* I developed a grounded theory model, the Health Conscientization Model, that appraised Saudis' health consciousness level in which it describes Saudis' capability of improving their health status. The ground theory model of Health Conscientization is based on three elements; (1) Saudis' awareness of their risky behaviors; (2) their analytic view toward health influential factors; (3) and their capability to change their health status. In the case of viewing each element in solitude, walls exist to prevent any connection of health truth and prevent the stimulate of collective action to change healthy reality resulting in lower health consciousness. On the other hand, a higher level of consciousness epitomizes the demise of the walls allowing Saudis to analyze health risk factors and ultimately empower them to achieve healthy status. Health Conscientization Model is manifested in three levels. Each level explains how the Saudis perceive health reality and become conscious of ways to critically improve their health status.

Level 1: Magical Health Consciousness

Magical Health Consciousness describes Saudis' experience as completely powerless to control their health status and to change their personal health behaviors. Saudis believed health is controlled by a superior power, the will of God. They expressed their inability to change health as it is God who gives health, and therefore God can take it away. This level is characterized by fatalism, where Saudis blamed their health on luck, fate, or God's will. As stated before, Saudi Arabia is a collectivistic culture and deeply religiously oriented. Saudis' health attitudes are greatly influenced by the culture and religion. It impacts their perceptions of health, their

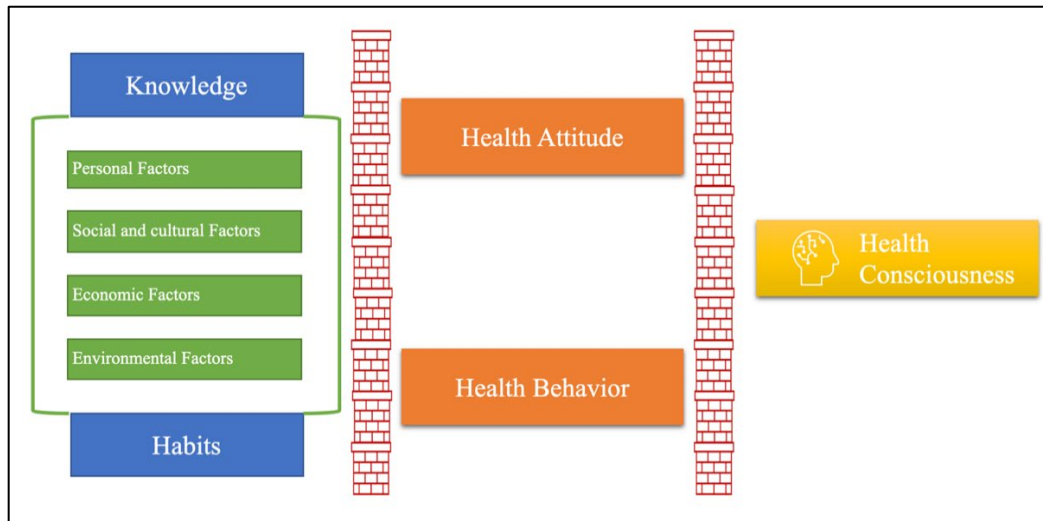
approaches to a healthy lifestyle, and their beliefs about causes of disease and death. It also impacts their experience towards illness and pain, their utilization of health care services, and their treatment preferences.

Saudis felt the powerless of their voices, thoughts, and opinions. For example, Participant 1178 stated, “the message is clear, it is all up to God and I must not challenge his will.” The participants perceived health as being beyond their control. Moreover, they were unable to distinguish the connection between their health knowledge and habits with their attitudes and behaviors. Remi held “I don’t ... reflect on my health behaviors.”

Clearly Saudis lacked comprehensive understanding of health influential factors. Figure (18) provides a visual representation of the participants’ magical health consciousness. The wall in the figure represents how Saudis isolated their health knowledge and habits from their attitudes and behaviors. This level of health consciousness is characterized by the fact that participants do not question their health reality. They passively live their lives with no intention to change or improve their health status. Henceforth, they do not engage in healthy activities nor seek healthcare services.

Figure 18

Level 1: Magical Health Consciousness.



Level 2: Naïve Health Consciousness

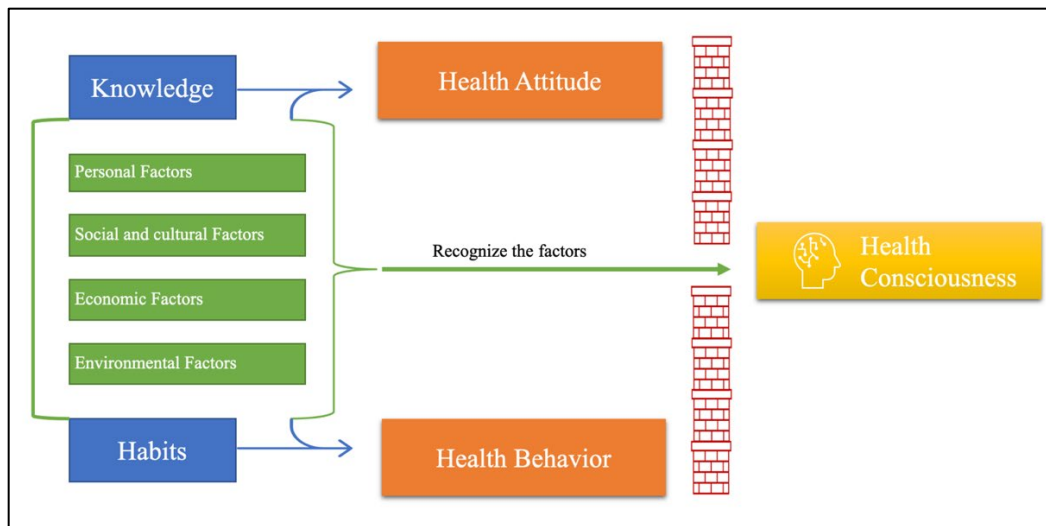
Saudis at this level sense that a healthy lifestyle is within their reach. As well, they can then distinguish the influential factors that impact their health. However, Saudis lacked awareness of their abilities of changing health attitudes and behaviors. The data from this research revealed that a vast majority of Saudis had a positive attitude toward health. They acknowledged their reasonability toward maintaining and improving their health. Yet, they oversimplified the impact of risky behaviors. For example, from the interview data, Johnny Bravo identified the danger of tobacco uses yet he explained, “I liked the feeling it [smoking] gives me. I found it so pleasurable.” Moreover, Saudis patently tend to underestimate the probability of negative events happening to them in the future. For instance, from the survey data, Participant 36 stated, “I will never encounter any negative health issue.” At the naïve health consciousness level, Saudis identified their own problems which include engaging in risky behaviors. Also, they acknowledged the impact of their personal, social, cultural, economic, and

environmental factors on their perceived knowledge and habits. Nonetheless, Saudis viewed the health as an unchanging established fact that cannot be changed.

The figure (19) below illustrates a vanishment of the wall between the influential factors and health attitudes and behaviors. However, health consciousness is still isolated by the wall because the participants lacked awareness of their capabilities of change. This is an indicator that they are addressing the problem on a “surface level” without acknowledging and working through the systemic issues causing the problem. In another words, Saudis addressed that their health knowledge and habits is impacted by the influential factors, nevertheless they do not understand how the influential factors impact negatively on their health. Therefore, participants are not able to keep up with a healthy lifestyle.

Figure 19

Level 2: Naïve Health Consciousness.



Level 3: Critical Health Consciousness

While analyzing 1636 responses from both the interview and survey data, I found that none of the participants reached the full level of critical consciousness. However, a few participants reached some sort of critical health consciousness in a specific aspect. Some were

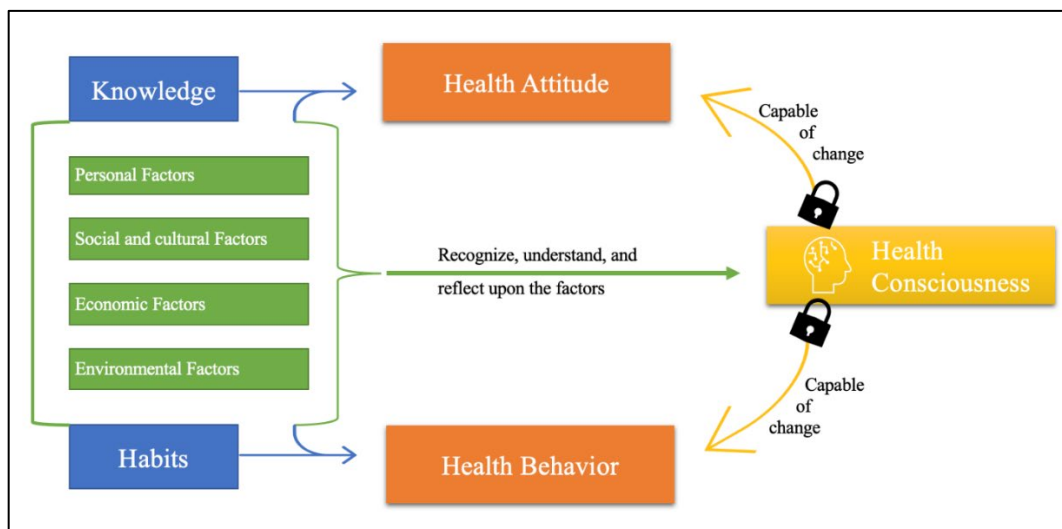
able to acknowledge the factors that impacted their eating habits and analyze how culture impacted their eating behavior. Further, they were capable of reflecting a change to their diet. This is evident in the case of Naruto. On his lifestyle change to maintain healthy food habits, he emphasized, “it is better for me to avoid many diseases and to be able to enjoy my life healthy.” Naruto reflected on the social circumstances that challenged him to uphold a healthy diet like social gatherings. He was aware of the factors that impacted his eating habits, but he managed to overcome the challenges and imposed a change to his family’s eating attitude and behavior. However, Naruto is a heavy smoker who started 10 years ago and is not planning to quit. He did not anticipate the dangerous impact of smoking on his health. As well, he did not mention the caveats of smoking, underlined “smoking relieves anxiety and tension.” Even though Naruto kept a healthy eating habits, his health is at risk because he still engages in unhealthy habit.

Therefore, I conclude that Saudis made efforts to identify the underlying forces of their health behaviors. They paid attention to the connections between influential factors and reflected on how it created their health attitudes and behavior. Yet, Saudis did not develop a clear perception of reality as they missed viewing all sides of a healthy lifestyle. According to the research result, compensatory health beliefs (CHBs) played a vital role in limiting the capacity of the participants to change their health behavior, resolve challenges, and determine their own health. CHBs hinder health behavior changes as they naturalized the engagement of risky behaviors. Therefore, CHBs impact the development of Saudis’ critical health consciousness. Although Saudis were able to view some of the oppressive factors that impacted their health, they did not recognize CHBs effect on their overall health status. Saudis’ critical health consciousness is not fully developed as they did not attain a collective action to change all unhealthy behavior.

In summary, Saudis reached immature levels of critical health consciousness. As shown in Figure (20), at this level, the participants were concerned about one specific aspect of their health, and therefore they were able to change and engage in healthy habits. However, their health consciousness is locked because they failed to comprehend the multi-dimensions of health as a whole and instead focused on one issue. The lock will disappear when Saudis question their everyday health practices, exam the impact of influential factors, and develop a plan to enhance their engagement in healthy activities.

Figure 20

Level 3: Critical Health Consciousness.



Analysis Summary

This qualitative case study highlighted the context of how the phenomena of health consciousness played out in participants' lives. The presentation of the thematic analysis mind-map addressed the first research question by illustrating Saudis' understating of health. In addition, the thematic analysis tackled Saudis' experiences in engaging in healthy practices, as well as risky behaviors. In regard to the second research question, Health Conscientization Model presented the role of health consciousness, or lack thereof, in Saudis' health attitudes and

behaviors. The Health Conscientization defined Saudis' ability to recognize and analyze influential forces shaping health status and their willingness to change unhealthy behaviors. It appears that Saudis create their own consciousness of struggle by ignoring the search of their reality and freeing themselves from the health oppression embedded by traditions and customs. Saudis must challenge themselves to become more critically conscious for a transformational change in their health.

Critical consciousness is a transformational tool that has the power to change the way individuals view their world, to strengthens them to resolve their problem, and to change the world to a better place for all to live (Freire, 2000). Thus, developing critical health consciousness among Saudis empower them to understand how the dynamics of the world works and how they fit into the system in changing their health status.

It is only by reaching critical health consciousness that the health status of Saudis will improve. Saudis must reflect on their health reality, by addressing the influential factors, and change the myth or the misunderstood health concepts. They must overcome their false consciousness of health reality and search for the causes that enforce them to engage in risky behaviors. Critical health consciousness allows Saudis to become aware of health barriers, recognize their own involvement in risky behaviors, and explore the links between their health status and influential forces. It is important to note that critical health consciousness is determined by analyzing the influential factors (personal, social, cultural, environmental, and economic) all at the same time. For example, the literature review revealed that the Saudi culture is rooted in Islamic religious believes. Although Islamic religion enforces health awareness and embraces ways of healthy activities engagement, Saudis still engage in risky behaviors. That's

explained by the fact that other influential factors have impacted Saudis' health attitude and behaviors such as social, environmental, or other factors.

The health Conscientization Model represents the way in which health consciousness was imperative for the action phase of changing health status. Acknowledging each level is a key to plan and implement health initiations and strategies. Understanding the concept of health consciousness as a personal attribute will have greater power in predicting diverse health behaviors among Saudis. The Health Conscientization Model aid in increasing the effectiveness of health intervention by targeting the population needs at each level of consciousness. For instance, when educating the public about the danger of red meat; people who are in the magical health consciousness, will need a more culturally sensitive approach which simplify the health knowledge needed to address the issue and address the impact of culture on food choice and consumption. In contrast, people in naïve health consciousness will need a focused plan to decrease their consumption of red meat emphasizing on their abilities to change their health status. On the other hand, people in critical health consciousness, are able to comprehends complex health recommendation. The Health Conscientization Model speaks to health policymakers, leaders, educators, and the Saudi community at large to empower Saudis in changing their risky behaviors to improve their health. Thus, this model calls for a need to foster critical health consciousness to build collective action to improve the health status of the Saudi population.

Implications

The issue of non-communicable diseases (NCDs) in Saudi Arabia is alarming. The literature revealed that the rise of NCDs has been driven by the increasing incidence of risky behaviors such as tobacco use, physical inactivity, and unhealthy diets (Habib, 2018). Therefore,

there is an urgent need for focused efforts to control the burden of NCDs. Implementation of Health Conscientization Model is a key requirement to apprehend the effectiveness of the NCDs prevention and control strategies. Health conscientization involves identifying the root causes of upholding risky behaviors, personalizing the issue to each individual, and then empowering individuals to work together as change agents. Based on the findings of this study, implementation and recommendations are made for the Saudi MOH, health leadership, health education, and for the Saudi community to enhance the health status of individuals, families, communities, and the nation. Developing critical health consciousness is a collectivist action in which health strategies must be implemented, health education must be reinforced, health policy must be changed, and the Saudi population must be engaged and willing to change their attitude and behaviors.

Implications for Ministry of Health

The findings of this research can be used to improve the implementation of the MOH health promotion programs in Saudi Arabia. Based on the findings of this study, the implication for the Saudi MOH are as follows:

- The MOH must address the non-compliance or non-adherence issue among the public. More qualitative studies on factors influencing compliance and adhering to health behaviors would be helpful to fill in the knowledge gap and contribute to formulating strategies for countering the issue.
- The MOH should focus on enhancing their advertising strategies to improve the public adherence. Health campaign advertising plays a key role in attracting the population and results in quality engagement. The study results revealed that popular slogans have a strong positive influence in Saudis' health attitudes and behaviors.

Thus, the MOH should consider the use of popular and well-known slogans as way of applying a culturally sensitive communication.

- The MOH should effectively utilize traditional, electronic, and social media to reach out to the public. In addition, the MOH must import a legalization policy that informs who is eligible to promote health information and recommendations. In this way, the MOH will prevent the widespread myth about health beliefs and practices, control and manage the health information, and improve health literacy among the public.
- The MOH needs to apply a policy and regulation to practice herbal and alternative medicine. Based on this study, many Saudis believe that herbal and alternative medicine are safe because they are natural. However, this is not true as there are a number of safety issues one must be aware of. Therefore, the MOH needs to assess the safety, quality, and efficacy of herbal and alternative medicine. Henceforward, the MOH will be able guarantee that herbal dietary supplements are free from contamination. In addition, the MOH will assure standardized practice and regulate alternative medicine practitioners.

Implications for Education

The findings of this study can be used to refine educational institutions' practices in implementing health education. Based on the findings of this study, the recommendations for education are as follows:

- Because the study suggested the Saudi public lacks a comprehensive health understanding, the Saudi Ministry of Education should collaborate with the MOH to improve the healthy literacy among the public. The two ministries should create and implement a mandatory health education curriculum at schools.

- Health institutions should cooperate with the MOH in educating the public about the importance of adhering to health rules and regulations.
- The education institution should adopt the effect of CHBs to guide its health education programs. They must enhance the public sense of personal control that encourages and enables healthy lifestyles. This could be accomplished by, first, providing rationale of why a certain health behavior is important. Second, raise the awareness of CHBs and its association with unhealthy habits. And, third, empower the public's abilities and responsibility for their health behaviors.
- This study implied the relationship between emotions and the engagement in risky behaviors. Thus, educational institutions should establish a comprehensive education plan that shapes Saudis' health behaviors by integrating meaningful opportunities that maximize learning outcomes. The learning opportunities must address healthy ways to deal with stress, anxiety, and all unpleasant emotions that impact healthy practices.
- Health education organizations must establish a training program to strengthen the efficacy of physicians' role in providing health promotion. The study reported that some physicians refuse to do regular checkups for patients with no health concerns. The implementation of training sessions will improve the physicians' understanding of the importance of annual checkups. Additionally, training will change their attitude and behaviors.

Implications for Leadership

The key contribution of this work is the solution it provides policymakers in identifying health concerns. Based on the findings of this study, the recommendations for Saudis in leadership roles are presented below.

- This study shows the negative impact of fatalism beliefs on health perception and practices. Consequently, Islamic religious leaders should address the issue of fatalism and educate the public about the importance of maintaining healthy attitudes and behaviors. Islamic religious leaders must implement an educational seminar series that increases the awareness and knowledge of health issues, advocates for health screening, and encourages the public to sustain a healthy community.
- Policymakers must establish health-promoting policies, as the data of this study revealed that workplace polices improved employee's health, knowledge, and skills. Therefore, policymakers must enforce an annual check-up rule to enhance the public preventive care.
- The findings suggest the cost of healthy food was perceived as a barrier to healthy eating. Hence, leaders need to apply price policies to promote healthier dieting among the public. The policy must ensure the price of healthy food is competitive with less nutritious food. This will influence food consumption behaviors and promote the public to choose healthy food.
- Multiple factors were found to influence Saudis' participation in physical activity such as cost and weather. Leaders should plan and implement strategies to enhance the physical engagement among the public. Health insurance coverage for gym membership fees is one possible mechanism to reduce the cost barriers. In addition, policymakers must consider a strategic plan to mitigate the weather's negative effects on physical activity. Leaders must consider establishing a weather-flexible and exercise-friendly facility in every neighborhood, like well-maintained parks with indoor and outdoor spaces.

Implications for the Saudi Community

The study's findings help the Saudi community identify their health needs and encourages them to implement strategies to improve their own health status. Based on the findings of this study, the recommendations for the Saudi community are explained below.

- It is necessary to shift the social perceptions of risky behaviors because of how these behaviors negatively impact health. Data revealed that social pressure contributed to the use of tobacco and the consumption of fatty food. The Saudi community must unite together to create a culture of healthy behaviors and reject the involvement of unhealthy behaviors.
- Saudis must learn how to be critically conscious about their health attitude and behavior to improve and manage their health with a critical consciousness mind.
- The study's findings implied that distrust in physicians negatively impacts healthcare utilization patterns. Therefore, the Saudi community should value, trust, and support all healthcare workers in general, especially physicians. Physicians are guided by rules and regulation from the MOH, and therefore, Saudis must comply. However, I encourage the Saudi community to communicate clearly with physician, as communication is critical in building trust.

Limitations

As with every research endeavor, this case study suffers from limitations. The acknowledgement of research limitations is an opportunity to make suggestions for further research (Creswell, 2009). One of the main limitations is the methods, sample, and selection section. The data utilized online-based surveys and online individual interview methods.

Although, the Internet has many potential benefits like generating large samples, unfortunately, it

also has many potential problems. I was limited to recruit people who actually have and utilize the internet. Therefore, I acknowledge that there may be other perspectives not represented in this study. While generalization is not a goal in qualitative research, the findings of this study are limited in application to the participants studied. I purposely selected participants from different geographic locations around Saudi to represent a comprehensive case study. My intention was to gain perspectives from across the country.

Furthermore, social desirability is another imposed restriction that may have impacted the results. Social desirability bias refers to the participants attempt to appear more socially desirable by answering survey and interview questions in a matter that is favorably viewed by the society (Krumpal, 2013). Considering this limitation, I asked follow-up questions to reveal the true feelings, thoughts, and opinions of the participants. Additionally, I assured the participants that I will protect their privacy, and henceforth I encouraged them to speak openly and freely. All of these limitations are aspects for consideration and caution in future research.

Recommendations for Future Research

This research contributes new knowledge regarding Saudis' health consciousness. Overall, the study findings are important because it could be used to guide policymakers, educators, and researchers in making decisions for future directions and studies. The first recommendation is to replicate this study in a wider scope to examine Saudi's health attitude and behaviors. This will aid in validating the study findings by comparing similar or discrepant results. Secondly, I suggest conducting a follow-up study with multiple participants to correlate findings among different situations. Longitudinal qualitative approach is proposed for the follow up study to capture and enhance understandings of Saudis' health consciousness change over time. Lastly, it is recommended that further research conduct regarding the use of Health

Conscientization Model to inform health education among the Saudi population. Such research will examine this new theory in real world practice. Fostering Health critical consciousness could take place in many forms, the findings of this research support the use of social media as many Saudis trust and use social media on a daily basis, therefore, it is proposed to conduct an online health educational campaign formed by enhancing the health critical consciousness abilities. It could follow the participants as they develop and grow from one level to another. Subsequently, the future research examines the effectiveness of health conscientization, and inform new health policy in the country.

Personal Reflections

Throughout the research journey, I reflected on my personal experience in witnessing Saudis' health behaviors. I attempted to understand why Saudis engage in unhealthy behaviors. I started to look at the literature, and then I identified the gap of knowledge in the field of health behaviors. After that, I started to look for data in different counties, subsequently I was introduced to the concept of health consciousness which contains various health aspects including health attitude and behaviors. Accordingly, I refined my research topic. The methodology approach is key in answering the research question. Therefore, I critically examined qualitative research approaches and decided that case study was the best approach. This is because case study allowed me to investigate the complex phenomena within a particular context.

During the research process, I learned many valuable lessons and gained many skills that made me a better researcher. I went through a steep learning curve in conducting the research. My communication skills and reflective techniques were sharpened. In addition, my experience in transforming the raw data into significant themes, constructing a conceptual framework, and

developed through grounded theory enhanced my critical thinking skills. Even though the process of conducting this qualitative study was difficult, I sure enjoyed every step. I was surprised by the number of responses I got from the survey. The participants were willingly and respectfully able to provide me meaningful insight about their own thoughts of health, their individual health experiences, and their struggles in upholding healthy lifestyle. This dissertation process has transformed my emotional and intellectual abilities. My desire to understand Saudis' health practices kept me focused on achieving the objective of this research. My personal experience did not comprise the data result, as I discussed in Chapter Three. I carefully examined my own bias using cultural awareness and intercultural communication skills to empower the voice of the participants.

Conclusion

Improving and enhancing the population's health is the main focus of the Saudi Arabia government. Therefore, the Saudi MOH planned and integrated health promotion programs and healthcare service to get along with global development. In spite of the MOH's effort, NCDs have emerged as one of the major health concerns in Saudi Arabia which is responsible for more than 70% of deaths annually (World Health Organization, n.d.). This increased rate of mortality and morbidity challenges the country from reaching sustainable development. To reduce the burden of NCDs, the MOH tackled the primarily risk factors, which are: tobacco use, physical inactivity, and unhealthy diets. Data from SHIS revealed that the prevalence of risky behaviors among Saudis are significantly increasing year after year (MOH, 2017). Insufficient progress has been made towards investigating Saudis' health understanding and practices. To that end, this study aimed to provide in-depth analysis of how society, culture, and other factors affects

Saudis' perceptions of and experiences with health. I examined Saudis' health attitudes and behaviors in the context of health consciousness. The analysis leads to the following conclusions:

- Saudis' health understanding is based on a broad range of cultural domains, and not solely on health perceived knowledge.
- Saudis' health behavior is influenced by personal, social, environmental, and economic factors.
- Saudis' health consciousness is not fully developed and that explains their tendency to uphold risky behaviors.
- It is important to consider the continuous processes of conscientization to recognize and analyze the factors that impact health consciousness and take action accordingly.

The findings in this study provided a new understanding of Saudis' health needs. The Health Conscientization model explained Saudis' health perception and practices. Thus, the findings can aid MOH to orient health systems, strengthen health promotion strategies, and deliver better healthcare services to successfully prevent and control NCDs impact.

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Appendix A

IRB Letter of Research Approval



All for the Common Good™



Date: August 31, 2020

To: Leenah Iskandarani

From: Sarah Muenster-Blakley, Institutional Review Board

Project Title: [1629076-1] A Case Study on Saudi's Health Related Attitude, Behavior, and Consciousness

Reference: New Project

Action: Project Approved

Approval Date: August 31, 2020

Expiration: August 30, 2021

Dear Leenah:

The Institutional Review Board has reviewed your protocol and approved your project as reflected in the application that you submitted. Please note that all research conducted with this project title must be done in accordance with this approved submission.

Please remember that informed consent is a process beginning with a description of the project and assurance that the project is understood by the participants and their signing of the approved consent form. The informed consent process must continue throughout the project via a dialogue between you and your research participants. Federal law requires that each person participating in this study receive a copy of the consent form. All original records relating to participant consent must be retained for a minimum of three years upon completion of the project.

Amendments to targeted participants, risk level, recruitment, research procedures, or the consent process as approved by the IRB must be reviewed and approved by the IRB prior to implementing changes to the research study. No changes may be made without IRB approval *except* to eliminate apparent immediate hazards to the participant.

Any problems involving project participants or others must be reported to the IRB within one (1) business day of the principal investigator's knowledge of the problem. A problem reporting form is available in the IRBNet Document Library or on the IRB website and should be submitted to [REDACTED]. Any non-compliance or complaints relating to the project must be reported immediately.

Approval to work with human participants with this project will expire on **August 30, 2021**. Please direct questions at any time to Sarah Muenster-Blakley at [REDACTED]. I wish you success with your project!

Sincerely,

Sarah Muenster-Blakley, M.A., CIP
Chair, Institutional Review Board

Appendix B

Consent Form

Research Participation Key Information**What you will be asked to do:**

We ask participants to participate in an interview. The time commitment is about 01:45 mins and the study will take place using online video chat.

Participating in this study has no known risks.

Please read this form and ask any questions you may have before agreeing to be in the study.

You are invited to participate in a research study about interpreting the phenomenon of Saudis' health consciousness in which Saudis understand health, practice healthy activities, and seek healthcare facilities. The title of this study is "A Case Study on Saudi's Health Related Attitude, Behavior, and Consciousness." You were selected as a possible participant and are eligible to participate in the study because you were born and lived in Saudi Arabia. The following information is provided to help you make an informed decision whether you would like to participate or not.

What will you be asked to do?

Interviews will take place through online format using ZOOM. The meeting will take a place in a quiet, comfortable, and private area. The interview will take about an hour and 45 minutes. The interview will be audio and visual recorded. Recording is required to participate in this study. A transcript of your answers and description will be made. If you begin to feel uncomfortable before, during, or after the dialogue. I will encourage you to pause and decide whether or not you want to continue with the investigation.

During the interview, I will ask question regarding your perceptions of health and healthy activities. After I transcribe the conversation, I might need to clarify some information with you. For that, if needed I will contact you via phone or email.

What are the risks of being in the study?

This study has no known risks.

Here is more information about why we are doing this study:

This study is being conducted by Leenah Iskandarani. This study was reviewed for risks and approved by the Institutional Review Board at the University of St. Thomas. The purpose of this study is to gain insight into your perceptions of health and healthy activities. There are no direct benefits for participating in this study

We believe your privacy and confidentiality is important. Here is how we will protect your personal information:

Your privacy will be protected while you participate in this study. I would like to assure you that any information you share will not be attributed to you or used to identify you or anyone else. Your participation is voluntary and may be discontinued at any time during the interview.

What you share with me is very important and I like to take notes, and record our conversation. The recording is confidential and will not be shared around. The only people that will hear the audio recording will be me and the person who transcribes our conversation. It will be kept in a secure location and destroyed when the study is complete. If at any time you would prefer that I turn the recorder off, please let me know, and I will do so immediately.

The records of this study will be kept confidential. In any reports I publish, I will not include information that will make it possible to identify you.

All signed consent forms will be kept for a minimum of three years once the study is completed. Institutional Review Board officials at the University of St. Thomas have the right to inspect all research records for researcher compliance purposes.

This study is voluntary, and you have the right to withdraw from the research with no penalties of any kind.

Your participation in this study is entirely voluntary. Your decision whether to participate or not will not affect your current or future relations with any individuals, employers, cooperating agencies, or institutions or the University of St. Thomas. There are no penalties or consequences if you choose not to participate. If you decide to participate, you are free to withdraw at any time without penalty. Should you decide to withdraw, data collected about you will be destroyed unless it is already de-identified or published and I can no longer delete your data. You can withdraw by contacting me. You are also free to skip any questions

Who you should contact if you have a question:

My name is Leenah Iskandarani. You may ask any questions you have now and at any time during or after the research procedures. If you have questions before or after we meet, you may contact me at [email: [REDACTED], phone: [REDACTED]

My Research Advisor: Eleni Roulis- School of Education- email: [REDACTED] - phone: [REDACTED].

Information about study participant rights is available online.

STATEMENT OF CONSENT:

I have had a conversation with the researcher about this study and have read the above information. My questions have been answered to my satisfaction and I consent to participate in the study. I am at least 18 years of age. I give permission to be audio recorded during this study.

You will be given a copy of this form to keep for your records.

Signature of Study Participant Date

Print Name of Study Participant

Signature of Researcher

Date