Exploring Adolescents' Perceptions of Graphic Health Warning Labels: A Cross-Cultural Qualitative Study from the United Kingdom and the State of Qatar

by

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Abstract

Introduction: Despite the progress in tobacco control efforts, smoking remains the leading reason of preventable morbidity and mortality. Alarmingly, adolescents are the most prone to experiment with smoking and become addicted. As part of deterring and reducing smoking, the Framework Convention on Tobacco Control (FCTC) recommends the implementation of Graphic Health Warnings (GHWs) on cigarette packages. This thesis examines whether GHWs are perceived as an effective approach to reducing smoking among adolescents. It also investigates the under- researched area of whether fear appeal associated with GHWs increases stigma and how adolescents engage with and create meaning from GHWs. As yet, no research has specified the social and cultural dimensions that may be important factors to the effectiveness of GHWs among adolescents.

Aim: The study takes a social marketing approach to examine the effectiveness of a public health policy, GHWs. The study follows an audience-centred approach to explore, through the lens of semiotics theory, the factors related to adolescents' perception of GHWs in a cross-cultural context. This empirical study aims to offer an original contribution to the literature by establishing the communication relationship between context-specific and cross-cultural public health and social marketing communication in tobacco control. The study also explores adolescents' suggestions for alternative messages and ways that could be more persuasive to change adolescents' smoking attitudes.

Method: The study followed a multi-site qualitative research method of focus groups and interviews among adolescents (13–18 years) in the UK and in Qatar. Twenty-six focus group discussions were conducted with adolescents in Qatar and a total of 9 focus groups and 6 individual interviews were conducted with adolescents in the UK. In total, 141 adolescents from both countries participated in the study. Interviews and focus groups were based on a semi-structured topic guide. The focus groups and interviews entailed an interactive methodological technique which is known as a projective technique. The technique involved three main activities for participants: ranking GHWs on a matrix of least to most persuasive for adolescents; designing their own understanding of a relevant and persuasive health message; and creating a mood board of the messages they perceive as persuasive to adolescents.

Findings: The data were thematically analysed drawing on the theory of semiotics. Analysis of the data revealed three main themes and eight sub-themes. The study reveals that fear

appeal is not always effective among adolescents and that it might create unintended consequences such as disengagement with the message, ethical considerations and reduced self-efficacy. The data suggest factors that are important message characteristics to account for during the development and evaluation of GHWs. Moreover, the study findings identify certain social and cultural factors that influence perceptions of GHWs. Adolescents in the study suggested alternative ways of communicating GHWs such as incorporating positively framed messages and other novel ways of communicating the anti-smoking message.

Discussion: This thesis makes a theoretical contribution by adding concepts to the theory of semiotics, such as proximity and authenticity that can enhance the relevance and effectiveness of health messages. This contribution adds to the understanding of the meaning of signs and the dimensions deemed relevant in meaning creation. The study offers early insights into adolescents' perceptions of GHWs in the Middle Eastern region and provides a comparative insight to adolescents' perceptions in the UK. The thesis contributes original insights to the health communication and social marketing field, by raising awareness of the importance of specific message characteristics and social and cultural dimensions in influencing the perceptions of the target group. It also provides informed perspectives on the potential of positively framed messages and other novel approaches that could reduce unintended consequences. Furthermore, the study connects social marketing and health promotion principles to elevate a public health policy. By following an audience-centred approach, the study explores the perspective of adolescents on GHWs and for the first time explores their suggestions for alternative messages and ways to communicate the anti-smoking message.

Conclusion: The study highlights concepts and dimensions to be considered in tobacco control policy that could also be transferable to other health products. The study accentuates the importance of targeting and tailoring health communication through contextualised messages that engage the target audience. This perspective suggests a participatory approach of health communication messages.

Table of Contents

List of Tables

List of figures

Author's declaration

"I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution."

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Signature:

Preliminary findings (paper) of this thesis were presented in an oral presentation at the World Social Marketing Conference- June 4, 2019, Edinburgh:

"Intercultural comparison of social and cultural factors shaping adolescents' perceptions of graphic health warnings on cigarette packages: the case of the United Kingdom and the State of Qatar"

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"How do UK adolescents perceive Graphic Health Warning Labels on Cigarette Packages? A scoping study"

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Definitions/abbreviations

ASH	Action on Smoking and Health
CDC	Center for Disease Control
CRUK	Cancer Research UK
DALYS	Disability Adjusted Life Years
EPPM	Extended Parallel Process Model
EU	European Union
FCTC	Framework Convention on Tobacco Control
GATS	Global Adult Tobacco Survey
GCC	Gulf Cooperation Council
GDS	Global Drug Survey
GHW	Graphic Health Warning
GYTS	Global Youth Tobacco Survey
HBM	Health Belief Model
HBSC	Health Behaviour in School-Aged Children
ITC	International Tobacco Control Policy Evaluation Project
MSPSS	multidimensional scale of perceived social support
NCD	non-communicable diseases
NRT	nicotine replacement therapy
SALSUS	Scottish Schools Adolescent Lifestyle and Substance Use Survey
SES	socio-economic status
UK	United Kingdom
UNDP	United Nations Development Programme
WHO	World Health Organization
ZMET	Zaltman Metaphor Elicitation Technique

CHAPTER 1: INTEGRATIVE CHAPTER

"Communication is at the heart of who we are as human beings. It is our way of exchanging information; it also signifies our symbolic capability" (Rimal and Lapinski, 2009, p. 247)

1.1 Introduction

This thesis has been influenced by a critical social science approach which assumes that health interventions are rooted in the social context and cultural beliefs of models of health and illness (Haines-Saah et al., 2015). It is informed by the ethical scholarly debate on fear appeal in health communication. Scholars in social marketing and public health such as Hastings et al. (2004), Haines-Saah et al. (2015, 2016) and Anker (2016) argue that the use of fear appeal in health communication holds ethical implications and might lead to unintended consequences. The study does not aim to undermine the effectiveness of GHWs, but rather to identify the circumstances where they work best.

The debate has been particularly important when studying adolescents who are considered a vulnerable group. Adolescence is considered a critical stage for the initiation of risky health behaviours (e.g. smoking, obesity, physical inactivity, alcohol use, unsafe sex) and which might be linked to health behaviour problems later in life (Viner, 2012). Experts in adolescents' health stress the importance that interventions target adolescence as a preventive measure against future burdens of disease (Hurrelmann, 1990; Viner, 2012). Consequently, the study examines the effectiveness of GHWs among adolescents as the target group.

The study focuses on two countries, the United Kingdom (UK) and the State of Qatar, which are culturally different but apply the same tobacco control policy of GHWs. This comparison enabled me to examine the role of different socio-cultural factors on adolescents' perceptions of GHW labels. Scholars have proposed the potential influence of socio-cultural differences on people's perceptions towards health messages and warning labels across cultures (Hastings et al., 2004; Haines-Saah et al., 2015, 2016). Yet, mono-cultural or single-site research has dominated the literature of GHW labels and adolescents. On the other hand, literature on multi-site qualitative research design shows that it allows for cross-cultural comparison of the phenomenon of study, strengthens transferability of findings to other similar settings and most importantly produces contextually relevant findings (Jenkins et al., 2018). The findings of this study could be adapted and built upon in other health

communication areas as well as in a recent public health crisis, the COVID-19 pandemic. Further information on the lessons learned for COVID-19 communication is presented in the conclusion chapter.

In this chapter, I lay the grounds for the thesis, by first stating the research aims and objectives and then explaining the interdisciplinary approach, and the importance of integrating social marketing and health communication to enhance the effectiveness of health interventions. The chapter also reflects on the reasons for focusing on smoking among adolescents and provides background information on the GHWs policy. Later in this chapter, I identify the gaps in the literature that this thesis intends to answer and provide a summary of the thesis structure.

1.2 Research aims and objectives

Fear appeal might lead to ethical concerns and other unintended consequences. The literature on adolescents' perceptions of GHWs has rarely examined the meaning that adolescents associate with GHWs and has rarely taken the social and cultural context into consideration. My main focus will be on this under-researched area of cross-cultural similarities and differences in health communication. Consequently, this study aims to explore the factors that influence adolescents' perceptions of GHWs in a cross-cultural context in order to establish the communication relationship between context-specific and cross-cultural public health and social marketing communication in tobacco control. Moreover, the study aims to explore adolescents' perceptions of alternative ways of GHWs and anti-smoking messages. The study findings will be used to indicate implications for health communication and policy.

The following objectives contribute to achieving the study aim:

- to explore the literature of health communication and social marketing on the use of fear appeal in health interventions more generally and GHWs more specifically;
- to examine the meaning that adolescents associate with the existing GHWs in the UK and Qatar by drawing on the theory of semiotics;
- to investigate the varying reactions of adolescents among different population groups;
- to identify the mediating factors that influence adolescents' reactions to existing GHWs in the UK and Qatar;
- to identify concepts in the theory of semiotics that apply to public health communication;

- to explore adolescents' perceptions of alternative ways to communicate GHWs and anti-smoking messages through an audience-centred approach;
- to better understand how social marketing and health communication can work together to enhance public health policies.

1.3 Interdisciplinary approach

This thesis takes an interdisciplinary approach that integrates the marketing discipline with public health. The study fits closely under the social marketing field. For me as a researcher from a public health background, integrating principles from the marketing field and emphasising the role of theory in guiding research was a challenging task at first. Yet, throughout the process I have learned the importance of connecting disciplines that might have more in common than are different, and which translate the systemic findings to policy implications. Studies on GHWs have been mainly dominated from a health promotion literature perspective. While it is not contradictory to social marketing, incorporating social marketing principles could help us understand the effectiveness of GHWs and establish audience-oriented suggestions that could improve engagement with GHWs.

The prominence of a multidisciplinary approach in health communication has been stated by Rimal and Lapinksi (2009), in their article on the importance of health communication. They state that the intricacy of health behaviour dimensions entails a multidisciplinary approach to successfully encourage change. Indeed, the integration of the disciplines strengthened my understanding of the field of social marketing and illuminated the positive impact of an interdisciplinary approach in health communication.

This thesis fits closely under the social marketing field and there might appear to be some overlap with the health communication and health promotion fields. If we take the basic four P's of the marketing mix (promotion, product, price, place) and its equivalent in health promotion interventions (Hastings and Haywood, 1991), we could assume the following about using the cigarette pack to promote anti-smoking messages GHWs could be considered to cover the 'Promotion' principle in the marketing mix, which is the communication used to transfer the message. The 'Place' in the mix is known to be the delivery channel, which is the use of the cigarette pack to communicate the message. The 'Product' in health promotion could be the aim of the intervention such as reducing smoking or preventing smoking initiation. As for the 'Price', which is the cost, this could be all types of costs that the target group has to pay (i.e. money, reduction/benefit in health, maintaining self-image, maintaining social circles, etc.). Therefore, GHWs cover the communication part of social marketing. Yet, social marketing experts recommend including more than one

marketing mix principle to enhance the effectiveness of the intervention (Hastings and Haywood, 1991).

In the following section, I briefly introduce the fields of social marketing and health promotion. A shared objective for both disciplines is that they aim at health behaviour change. I highlight their similarities and differences and the importance of integrating them to enhance the effectiveness of health interventions. Griffiths and colleagues (2009), in their paper for the "Royal Society of Public Health and the National Centre for Social Marketing in the UK", discuss the differences and similarities of both disciplines and state that they are complementary to one another. They emphasise the importance and strength of merging both disciplines for stronger health interventions. They argue that the commonalities between social marketing and health communication is that they aim equally to influence change by focusing on and emphasising the role of health behaviour, that they both engage individuals and communities and that they equally engage in systematic approaches to study, develop and evaluate health and social interventions. While they are not mutually exclusive, each of the fields focuses on certain concepts with more emphasis and their focus differs on these approaches. For instance, it is stated that health promotion focuses more on reducing health and social inequalities and on the social determinants of health and on advocacy and policy. Social marketing strengths lie in its focus on sustainable behavioural outcomes, audience-centred approaches, its focus on exchange theory and competition and enabling communities and individuals to adopt behavioural change (Griffiths et al., 2009). Likewise, Hastings and Haywood (1991), in their paper on social marketing and health promotion, state that both disciplines can add benefit to the other, and that it starts with a focus on an audience-centred approach:

> …social marketing can help with health promotion. The philosophy underlying this implementation is consumer orientation. It is the consumer who ultimately guides the health promoter through problem definition and setting objectives, to segmenting the market and achieving objectives by means of the marketing mix. Thus, the need to check that an audience understands the language in a communication or that the images used are decipherable, needs little justification. (Hastings and Haywood, 1991 p. 140)

Health promotion is defined by the Ottawa Charter for Health Promotion as (WHO, 2020b):

> Health promotion represents a comprehensive *social and political process*, it not only embraces actions directed at strengthening the skills and capabilities of individuals, but also action directed towards *changing social, environmental and economic conditions* so as to alleviate their impact on public and individual health.

Alternatively, Kotler and Zaltman (1971), introduced the term “Social marketing”, in their paper that discusses how commercial marketing principles could be integrated to promote social and health interventions. The article has been hugely influential in defining the discipline. The authors acknowledge the significance of using the marketing mix, to enhance the design, communication and delivery of social and health initiatives that better fit the target audience. Later, the “International Social Marketing Association, European Social Marketing Association and Australian Association of Social Marketing, indicate that social marketing is guided by ethical principles and they provide a consensus definition on its important dimensions:

> Social Marketing seeks to develop and integrate *marketing concepts* with other approaches to *influence behaviour* that benefits individuals and communities for the *greater social good*. Social Marketing practice is guided by *ethical principles*. It seeks to integrate *research, best practice, theory, audience and partnership insight*, to inform the delivery of *competition sensitive* and s*egmented social change* programmes that are *effective*, efficient, *equitable* and sustainable (French 2017, p.1emphasis added)

Furthermore, from a practical standpoint, social marketing is an established framework used by governments in many countries. For instance, the UK has a National Social Marketing Centre, which used to be run by the government; and the Scottish Government employs social marketers and uses a social marketing framework to promote public health (Public Health England, 2017; Scottish Government, 2019; National Social Marketing Centre, 2020).

Moreover, a core dimension in social marketing is the in-depth understanding of the target audience, from the stage of relevance of the problem, their capacity to tackle the problem, to the knowledge they have about the problem and the space to promote change within their environment (European Center fir Disease and Prevention Control, 2020). Similarly, Austin (1995) suggested that campaigners and health communicators should view the target group as a participant during the development of the health message rather than just a recipient. Thus, a main driver in this thesis is exploring the views of adolescents as the target group of GHWs who are intended to be reached but not always heard enough. Participants in the study reported their appreciation for involving them in what they perceived as topics of interest to them. They often told me that they were excited to see the outcome of their participation and whether some of their ideas would be implemented. Participants also expressed their interest during the discussions and informed me that talking about smoking in a friendly way and an interactive one was engaging. They reported having much to say especially on topics that

they relate to, like smoking, and that their opinions and thoughts were not usually heard (Field note: October 2018).

My thesis focuses on understanding the effectiveness of GHWs from adolescents' perspective, understanding the meaning of existing GHWs and how they create this meaning to identify factors that are deemed relevant in shaping their perceptions of GHWs. Moreover, the study draws on social and cultural contexts of adolescents to recognise factors mediating adolescents' response to GHWs. Ford (2014) has used a similar data collection technique (projective technique) to the one used in this thesis, yet she studies more specifically the impact of plain packaging and the pack design on adolescents using a mixed methods approach. Although I focus only on the communication dimension of the marketing mix in GHWs, I conclude at the end of the thesis the need to include more than one dimension of the marketing mix to enhance the effectiveness of GHWs. Through the integration of both disciplines, public health and marketing, the thesis provides an explanation as to how health warnings could be enhanced to be better understood by the target audience and to better motivate the target audience to change behaviour and influence policy.

1.4 Smoking among adolescents

Despite the progress in tobacco control efforts, smoking remains the leading reason of preventable morbidity and mortality (CDC, 2017; Reitsma et al., 2017). If the current trends in smoking continue, smoking related mortalities will exceed 7 million around the globe by the year 2030 (CDC, 2017; WHO, 2019c). According to the World Health Organisation report on Tobacco Prevalence (WHO, 2015), smoking is still the number one risk factor for non-communicable diseases (NCDs). In 1990, the number of countries that placed smoking among the highest risk factors of Disability Adjusted-Life Years (DALYS) was approximately 80 and, by 2015, had increased to more than 105 (Reitsma et al., 2017). Regardless of smoking status, tobacco use is a health threatening behaviour towards smokers and second-hand smokers with no identified safe levels (Harvard Health Publications, 2012).

Alarmingly, adolescents are the most prone to experiment with smoking and become addicted. The stage of adolescence is distinguished from other stages in life because it involves further curiosity, experimentation and rebellious behaviour (Hurrelmann, 1990). According to Hurrelmann, (1990) in his paper on health communication for adolescents, health interventions that are only focused on the individual level (e.g. addiction to smoking) and that overlook the social aspect of the behaviour and the reasons behind the behaviour are assumed to be ineffective and rather lead to unintended consequences. In the same line

of argument, Viner (2012), in the "Annual Report of the Chief Medical Officer 2012, Our Children Deserve Better", states that adolescents' health behaviour is strongly linked with their social and cultural environment. They are influenced by their educational background, parental connection, peers and social circle, school environment and self-esteem. It is estimated that around two-thirds of adults who smoke started smoking during their adolescence and more than 75 per cent of adolescents who smoke become lifetime smokers (WHO, 2003; CDC, 2017). While smoking causes premature death, the history of the tobacco industry showed that adolescents were always of interest to recruiters (ASH, n.d.). Therefore, tobacco control measures such as GHWs are important in contributing to the reduction of the prevalence of smoking and to prevent smoking initiation (WHO, 2003).

1.5 Graphic health warnings

In this section, I explain further the details of the tobacco control policy that recommends placing GHWs on cigarette packs. I also provide a brief background on the use of packaging as a promotional tool and the increased interest in GHWs in other areas of health communication.

1.5.1 FCTC Article 11

In the past decade, tobacco control efforts and policies were strengthened (WHO, 2015) and most importantly WHO developed the Framework Convention on Tobacco Control (FCTC), which was the first global public health treaty. However, despite past efforts there continues to be a need to strengthen tobacco control policies (Reitsma et al., 2017).

The FCTC recommends the implementation of GHWs on cigarette packets and sets guidelines and standards for "packaging and labelling of tobacco products" (WHO, 2003, p.9). FCTC is an international treaty that sets recommendations for parties on comprehensive tobacco control measures to protect populations from the adverse consequences of smoking in various areas in their lives (WHO, 2015). It outlines the obligations of parties to start implementation after three years from ratifying the treaty with a commitment of reporting progress every two years (WHO, 2016).

The purpose of implementing GHWs has been stated in the FCTC:

> In comparison with small, text only health warnings, larger warnings with pictures are more likely to be noticed, better communicate health risks, provoke a greater emotional response and *increase the motivation of tobacco users to quit and to decrease their tobacco consumption*. (WHO, 2003, Article 11, item 7)

Public health efforts to fight the smoking epidemic target smokers and non-smokers (Pierce, 1997). Tobacco control interventions aim to reduce smoking consumption of smokers and prevent smoking initiation among non-smokers, especially when it comes to adolescents who are prone to uptake smoking.

GHW is considered a cost-effective intervention. It is a population level intervention that does not incur a cost burden on health departments of countries implementing it. It reaches the "consumer" of the product (smokers) and "non-consumers" (non-smokers) 24/7. It provides health information to smokers and their surroundings (e.g., friends and children) (Canadian Cancer Society, 2018). So far, more than 150 countries have implemented GHWs on cigarette packets which constitute most of the world's population (WHO, 2015; Canadian Cancer Society, 2018). The FCTC has specified that the GHWs on cigarette packets must be large, simple and occupying more than 50 per cent of the package size to make it more visible. It is the responsibility of the health departments of the countries that ratified the treaty to implement GHW policy and develop the content of the warning labels whereas the tobacco industry incurs the cost for printing it (WHO, 2016). Moreover, Article 11 states the guidelines for the continuous rotation of GHWs (WHO, 2003). Studies have shown the importance of continuously rotating the images to prevent desensitisation (Moodie et al., 2015; White et al., 2015).

Recently, in some countries, GHWs are being placed on standardised plain packs to enhance the effectiveness of the GHWs. Plain packaging has been implemented in some countries such as in Australia, Canada, the UK and New Zealand (Canadian Cancer Society, 2018). Plain packaging has been shown to enhance the attention to GHWs (Moodie et al., 2012).

GHWs seem to be a crude intervention, where globally countries are using fear appeal messages such as GHWs on cigarette packs to communicate the adverse impact of smoking on health (Haines-Saah et al., 2015; WHO, 2020a). Haines-Saah et al. (2015, p.e62), in their content analysis on GHWs state that the labels only tackle death and disability and none tackle "why people smoke". Fear appeal messages are defined as messages which communicate the adverse effects of smoking by highlighting the harmful effects on the body or on someone's health. Fear appeal has been used in social marketing to target behavioural changes such as those related to tobacco use, safe driving and drug use (Lennon et al., 2010). Existing GHWs display information about health consequences of smoking such as cancer, gangrene, yellow damaged teeth, black pigmented lungs, second-hand smoking and more (e.g. Appendix 1A and 1B). From my observation of the WHO database (WHO, 2020a), rarely do GHWs cover the social or economic impact of smoking. The only GHWs that

include information on socio-economic consequences are the ones in Africa with a warning label “Tobacco causes poverty” (WHO, 2020a).

Nevertheless, there is a gap in the available public information on how GHW messages are developed and who develops them, and whether they have been pre-tested and co-created with the target audience. The process of developing the GHWs is unclear and there is not enough public information on the process.

1.5.2 Packaging as a promotional tool

Packaging, which is more known in commercial marketing, is historically believed to be known as the “silent salesman” for its key role in increasing the attractiveness and purchase of products (Stewart, 1996, p. 2). Packaging of a product involves dimensions in the package design such as size, colour and form that attract “consumers”, influence their perceptions about the product and encourage the purchase behaviour (Ford et al., 2012).

Cigarette packages are no different from any other product, and the tobacco industry has used the cigarette package for years to promote its products. Social marketers and health communication experts have recognised the importance of the pack as a communication tool, especially after restrictions on advertisements and sponsorship on the tobacco industry came into place after the FCTC and the Tobacco Advertising and Promotion Act in the UK (Tobacco Advertising and Promotion Act, 2002; Moodie and Hastings, 2010). The GHWs and plain packaging policy has limited the space on which the product can be promoted – this was a powerful promotional tool for tobacco industries, and thus was used to communicate anti-smoking messages to the public.

1.5.3 Graphic health warnings on other health-damaging products

Tobacco GHWs have been guided by the FCTC, and research that could contribute to improvements to the policy could also contribute to lessons learned for other areas of health communication. Areas that could benefit from the transfer of systemic evidence from GHWs research are waterpipe, e-cigarettes, alcohol and sugary food and beverages. Although there is no global public health treaty that mandates GHWs on sugar and sweet food and beverages, emerging tobacco products or alcohol products, there is a wide array of discussion in the academic field on the potential of health warnings on other health-damaging products (Ares et al., 2019; Winstock et al., 2020; Hobin et al., 2020). This discussion increases the significance of evidence-based recommendations from empirical studies on ways to elevate the effectiveness of GHWs on tobacco products and deduce lessons learned (Capewell, 2014; Popova, 2016; Vallance et al., 2020).

1.6 Policy transferability and cross-cultural research

The advantages of a multi-site qualitative application are that the lessons learned give an idea of the importance of tailoring policies to specific contexts and of the potential factors that could influence the implementation of tobacco control policies. Multi-site qualitative research aims to share lessons learnt about health policies that better fit the target group (Jenkins et al., 2018). Policy relevance is important in the context of this thesis because GHWs are a policy that is being implemented in more than 150 countries. Thus, countries can learn from each other by adopting best practice. However, context is important, so policies have to be adapted according to the context of each country, their social and cultural beliefs, norms and practices. My study provides further information about the dimensions in the UK and Qatar contexts which should help to better adapt the GHW policy to the socio-cultural context, thus contributing to improving the policy.

The policy transfer framework from Dolowitz and Marsh (2000, p.5) defines policy transfer as: "a process in which knowledge about policies, administrative arrangements, institutions and ideas in one political setting (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political setting". Policy transfer across countries especially in tobacco control policies is popular. GHWs like other tobacco control policies are also adapted from one country to another according to best practice. For example, countries tried to follow best practice from other countries that had initially implemented GHWs, such as Canada and New Zealand (Canadian Cancer Society, 2018). Other countries followed the lessons learnt from the GHWs policy implementation to best practice for implementing GHWs and accelerated implementation of the policy (Hoek et al., 2010; Huang et al., 2014).

1.7 Gaps in the literature

Currently, there is evidence that GHWs increase knowledge about the adverse impacts of smoking and negative emotions in adolescents (Goodall and Appiah, 2008; Moodie et al., 2009; Vardavas et al., 2009; Hammond et al., 2009; Pepper et al., 2013; Andrews et al., 2014; Alaouie et al., 2015; White et al., 2015; Adebiyi et al., 2016; Netemeyer et al., 2016). On the other hand, recent studies have shown that GHWs on cigarette packets are rather ineffective in changing individuals attitudes to smoking and rather create unintended consequences such as avoiding the message and finding the messages irrelevant (Drovandi et al., 2018, 2019a, 2019b; Bekalu et al., 2019; vanMourik et al., 2020). Nonetheless, Stewart and Martin, (1994) and Hastings et al. (2004) highlight the importance not only to study the "effectiveness" of health messages on certain populations, but also to ensure that they do not

lead to unintended consequences in other population groups. The literature showed different definitions of the effectiveness of GHWs and showed some methodological shortcomings. The literature on fear appeal in general has been inconclusive on its effectiveness. Some scholars claim it is effective in triggering motivation in individuals to change behaviour (Hale and Dillard, 1995; Andrews et al., 2016) while other scholars challenged this claim and argued that fear appeal leads to ethical implications and unintended consequences(Guttman and Salmon, 2004; Hastings et al., 2004; Thompson et al., 2009; Haines-Saah et al., 2015; Anker, 2016).

Consequently, several gaps in the literature have been identified with regard to exploring the unintended consequences of GHWs: concerns have been expressed about the ethical considerations of fear appeal in emphasising stigma among smokers (Hastings et al., 2004; Haines-Saah et al., 2015, 2016; Anker, 2016) but none of the studies to date has addressed the unintended consequences of fear appeal on adolescents. Moreover, insufficient attention has been paid to how adolescents relate to and create meaning of GHWs and what factors they consider when being exposed to, and evaluating, GHWs. Also, there is little information about how the process of meaning-creation might lead to unintended consequences. In addition, no research has considered the role of the social and cultural backgrounds of adolescents in their perceptions of GHWs and the way in which the social and cultural context that has an impact on adolescents might contribute to intended or unintended consequences. Studies in health communication and adolescents' health emphasised the role of the social and cultural contexts in influencing the understanding of messages, attitudes and behaviour change (Hurrelmann, 1990; Amos and Bostock, 2006; Haines-Saah et al., 2015). Finally, many studies on GHWs and adolescents "test" the existing or proposed GHWs that are suggested and put by governments and experts. Rarely did the studies explore through participatory approaches adolescents' own perceptions of alternative ways of presenting GHWs and anti-smoking messages.

1.8 Intended contribution

This thesis attempts to make several contributions to knowledge. First, the study intends to address the ethical considerations of GHWs on adolescents, which has not previously been given much attention in the literature. By addressing this gap in the literature, the study aims to contribute to the literature of health communication on reducing the unintended consequences of health interventions.

Second, the study intends to make a theoretical contribution to the theory of semiotics, by adding dimensions that are deemed important to enhance the alignment of the intended

meaning and the perceived meaning of health interventions. The study further attempts to contribute to the body of literature by using the theory of semiotics on how adolescents create meaning of GHWs and adds to the literature the identified factors that they consider when being exposed to and evaluating GHWs. The study adds – to the health communication literature on the effectiveness of GHWs among adolescents – a more complete understanding of the meaning that adolescents associate with GHWs from an individual, social and cultural level through an audience-centred approach. In understanding the process in which adolescents create meaning and relate to GHWs and identifying the dimensions that they perceive as relevant; the study contributes to the literature and practice of the development of health communication.

Furthermore, the study intends to add to the literature on the under-researched area of cross-cultural research to identify the social and cultural aspects that are deemed relevant to adolescents. The study thus highlights the importance of tailoring and adapting health policies to the social and cultural context of the target audience to reduce unintended consequences.

Moreover, the study intends to add to the implications of applying social marketing into health communication in tobacco control and other areas of public health policy. It is the first to go in-depth into GHWs design, content and message framing and how it is incorporated with the cigarette pack. It thus will help enhance the effectiveness of GHWs on cigarette packets and on other health communication products.

Finally, the study intends to suggest alternative ways to provide GHW messages and ways in which to use the cigarette pack, taking an audience-centred approach. It is the first study to explore adolescents' perceptions of alternative ways rather than examine their perceptions (test) on ways suggested by governments and experts in the field. This opens the door to explore a participatory or a co-creation approach in developing health communication and social marketing interventions.

1.9 Thesis structure

In the following three chapters, the background literature for the study and its context are discussed. Chapter 2 provides a comparison of the tobacco policy implementation and research in the UK and Qatar and offers a general background on the context of both countries, in terms of demographics, prevalence of smoking and tobacco control efforts. Chapter 3 sets up the background to the theoretical lens that guides the study and identifies the assumptions and applicability of the theory. Chapter 4 critically reviews the existing

evidence on GHWs by discussing the various ways of measuring their effectiveness and discussing the scholarly debate on the use of fear appeal. The chapter also presents a critical review of the results of the qualitative search of the literature in terms of outcomes of fear and the factors mediating the response by referring to the fear appeal literature more generally and to the GHW literature more specifically, highlighting areas of agreement as well as areas of disagreement in the literature and identifying gaps in the literature.

Chapter 5 introduces the reader to the methodology followed in this thesis. The chapter presents the reasons for choosing a qualitative research design and presents the details and lessons learned from the pilot study. In Section 5.5, the chapter provides details on the "projective technique" of data collection used with adolescents in focus groups and interviews in the study. The chapter then assesses the main study consideration of methods chosen, sampling and ethical considerations. Moreover, the chapter specifies the details of conducting the study from timing, access and recruitment and facilitation of the discussions to recording and transcribing. The chapter ends by discussing the thematic analysis followed in this study and explains the identified codes.

Consequently, the following chapters separately present the main findings and discussion. Chapter 6 reports on the findings of the study. The chapter presents a description of the sample characteristics and then reports on the findings from the study. In this chapter data from the study are reported in three major themes: adolescents' perceptions of GHWs; the factors that were considered relevant to adolescents; and alternative approaches to fear appeal. The chapter presents the similarities and differences in the findings between participants from the UK and those from Qatar. Chapter 7 offers a discussion of the findings and teases out the main ideas by drawing on the semiotics theory and the existing literature. The chapter reflects on the theoretical and empirical contributions of this thesis and responds to the weaknesses of the study.

Finally, Chapter 8 provides a conclusion to the thesis by offering new informed perspectives to the gaps found in the literature. The chapter reflects on the relevance of the thesis and identifies policy implications. The chapter ends with an outlook for establishing implications for future research.

CHAPTER 2: CONTEXT

2.1 Introduction

In this study, I argue that adolescents' perceptions of GHWs do not exist in isolation from their socio-cultural world; this means that the context of the target group of a GHW matters. I thus explore the perception in two different socio-cultural contexts, the UK and Qatar, in order to highlight social and cultural factors that are deemed relevant to the target group, adolescents, in making the meaning of GHWs and engaging with the health message.

The multi-site qualitative study approach allows for a comparison of target group attitudes towards the health warnings in identifying the social and cultural dimensions that shape their perception of GHWs (Brennan et al., 2015; Jenkins et al., 2018). It has been determined that adapting communication strategies to cultural uniqueness is essential to capturing the socio-cultural factors that might contribute to shaping consumer behaviour (Douglas and Craig, 1997). I included two sites for my study, a western country, the UK, and a Middle Eastern country, the State of Qatar. The study will contribute to understanding the similarities and differences in adolescents' perceptions of GHWs, of how they make meaning of the messages and the influence of the different social and cultural contexts on the attitudes of the adolescents in these sites, which, according to Jenkins et al. (2018), can be done through a comparative study that will allow for comparisons across settings.

The aim of this chapter is to provide background information on both study sites and to highlight the way forward in terms of tobacco control policy and GHW policy more specifically in the UK and Qatar.

2.2 General background on Qatar and the UK

In the following sections, the general background of each of the countries, the UK and Qatar are reviewed.

2.2.1 The State of Qatar: general background

According to Maziak and colleagues (2014) in their paper assessing tobacco control in the Arab world, the region is still in the early phases of the smoking epidemic and that smoking related diseases and deaths are expected to increase with the increase in tobacco use. As Maziak et al. (2014) suggest, the region shows similar figures of tobacco use as well as mutual problems. So, some messages learned from Qatar could be adapted to other countries in the Arab region.

The State of Qatar is a country in the Eastern Mediterranean region (WHO EMRO) and a member of the Gulf Cooperation Council (GCC), which is a union of all gulf countries, Saudi Arabia, Qatar, Kuwait, Bahrain, United Arab Emirates and Oman (The Cooperation Council for the Arab States of the Gulf, 2020). The GCC's objective is to strengthen cooperation between member countries in the economic, health, social and other sectors. For example, the GCC health committee meets regularly to discuss health related topics in the GCC countries and would issue recommendations on tobacco control policies for members to discuss within their countries (Hassounah et al., 2014; Raad, 2015).

Qatar is a small country, rich in resources of natural gas and hydrocarbons, which used to be the main source of wealth for the country. The State of Qatar shares similar characteristics with other countries in the GCC, such as language, religion, values, social activities, income levels, etc. Qatar is considered a high-income oil-rich country and according to the World Bank, the poverty level is almost non-existent (World Bank, 2017). Since the oil crisis in 2015, Qatar's priorities and strategies have been shifting to reduce its reliance on oil. Qatar's main language is Arabic, and its main religion is Islam which defines to some extent some of the cultural and social practices in the country. Qatar has a large number of expats of several nationalities, religions and who speak different languages. Arabic and English are the main languages used in educational institutions.

According to the United Nations Development Program (UNDP)'s 2015 report on Qatar's National Health Strategy, Qatar's population has shown a sharp increase in the past 15 years until 2015. Population size almost tripled to reach around 2.6 million in 2017 (World Bank, 2017). The main reason for the rapid population growth in Qatar is expats coming to the country to work. The population in Qatar is relatively young with a median age of 30 years in 2014 and 21 years among Qataris (Ministry of Development Planning and Statistics, 2015).

In Qatar, because of the predominance of a young population, the importance of incorporating youth in decision making and in informing policies is given higher priority. Social media use among youth in Qatar is very prevalent and offers a gateway to providing health intervention and messages. The use of social media and the internet among youth in Qatar is among the highest in the GCC countries (Ministry of Development Planning and Statistics, 2015).

The lifestyle in Qatar is similar to most other GCC countries and because of the high GDP, people in Qatar enjoy a luxurious lifestyle. However, according to the Ministry of

Development Planning and Statistics' (2015) report, these modern life choices are negatively affecting the health and wellbeing of the population in Qatar. The physical environment of the country also plays a role in the activities that people might be involved in. The weather is very hot (temperature easily reaches 42°C) for around five months of the year which makes activities limited to indoor activities during these months. Thus, physical activity rates are low, while diabetes and obesity rates are very high.

2.2.2 United Kingdom: general background

In this section, the economic and political background of the UK is reviewed. The UK is a union of four countries, England, Scotland, Wales and Northern Ireland (The Commonwealth, 2018). It is historically known to be the basis of parliamentary democracy and the industrial revolution. As of 2017, the population in the UK was around 66 million and is expected to grow to more than 70 million by the year 2041 (Office for National Statistics, 2018a; World Bank, 2018). The main revenue of the UK economy is mainly derived from the services sector (Government Office for Science, 2018).

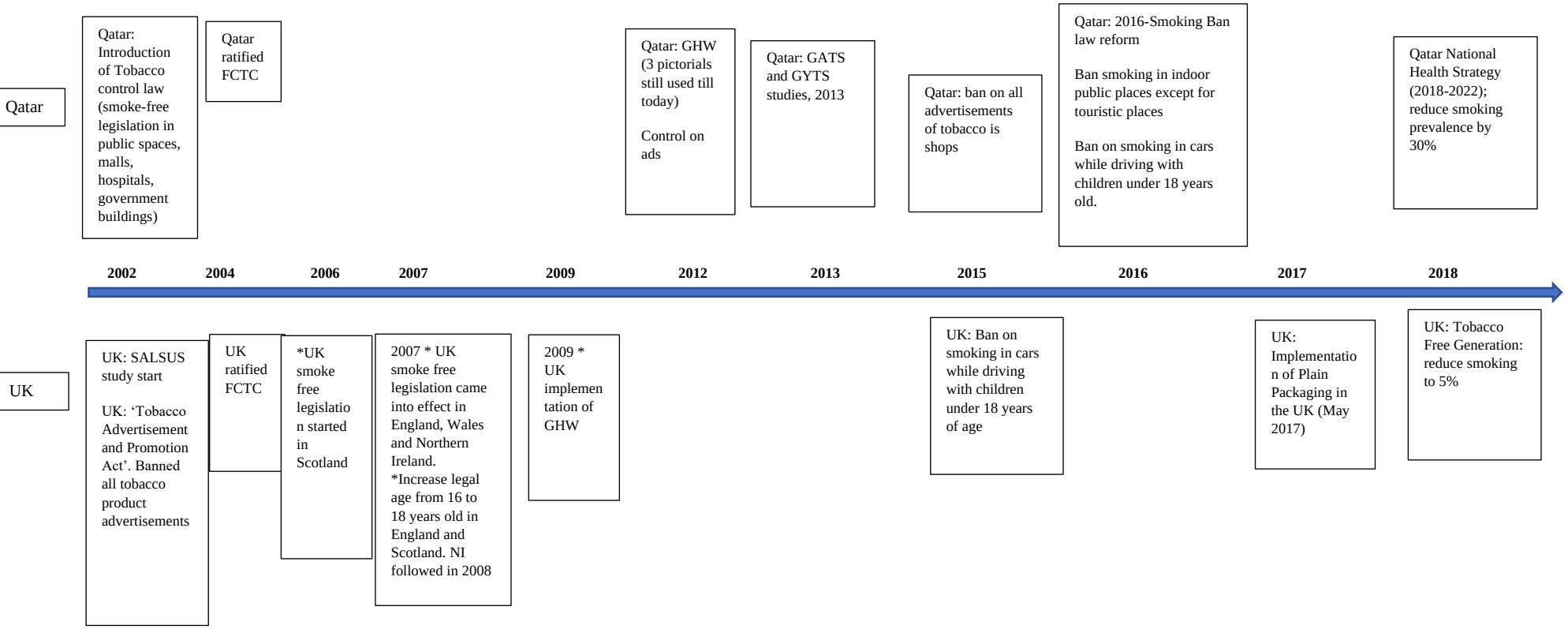
A quarter of the population are of white ethnicity, while the rest of the population consists of Asian and other ethnicities. Moreover, the population in the UK is expected to be an ageing population with around a quarter of the population above 60 years old (Office for National Statistics, 2019).The Royal College of Nursing states that most of the health risk factors in adults are initiated during adolescence, particularly before the age of 18 years (Royal College of Nursing, 2020).

2.3 Comparison in tobacco control policy: the UK and Qatar

In this section, a comparison between the UK and Qatar backgrounds and tobacco control policy is provided. Qatar and the UK are two high-income countries that ratified the FCTC in 2004, and have similar targets to reduce smoking among youth in the near future (e.g. Tobacco Free Generation in the UK and Qatar National Health Strategy in Qatar) (The Scottish Government, 2013; Ministry of Public Health Qatar, 2018a; WHO, 2019a, 2019b).

Figure 1 outlines the timeline of tobacco control policy in both countries.

Figure 1 Tobacco control policy timeline in the UK and Qatar



Source: Various, including The Scottish Government, 2013; Canadian Cancer Society, 2018; Ministry of Public Health Qatar, 2016; WHO, 2019a, 2009b; Drope et al., 2018

The UK and Qatar share some differences on the MPOWER score (Table 1). MPOWER stands for **M**onitoring (availability of surveillance system and data on prevalence), smoking free **P**olicy, **C**essation Program, health **W**arning labels, **M**ass media and Ads bans and finally **R**egulation (Taxation). The UK scores higher on MPOWER measures of tobacco control except in Ad bans where Qatar is doing better (Table 1).

Table 1: MPOWER Comparison between the UK and Qatar

	M	**P**	**O**	**W**		**E**	**R**
	Monitor	Policy (smoke-free)	Cessation Programmes	Health Warnings	Mass Media	Ads	Taxation
UK							
Qatar							

Source: WHO, 2019a, 2019b.

Full Implementation Partial Implementation Weak Implementation

With regards to the Ads section, as per the WHO (2019a, 2019b) reports, the ban seems to be not fully complete in the UK whereas it is in Qatar. The weakness in the UK implementation is in the banning of tobacco products ads. More specifically, the ban on internet sales of tobacco products and the ban on appearance of tobacco products in films, which are not fully met in the UK. Moreover, the WHO, 2019b report shows an incomplete ban on sponsorship and corporate social responsibility acts in the UK.

Moreover, in Qatar, the price of a cigarette pack with 20 cigarettes is QAR10 which is equivalent to GBP 2, whereas in the UK, one pack of cigarettes costs GBP10. Also, in Qatar, alternative tobacco products such as smokeless tobacco and shisha (known as waterpipe) are more prevalent than in the UK, whereas in the UK, electronic cigarettes are more prevalent among youth than in Qatar. In terms of anti-smoking campaigns, unlike the UK, in Qatar, the national anti-tobacco campaigns have been limited between 2014 and 2016 (WHO, 2019a, 2019b).

In terms of GHWs, Table 2 outlines the main similarities and differences between Qatar and the UK:

Table 2: Comparison between the UK and Qatar on GHW policy

Country	UK	State of Qatar
Size	65% of the pack	50% of the pack
Year of Implementation	2009, rotated twice so far	2012 (never rotated)
Language	English	Arabic and English
Number of approved health warnings	42 pictorials: three sets of 14 approved health warnings	3 approved health warnings
Plain packaging	May 2017, standardised packaging implemented fully across UK	not adopted yet

Source: Various, including Tobacco Labelling Resource Centre, 2013; Canadian Cancer Society, 2018; Tobacco Atlas, 2018a,2018b,2018c; Government of UK, 2016; WHO, 2019a, 2019b

Besides, it is noticeable that GHWs in the UK and Qatar share a commonality of being negatively framed and display gruesome images with a text explaining the image. Yet, looking at the GHWs in the UK, these display pictorials that have a physical resemblance (e.g. damaged lungs, damaged teeth; gangrenous foot, etc.). However, in Qatar, the GHWs suggest more hidden meanings (e.g. the skull GHW, which is supposed to represent death). The use of resemblance for GHWs in Qatar could be attributed to the Islamic culture, which does not prefer the use of iconic signs that show physical representations of the body (Allen, 1988).

Qatar ratified the FCTC in 2004 and implemented GHWs in 2012. Four GHWs had been implemented in Qatar since 2012 and were never rotated; one of the GHWs was later placed on waterpipe tobacco products instead of cigarettes (Tobacco Labelling Resource Centre, 2013). The GHWs in Qatar show an abstract depiction of the consequences of smoking (Appendix 1A). Only few studies have investigated the effectiveness of GHWs in the Middle Eastern region (Awaisu et al., 2013; Alaouie et al., 2015; Mansour and Bakhsh, 2017; BinDhim et al., 2018; Jradi and Saddik, 2018) and only one of them has focused on adolescents (Alaouie et al., 2015). Together these studies showed that people in the Middle East region preferred GHWs to only text warnings (Alaouie et al., 2015; Awaisu et al., 2015; Mansour and Bakhsh, 2017; BinDhim et al., 2018; Jradi and Saddik, 2018) and suggest a need for further research on GHWs and policy advancement (Al-Lawati et al., 2017; Jradi and Saddik, 2018).

The UK implemented GHW policy in 2009 and has had two rotations of the warnings so far. A total of 42 pictorials are issued for the latest round of rotations with 3 sets of 14 pictorials each. In May 2017, the UK fully implemented standardised packaging (Tobacco Labelling

Resource Centre, 2013; Canadian Cancer Society, 2018). Several research studies have looked at the effectiveness of GHWs in the UK. Most of the studies showed that GHWs are more effective than text warnings. Haines-Saah et al., (2015), in their content analysis on GHWs, found that the warning labels in the UK displayed the inside of the body (see Appendix 1B).

2.4 The way forward: tobacco control legislation in Qatar and the UK

In this section, I outline the framework of tobacco control legislation in the UK and Qatar as well as provide some information on their set goals for the future in terms of tobacco control.

Qatar launched the National Health strategy 2011–16 and 2018–22 that tackled several health issues such as drinking, obesity, smoking and physical activity. The Tobacco Cessation goal in the National Health Strategy specifies recommendations for tobacco use reduction by 3 per cent in 2030 through several interventions, mass media campaigns and increase in cessation services (Ministry of Public Health Qatar, 2018a). Tobacco Cessation Action Plan 2015–16 also aimed at using the fund from taxation to enhance pictorial health warnings and raise awareness against smoking. Qatar's Ministry of Public Health is working to increase pictorial warnings space and implement standardised packaging (Ministry of Public Health, Qatar, 2018b).

The health committee at the GCC council issues recommendations for member states with regards to tobacco control and other health policies, yet the country decides on issuing regulations based on these recommendations. Qatar is among the top two countries with highest compliance with MPOWER in the GCC. Although not the highest level of compliance is achieved, Qatar, Saudi Arabia and the UAE rank among the highest in the WHO EMRO region in terms of MPOWER efforts for tobacco control (WHO 2017a; Heydari, 2020) (Appendix 2). Tobacco Control is among the 16 main public health areas identified as a priority in the strategy with a focus on cardiovascular diseases, diabetes, maternal and child health, respiratory diseases and more (Ministry of Public Health Qatar, 2018b).

The health policy in Qatar is recognising that preventive care and health awareness to change lifestyle diseases is important and is stated as part of Qatar's vision 2030 (Ministry of Development Planning and Statistics, 2015). Tobacco control was given prominence and highlighted in the country's vision under the Health Section (Ministry of Public Health, Qatar. 2020). In this section, I present an overview on the tobacco control situation in Qatar in terms of existing legislation, the way to move forward and the existing challenges.

The NCD department at the Ministry of Public health in Qatar is also responsible for monitoring progress in terms of tobacco control efforts such as the monitoring of the law enforcement and the implementation of the FCTC. Also, there are several smoking cessation clinics spread over the country in primary healthcare centres and in the main governmental hospital, Hamad Medical Corporation. Recently, smoking cessation services have started to provide more comprehensive care, that of treatment of smoking via medication as well as counselling and focusing on preventive measures especially among adolescents, where many awareness sessions are held in schools (Hamad Medical Corporation, 2018b).

Qatar's tobacco control law no. 20 which came into force in 2002, mandated restrictions on specifications on tar and nicotine content, requirements of text health warnings in the country's language (Arabic), prohibited sales to individuals below 18, prohibited ads and promotion and mandated smoke-free places for indoor public places with exemptions. The exceptions related to shisha cafes and restaurants that obtain licensing. In Qatar, youth under 18 years of age are not permitted to purchase tobacco (Ministry of Public Health Qatar, 2016). Although the WHO benchmark for excise tax is minimum 70 per cent of the retail price of a cigarette, there has been no tobacco excise tax in Qatar as of July 2018. In Qatar the only cigarette tax is on imports and these increased from 20 per cent to 40 per cent between 2016 and 2018 (; Tobacco Atlas, 2018a; WHO, 2019b). Consequently, Qatar was the first country in the EMRO region to sign the FCTC in 2003 and ratify it in 2004. In 2012, the GHW policy was introduced via "Law No. 1 on the Control of Placing Advertisements" by the Ministry of Public Health Qatar. This policy recommended that pictorials be placed on cigarette packs occupying 50 per cent of the cigarette package and the removal of descriptors on cigarette packages (Hassounah et al., 2014).

However, one of the main challenges in Qatar is the increasing prevalence of smoking of cigarettes and shisha among youth. In addition, other tobacco products such as chewing tobacco (*sweika*) and the emergence of electronic cigarettes are becoming popular among adolescents. In Qatar, although the purchase and use of electronic cigarettes is illegal, according to a 2013 WHO survey, around 3 per cent of the total population report to having used e-cigarettes (WHO, 2013a) and there is a concern that it could be a gateway for nicotine use among adolescents (Caruana, 2016). The most crucial challenge in Qatar is enforcement of the smoke-free legislation and progress in the FCTC recommendations, as the country still lags behind the global effort in meeting the WHO FCTC guidelines, yet is still comparable to other countries in the region. GHWs have not been updated since 2012, compromising their effectiveness (WHO, 2017b).

Similarly, the UK is often presented as being far ahead of other EU countries in terms of tobacco control (Joossens, and Raw, 2017). Also, in many areas, the EU can only recommend; member states might not *follow* recommendations. They might develop their own legislation, spurred on by EU recommendations. The EU Tobacco Products Regulation Directive sets recommendations for EU countries on tobacco regulations and specifically on the pictorials of the GHWs (Government of UK, 2016).

As shown in Figure 1, before signing the FCTC, the UK required the ban on tobacco advertisements in 2003 and with the implementation of the FCTC in 2004, all types of tobacco advertisements and promotions were banned. Since then, the UK has set several tobacco control strategies, such as The Health Act 2006, which is a set of guidelines for smoke-free policies and updated the Tobacco Advertising and Promotion Act recommendations that banned tobacco advertisements, promotion and sponsorship (Tobacco Advertising and Promotion Act, 2002). Since 2007, a smoke-free policy has been enforced in Scotland, Wales and England respectively, and the minimum age of purchase of tobacco products for children was raised from 16 to 18 years (Scottish Government, 2013). Consequently, in 2009 the requirement of pictorial warnings followed and in 2011, the ban of tobacco products in vending machines in England, Wales and Scotland took place. After that, the ban on sale displays in supermarkets (2012) and all points of sale (2015) was enforced. Lately, as of May 2017, parliament had signed the plain packaging law and it was expected that all cigarette packages in UK and Northern Ireland would have implemented standardised packages by May 2017 (UK Government, 2016).

The following provides further information on how to move forward on the country's tobacco control plans and reflects on smoking related health inequalities in the UK. The UK is among the countries which have four or more MPOWER measures at the highest level covered to 2007 and has shown improvement in health warnings (WHO, 2019b). Moreover, the UK has been leading in terms of tobacco control. It ranks the highest in the Eurobarometer among European countries and was the first country in Europe to implement standardised packaging (Joossens and Raw, 2017).

In this thesis, I focus on presenting the data on smoking prevalence and the tobacco control efforts of England and Scotland. England and Scotland share a target to achieve smoke-free generations by 2034 and have set objectives starting 2022. Thus, acting upon enhancing tobacco control policies, such as GHWs, could contribute to the efforts of the short-term objectives of achieving the vision of smoke-free generations.

In Scotland, tobacco control policy has been a population health priority for the Scottish Government for the past 20 years. The Tobacco Control Strategy was created by the Scottish government in March 2013 and aims at creating a tobacco-free generation. The strategy states targets to reduce adults smoking prevalence to 5 per cent by 2034. This is planned to be attained by the strategy to create an environment for teenagers in which it is hard to smoke and limiting supply and thus availability for those under 18 (Tobacco Advertising and Promotion Act, 2002; Scottish Statutory Instruments, 2006; The Scottish Government, 2013).

As for England, the government has put a plan in place to achieve a smoke-free generation by 2022. The plan aims to decrease youth smoking to less than 3 per cent and to decrease adult smoking in England to less than 13 per cent. The action plan also aims to decrease the inequality gap in smoking prevalence in the population (UK Government Department of Health, 2017).

However, according to Cancer Research UK (CRUK) report (n.d.), smoking remains the biggest preventable cause of death in the UK. For example, although in Scotland the prevalence of adults and young people who smoke has been decreasing, yet, according to Scottish adult smoking trends (NHS, 2017), data show that Scotland is still off target for 2034, especially among those most deprived (inequalities from smoking). Furthermore, the SALSUS report suggests focusing on and unveiling social contexts of smokers and the meanings of smoking as well as activities that regular adolescent smokers' practice (Scottish Government, 2017).

As smoking remains the single biggest preventable disease, social health inequalities attributed to smoking is an area of concern in the UK. Smoking prevalence in the UK is most common among disadvantaged communities. For example, anti-smoking messages are thought to have high impact on disadvantaged populations if they are tailored to the target group and context sensitive (Amos et al., 2011). This necessitates an approach to message framing and context that are acceptable for the target audience.

On the other hand, vaping among adolescents is a pressing issue in tobacco control in the UK. The data on whether the use of e-cigarettes provides a gateway for adolescents to smoke is still not conclusive. A study by Hilton et al. (2016) states that the flavourings of e-cigarettes and the growing marketing of the product could be encouraging adolescents to experiment and suggests further investigation of the hypothesis that e-cigarettes could prompt more nicotine use among adolescents is recommended. Public Health England and

ASH Scotland identified that e-cigarettes are less harmful than cigarettes and that they should only be used for cessation purposes (Bauld et al., 2014, 2017). However, some studies in the UK indicated that although the prevalence of smoking is decreasing, the use of e-cigarettes especially among adolescents is increasing (Conner et al., 2018). E-cigarettes being a pressing issue might also highlight the need to learn from GHWs on cigarette packages and transfer or adapt them to e-cigarettes when possible.

2.5 Summary

This chapter indicates that smoking in Qatar among youth is on the rise and that it could be that a smoking epidemic is in its early stages as more youth are taking up cigarette smoking. Moreover, it indicates that although the UK has shown declining prevalence of smoking among adults and youth, yet it is still the number one risk factor for mortality in the UK. It also shows that a high percentage of smokers are adolescents who are finding it difficult to quit. The chapter also highlights the history and background of tobacco control legislation in each of the countries and emphasises that both countries have established national goals to reduce smoking prevalence among youth in the future. Thus, indicating that enhancements in tobacco control policy could feed into these goals.

Furthermore, both countries have implemented GHW policy, yet as this thesis aims to understand how to enhance the effectiveness of GHWs, this could be applicable and useful to both countries, knowing that they have national goals to reduce smoking among youth and enhance their implementation of the tobacco control policies, while bearing in mind the importance of lessons learned among countries to enhance policies in place such as tobacco control policies. While countries benchmark best practices of policy implementation, it is also important to ensure the adaptability and contextualisation of this adaptation. Thus, in this thesis, I examine the perceptions of adolescents of GHWs in both countries and the factors that influence their perceptions to unravel specific social and cultural contexts that could matter for health communication and for tailoring GHWs and improving the policy.

CHAPTER 3: SEMIOTICS AS THE GUIDING THEORETICAL FRAMEWORK

3.1 Introduction

The significance of health communication is realised in different aspects of public health such as its influence on quality of life and the prevention of illnesses (Rimal and Lapinski, 2009). Berry (2007), in her book on health communication theories and practices in healthcare settings, argues that health communication is essential and when messages are "effective" could lead to positive health outcomes, yet when ineffective, misunderstood or weak, could lead to unintended consequences. While communication is essential for the meaning of health messages to be understood, and this sometimes could lead to a positive drive in behaviour change, yet, social marketers are often critical of interventions that rely on communications only. As mentioned in the introduction, social marketers often advise that intervention involves more than one principle of the marketing mix (Promotion, Price, Place, Product) (Hastings and Haywood, 1991). Communication is an essential part to change attitudes and behaviour. It has been argued in consumer research literature that consumers' attitudes and behaviours is linked with the meaning they form of the signs they receive (Mick, 1986). The theory of semiotics could help in understanding the meaning of signs. Therefore, in this dissertation, theory of semiotics could assist in understanding the meaning that adolescents create of GHWs, to understand how they make meaning and what factors do they consider during meaning creation.

In this chapter, I provide a rationale for choosing Peirce's semiotics theory as the theoretical lens for the study. I start by explaining why other health communication theories were not deemed suitable to my study and then move on to explain the elements that constitute the triadic relationship of the theory of semiotics. Later in the chapter is an explanation of the applicability of the theory to this thesis and how it helps explore the meaning that adolescents associate with GHWs. I conclude the chapter by providing a critique to the theory and how this research study is responding to it.

3.2 Discussion on the fit of the theoretical framework to the study

In the most basic model, communication is thought to include four dimensions, the sender, the message, the recipient and a channel for the health message, where the message process flows in one direction from the sender to the receiver and through the channel of communication (Adler and Towne, 1978). This relationship is often critiqued for being

simplistic and in a one-way direction. It is argued that the communication relationship is much more complex and dynamic, where the receiver could also be the sender (Rimal and Lapinksi, 2009). Scholars in health communication propose that the message recipient could also be receiving numerous messages at a time, and that these messages might be complementary to one another or conflicting to one another (Mick, 1986; Berry, 2007). Consequently, the receiver is likely to have a more active role than shown in previous health communication models.

The Health Belief Model (HBM) and the Extended Parallel Process Model (EPPM) are widely used theories in health communication and health behaviour as well as in the literature studying the impact and effectiveness of GHWs. Considering HBM for this thesis could have been helpful in examining adolescents' perceptions of GHWs as it is generally used in health communication to predict and understand an individual's decision making of health behaviour. HBM identifies relevant concepts such as perceived susceptibility, perceived benefits, self-efficacy and demographics and personal data to predict the change in behaviour (Rosenstock, 1974). Similarly, EPPM, developed by Witte (1992), could have been helpful in studying adolescents' perceptions of GHWs as it argues that fear appeal could only work if accompanied by messages that enhance efficacy, otherwise fear appeal messages might result in unintended consequences such as avoiding or ignoring the message or rejecting it. Yet, both theories have been critiqued in the literature to provide an approach that emphasises the "rational choice" (Neuhauser and Kreps, 20009; Gehlert and Browne, 2011). It is argued that the underpinning assumption of the theories is that the individual has to react in the rational way and lead to a logical outcome to reduce threat. Gehlert and Browne (2011) claim that such approach gives a lot of emphasis that the individual rationalises in "solitude", independent of the context, which places the individual in a passive role. Similarly, Neuhauser and Kreps (2009) argue that the existing health communication theories do not give sufficient evidence to the social and cultural dimensions of behaviour. The theories tend to be directed in a one-way direction; I argue in this thesis – which I explain further in section 2.3 – that the formation of meaning is rather a dynamic process between the individual, their social and cultural context and the message -not to be simplified as individuals are expected to react in a logical or 'rational' way. Thus, in this thesis, I argue that the individual is rather a social agent who is actively involved in meaning creation. Therefore, it is important to study the meanings that the social agent associates with the message to examine their engagement with it and its effectiveness in changing their attitudes

and behaviour. Consequently, HBM and EPPM are not deemed suitable for the research aim and objectives of this thesis.

Alternatively, the theory of Peirce's semiotics adds something unique that the other theories cannot offer. Semiotics has been used extensively in the field of marketing and linguistics and recognises the role of the individual as an active player in the development of the meaning and thus in the perception of the health message, which I explore further in the next section. Among the main strengths of using Peircan's semiotics as outlined by Mick (1986) are that semiotics reflects interdisciplinarity as it incorporates multiple meanings from different interpreters, and that it provides an in-depth exploration of meaning as the very core of consumer research (Mick, 1986; Ritson and Elliot, 1999).

In marketing research, semiotics has been used to emphasise the personal, social and cultural context of brands such as lifestyles, experiences, social trends and cultural ideologies to develop communication strategies accordingly (AMA, 2015). Similarly, in health communication, concepts of semiotics such as understanding the meaning of the pictorials have been used but not intensively in assessing health messages framing, and without mentioning the framework explicitly (Strahan et al., 2002; Haines-Saah et al., 2015). For instance, Haines-Saah et al. (2015) studied how images are depicted by smokers in a content analysis by studying the visual culture of tobacco control and argued that the effect of the social context might impact how smoking is experienced.

Therefore, I explore adolescents' perceptions of GHWs in this thesis through the lens of semiotics. Peirce's semiotics theory allows me to explore the adolescents' subjective meaning of GHWs, while acknowledging that individuals construct their perceptions and meaning of signs through personal experiences.

3.3 Social agents

Health communication recognises the individual as an active player in the creation of meaning of the health message. As Rimal and Lapinski (2009) postulate:

> Information is received and processed through individual and social prisms that not only determine what people encounter (through processes of selective exposure), but also the meaning that they derive from the communication (known as selective perception), depending upon factors at both the individual (prior experience, efficacy beliefs, knowledge, etc.) and the macro-social (interpersonal relationships, cultural patterns, social norms) levels.

Rimal and Lapinski (2009), argue that an important dimension in health communication is when we recognise the influence of the social world on individuals' perceptions of health communication messages. This perspective contradicts the basic communication model that places the receiver in a passive role. It is argued in the health communication literature that individuals associate a meaning to the message in a dynamic manner, according to societal influences and cultural norms and beliefs (Berry, 2007; Cho, 2011; Davis and Resincow, 2012). According to Davis and Resincow (2012), culture often plays a role in shaping norms, attitudes and beliefs that influence health behaviours and outcomes and that thus, cultural dimensions have to be considered in messages' design. Davis and Resincow (2012) state that the data on differences in perceptions and health behaviours of different population groups indicate that perception of persuasiveness of health messages could vary across cultures. Likewise, Mick, (1986), in his conceptual paper on "consumer research and semiotics" argues that individuals have been placed as passive agents in communication models and theories. He added that their attitude and behaviour is usually studied as predictive and rational. On a similar line of discussion, the literature in public health ethics argues that individuals are "social agents" and rather play an active role in the communication process (Bell et al., 2015; Haines-Saah et al, 2015).

Similarly, in the field of tobacco control research and more specifically in GHWs, Haines-Saah et al. (2016) argue from the perspective of critical social science literature, that tobacco control health interventions have to consider the social and cultural context of the individual which plays a role in their perception and engagement with the message and understand their behaviour beyond the individual and passive level. Haines-Saah and colleagues (2015) argue that focusing on the individual level of analysis only might widen the social inequality gap, thus impacting more the most disadvantaged without equipping them with the needed resources to change their lifestyle to enable them to change their behaviour.

From the lens of theory of semiotics, scholars in social science have argued that semiotics could uncover the socially constructed meaning of signs (Neuhauser and Kreps, 2010). In other words, that by recognising the individual is a social agent and socially construct meaning, the framework of semiotics could help uncover how individuals make meanings of the health messages with their interaction with their surroundings, their belief systems, their social context and their perceptions and attitudes towards themselves and others (Kreps, 2008). An underpinning assumption in the link between semiotics and consumer behaviour

is that individuals are more likely to engage in behaviour which has a symbolic meaning for them; or in other words represents something to them and that they perceive it as relatable to their context (Mick, 1986; Luna and Gupta, 2001). Thus, understanding what is relevant to the target group and the messages that resonate with them can elevate the effectiveness of the health messages such as GHWs, among the target group.

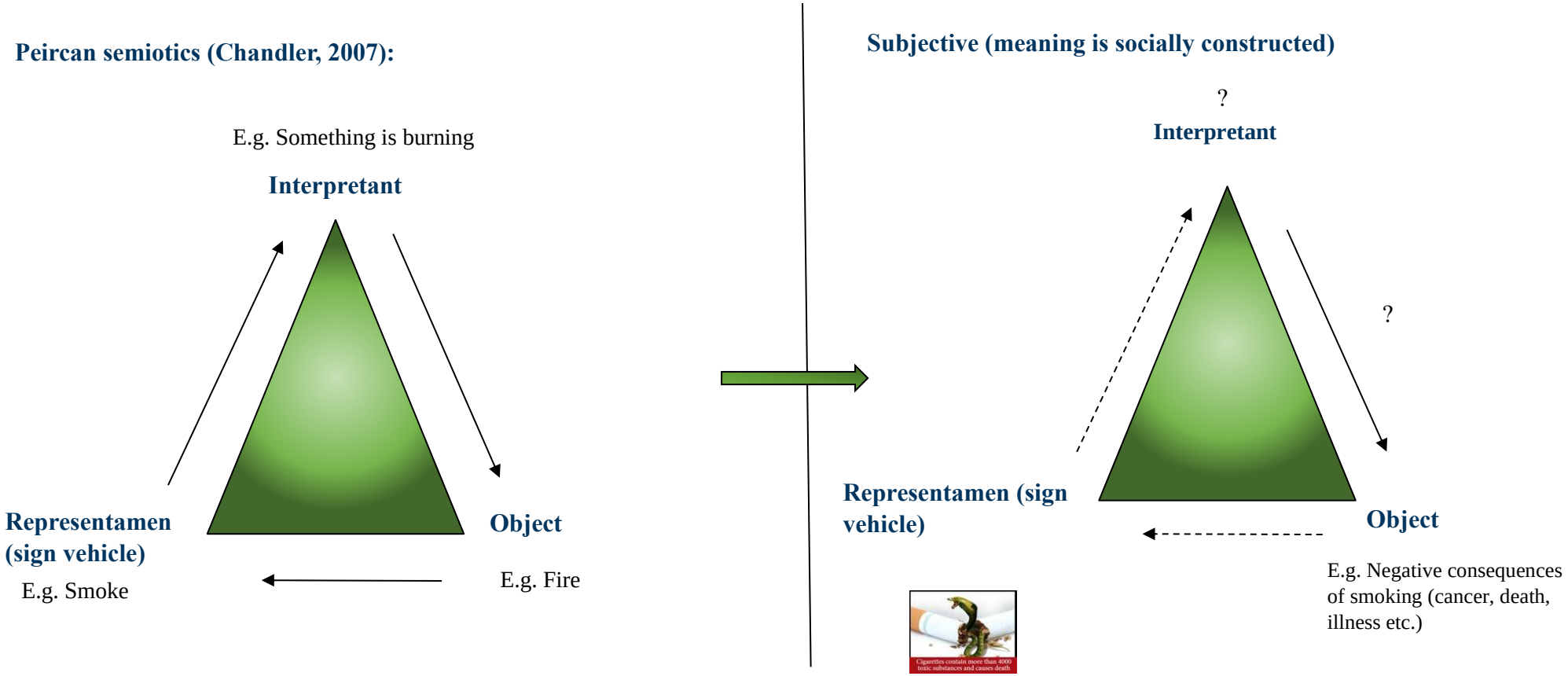
3.4 Peirce's semiotics: a triadic relationship

Charles Peirce defines semiotics as the "study of 'signs'" (Chandler, 2007). A "sign" is "something that stands for something else or somebody in some respect" or to an idea in some respect ("object") (Peirce, 1931–58; Chandler, 2007). This quote means that a sign provides an approach for a type of emblematic communication that is theoretically linked to a perceived meaning in individuals (Ewing et al., 2012).

According to Peirce, a sign constitutes three elements, the *representamen* or *sign* (sign vehicle), the *object* (what the sign resembles) and the *interpretan*t (the explanation). These three elements are connected in a triadic relationship that is illustrated in a triangular visual (as shown in Figure 2). In other words, the representamen is defined as the sign that is being interpreted, the object is the meaning associated with the sign and the interpretant is the subjective meaning given by the interpreter to the sign (Chandler, 2007).

This triadic relation between the sign, object and interpretant requires influence, cooperation or interaction among the three dimensions (Mick, 1986). This assumption brings us back to why semiotics is more suitable to this study than the other health communication theories. One of Peirce's assumptions is that signs have "natural" sign vehicles. He argues that individuals are more likely to "infer" meaning based on sign vehicles (e.g. smoke as a sign of fire-Figure 2). This interpretation is not thought of as being culturally determined; rather this is the same for all cultures.

Figure 2: A triangular visual of the Peircan theory of semiotics (and its applicability to this study



Moreover, Peirce characterised a "sign" based on three main categories which are index, icon and symbol (Mick, 1986). I provide definitions of each of these categories in Table 4. An icon represents the physical semblance between the object and the original figure. An index holds a concealed meaning such as cues. A symbol is a sign which does not exist without the presence of an interpretant, thus identifies the value of being understood to establish its significance (Grayson and Martinec, 2004).

Table 3: Elements of Peirce's semiotics

Concept	**Definition**	**Applicability in my study**
Representamen/ Sign	It is the sign vehicle that is being interpreted (Chandler, 2007)	GHWs on cigarette package are considered a sign or the representamen (i.e. the pictorials/messages on cigarette packages; GHWs)
Object	The intended meaning associated with the sign (Chandler, 2007)	Negative consequences of smoking (e.g. smoking will cause gangrene. Smoking will cause stroke, damaged lungs etc.)
Interpretant	It is the explanation of the sign. In other words, it is the subjective meaning given by the interpreter to the sign; interpreter's response to the sign (Mick, 1986; Chandler, 2007)	The perceived meaning by the target group (i.e. abuse, smoking is bad, smoking is cool, I find this appealing, this is scary, I am disgusted, etc.)

Table 4: Elements of a sign

Concept	Definition	Applicability to GHWs
Index	The sign that communicates cues; or the hidden meaning behind the sign (Mick 1986; Mick et al., 2004)	E.g. GHWs which show the index displaying pictorials such as: the skull GHW, the snake GHW; that hold the hidden meaning of death and poison
Icon	The sign that displays physical resemblance between the original and the "object" (Mick 1986). "Icons, are associated with the phenomenological experience of attending to one's senses and that perceivers must have some pre-existing knowledge or expectations, which create a "composite photograph" in their minds" (Grayson and Martinec, 2004, p. 297).	E.g. GHWs which communicate physical pictorials of the body damage that is similar to the original in reality such as the damaged teeth GHW
Symbol	An acquired "sign" (Mick 1986) (e.g. numbers, traffic light).	The existing GHWs do not seem to display symbols as part of the health message

3.5 Applicability of semiotics to the thesis

Semiotics is defined as the process of developing meaning of signs (Van Leeuwen, 2005; Chandler, 2007) and recognises that signs are an important communication tool (Berry, 2007, p. 27). One of the main aims of semiotics is to uncover meanings, how the meaning of a sign is constructed and reveals the communication strategies that are relevant to a particular social group (Kreps, 2008).

To ground the meanings that adolescents associate with the existing GHWs theoretically, I draw on Peirce's semiotics theory. Drawing on semiotics theory provides a good fit to help us explore the perceived meaning (interpretant) of GHWs and examine whether it aligns with the intended meaning (object) of GHWs. According to Kreps (2008), if the signs (e.g. in this study GHWs) are not understandable or relatable, the target group will not feel motivated to change their attitudes. To elevate the effectiveness of health messages, the literature in social marketing and health communications shows that it is important that the target group shows engagement with the message. This engagement with the message

requires that the message is firstly well understood by the target group and secondly perceived as relevant and relatable by the target group (Neuhauser and Kreps, 2010). Semiotics theory does not only allow for examining the meaning that the target associates with the sign, but also allows for exploration of the perceived meaning within the broader social and cultural context. So, there is a need to study the subjective meanings that adolescents associate with GHWs from a new health communication perspective.

Peirce's semiotics theory assumes that meaning is created in a 'logical and rational' way and that individuals will respond according to "common sense" (Yakin et al., 2014). In the same line of argument, the existing crude GHWs, are designed with an underpinning assumption that individuals will respond in a "rational way" to the threat communicated on the cigarette pack, which is not always the case (Figure 2) (Berry, 2007; Davis and Resincow, 2012; Haines-Saah et al., 2015). However, literature on adolescents and public health ethics suggests the need to examine and identify the aspects within the social and cultural context of the target group that influence their perceptions to help us optimise the engagement with and design of GHWs (Haines-Saah et al., 2015; Nagelhout et al., 2016). Likewise, literature in social marketing and public health ethics critiqued the literature on GHWs policy, in that it framed smoking as an individual risk behaviour isolated from the social and cultural context (Strahan et al., 2002; Guttman and Salmon, 2004; Hastings, 2004; Bell et al., 2015; Haines-Saah et al., 2015). Guttman and Salmon (2004) argue in their paper on the ethical issues of public health programmes that health interventions hold the individuals responsible for their actions without taking into account the social structure they live within.

Using semiotics to understand how the target group makes meaning of GHWs could enhance the alignment of the meaning between the interpretant (perceived meaning) and the object (intended meaning) of the sign (GHW). Therefore, it is important to understand how adolescents construct and attach meaning to GHWs to enhance their comprehension of the message and its relevance to them. The objectives of this study are to explore the meanings that adolescents (interpreters) associate with the representamen/sign (GHWs) and identify whether their perceptions or meanings align with or differ from that intended meaning (object) set by experts and governments. The study also aims to recognise aspects of the social and cultural context that influence their perceptions and unravel alternative methods that could elevate the effectiveness of the GHWs.

Drawing on Peirce's framework (Figure 2), if we take the example of the GHW that displays the image of a snake, the "representamen" or the "sign" is the graphic of the snake and the message underneath it, the "object" is the intended meaning of the sign as assigned by the

experts (i.e. cigarette contains poisonous chemicals), and the "interpretant" is supposed to be the subjective meaning or how different individuals perceive the image differently (e.g. poison, sign of a pharmacy, cool sign). Ideally, the interpretant is aligned with the object, but the problem is that this cannot be assumed because the individual takes an active role and might interpret the representamen in a different way.

By adopting Peirce's semiotic perspective and giving more attention to the mediating role of signs in specific contexts in constructing social realties and attitudes towards GHWs (Chandler, 2007). The theory offers a better understanding of adolescents' perceptions of GHWs and the criteria that influence their comprehension and relevance to the warning which could increase its effectiveness. For these reasons, I use semiotics to examine adolescents' meaning of GHWs and identify potential discrepancies of the intended meaning to consequently unravel the dimensions that need to be considered when designing and developing GHWs for adolescents.

3.6 Critique to Peirce's semiotics

Peirce, a major contributor to the field of semiotics and an American philosopher with a background in natural sciences, adopted a logical approach to meaning creation that is founded on empirical observation to establish meaning (Mick, 1986; Ewing et al., 2012) and also links signs with experiences (Grayson and Martinec, 2004). Peirce's approach has been critiqued that it falls into different epistemological views. Peirce's "views exemplify, on the one hand, Peirce's realism, and on the other, his tenet of fallibility, i.e., that exactitude in science can never be attained" (Mick 1986, p.199). Although Peirce critiqued the unreliability of science occasionally, his approach to signifying signs is perceived to be based in natural sciences (Mick, 1986). Peirce's semiotics was based on an observational predictive principle to understand meanings (Mick, 1986; Yakin et al., 2014). In addition, Peirce's theoretical framework of semiotics has been critiqued to provide infinite possibilities of interpretations and responses as interpreters interpret signs subjectively (Chandler, 2007). Semiotics has been critiqued to be a wide field in which multi-paradigms and methodologies could be implemented, causing it to be slightly unstructured. Yet, this variation might provide flexibility in terms of application of methodologies and paradigms that serve the aim of the research study.

Peirce's realism assumes that the human response and behaviour to the 'sign' is a predictable one (Mick, 1986). However, GHWs are signs, the meaning of which can differ across cultures. Especially among vulnerable populations such as adolescents, whose meanings of

the social world might differ from that of conventional and experts' perspective. Therefore, it is important to distinguish the difference between Peirce's realism and the socially constructed meaning of signs, and this distinction is where the study makes a theoretical contribution. Although Peirce's semiotics theory was developed to explain a type of naturalistic meaning-creation in relation to signs, it is applied in this thesis to understand the nature of certain socially constructed meaning-structures which could add to the explanatory power of the theory.

Nonetheless, in this study, common and recurrent themes from the target group (adolescents) will be an indication of possible relevant messages to that group in that specific context and might help uncover how the social and cultural dimension of those specific adolescents shape their perception of the warning labels.

3.7 Summary

Drawing on Peirce's guiding theoretical framework for this study, I employ a unique perspective to studying a tobacco control policy (GHWs). This framework could help uncover important mediating factors to be taken into consideration when developing tobacco control policies and more generally public health policies for adolescents especially one that it is being studied in two different cultural contexts. This chapter has summarised the main framework and rationale of semiotics and discussed its applicability to the PhD project. The chapter reflects on the importance of understanding the meaning of signs to enhance the alignment between the "interpretant" and the "object". Using Peirce's framework, the study aims to deliver a new perspective to the literature of GHWs and cover some of the literature gaps.

CHAPTER 4: LITERATURE REVIEW

4.1 Introduction

Having discussed Pierce's semiotics theory and its applicability to this thesis, I present in this chapter a review of the evidence on GHWs. I conducted a qualitative search of the literature to explore the available evidence on GHWs and adolescents (see Appendix 3) and identify the existing gaps. In line with the research objectives, this review focuses on exploring the evidence of GHWs' effectiveness and on identifying the gaps in the literature. Consequently, I draw both on evidence from GHWs literature, specifically and on fear appeal relevant literature, more generally to capture evidence on understanding the effectiveness of GHWs.

In this chapter, I first discus the main shortcomings of the available evidence on GHWs and fear appeal health communication which shows various ways of measuring "effectiveness". Next, I discuss the scholarly debate on the use of fear appeal and present the arguments against the use of fear appeal from an ethical standpoint. Then, I present existing evidence in the literature that identifies the intended and unintended outcomes of GHWs more specifically and fear appeal more generally. Subsequently, I highlight the evidence on GHWs that suggests that different groups and subgroups of the population react differently to GHWs and identify adolescents as the target group for this study. Finally, I review the existing evidence in GHWs and fear appeal literature on the mediating factors that play a role in shaping reactions such as message characteristics and social and cultural factors. At the end of the chapter, I identify gaps in the literature by stating the three main research questions which my study will focus on answering.

4.2 Effectiveness: various ways of measuring

Scholars such as Hastings and colleagues (2004), in their conceptual paper on the ethics of using fear appeal in social marketing, argue that the existing fear appeal literature does not have a unified definition of the "effectiveness" of the health message. They claim that the various definitions justify the inconclusive evidence on the effectiveness of using fear appeal in social marketing campaigns and interventions. Furthermore, when examining the specific literature that studies the effectiveness of GHWs, a similar limitation is noticed. The available evidence on the literature from GHWs shows that there are various ways of measuring the effectiveness of GHWs as well as some methodological shortcomings in the existing literature.

The academic literature that studied the impact of GHWs on adolescents has revealed that the term "effectiveness" appears to be defined differently. Some authors have mainly been interested in questions concerning the effectiveness of GHWs on adolescents' increased recognition of, and attention to, the GHWs (White et al., 2008, 2015; Awais et al., 2013; Hammond et al., 2013, Moodie et al., 2015; Peebles et al., 2016; Jradi and Saddik, 2018). Others have assessed the effectiveness of GHWs in provoking negative emotions and increasing awareness of perceived harm (Andrews et al., 2014, 2016; Nonnemaker et al., 2015; Adebiyi et al., 2016; Netemeyer et al., 2016; Peebles et al., 2016; Wolf et al., 2016; Bekalu et al, 2019; Drovandi et al., 2019b), or in increasing negative perceptions of the cigarette pack (White et al., 2015), increasing cognitive processing (Goodall and Appiah, 2008; White et al., 2008, 2015; Sabbane et al., 2009; Anderws et al., 2014, 2016; Alaouie et al., 2015; Bekalu et al., 2019); finally, three studies examined the effectiveness of GHWs on adolescents' likelihood of quitting, the emergence of thoughts of quitting and actual changes in behaviour (Goodall and Appiah, 2008; Andrews et al., 2016; Bekalu et al., 2019). This difference in definitions and lack of agreement on what aspects "effectiveness" GHWs aim at, might have contributed to the ethical debate on the effectiveness of GHWs. Thus, in this thesis, I aim to understand what constitutes the effectiveness of GHWs.

In addition to the conceptual limitations of the evidence, certain methodological shortcomings in existing studies of GHWs have been identified. A considerable amount of literature has been published on GHWs and adolescents with most of the studies being quantitative. Thus, predominantly the available literature offers one standpoint on the topic. Quantitative studies rely on pre-coded responses, and it is argued that this might narrow the chance for these studies to understand the subjective meanings and experiences of the target group (Corbin and Strauss, 2008; Berg and Lune, 2014). Denzin and Lincoln (1994, p. 40) state that quantitative questioning of a situation might narrow the complexity of the problem being examined as well as simplify the complexity of the target group's world. Furthermore, the evidence on effectiveness of GHWs predominantly used experimental designs and online surveys (Goodall and Appiah., 2008; Hammond et al., 2009; Moodie et al., 2009; Sabbane et al., 2009; Vardavas et al., 2009; Pepper et al., 2013; Alaouie et al., 2015; Andrews et al., 2014; White et al., 2015; Adebiyi et al., 2016; McQueen et al., 2016; Netemeyer et al., 2016; Drovandi et al., 2018) that indicate certain limitations. One of the main limitations of online experimental studies is argued to be its potential for participant fraud through online platforms, especially when the target audience is adolescents. Moreover, online surveys are limited in terms of ensuring question comprehension in participants, unlike a face-to-face

interaction where a participant could clarify a meaning of a question from the researcher (Crump et al., 2013).

I underline the above conceptual and methodological issues with the existing evidence, not to neglect the available evidence on GHWs, but to emphasise that what we know about GHWs effectiveness and adolescents is largely based on quantitative studies that share a comparable epistemological stance. In this thesis, I explore the effectiveness of GHWs from adolescents' perspective using a qualitative approach, thus offering a different perspective on the topic.

4.3 Fear appeal use

Historically, there has been existing ethical scholarly debate in the literature on the use of fear appeal in health communication. The disagreement focuses around the effectiveness of fear appeal in changing attitudes, and the justification of the benefits of fear appeal interventions versus its unintended consequences. I present in the following section supportive evidence for using fear appeal and the general critique in terms of ethical implications of fear and its unintended consequences.

4.3.1 Rationale of using fear appeal

The literature whose data point to supporting evidence of fear appeal claims that fear appeal creates a motivation in the target group to change their behaviour and suggests that unintended consequences have to be tolerated because shock tactics increases the salience of health messages (Rogers and Deckner, 1975; Hale and Dillard, 1995). Hale and Dillard (1995), in their chapter in the book *Health Communication: Theory and Practice* (Berry, 2007, p. 109), argue that effective health interventions were those that used high levels of fear that evoked high threat levels, which they not only claimed to be effective in disseminating health knowledge, but also to have persuasive power. Likewise, Rogers and Deckner (1975) in their study on the effects of the emotional appeal of fear on smoking postulate that fear appeal motivates intentions to quit and that it increases the self-efficacy among individuals to quit smoking. They argue that the higher the level of fear produces the intended effects in attitude change and are considered more persuasive.

Moreover, Self and Rogers (1990) advocate for the effectiveness of fear appeal in changing behaviour. They argue that fear appeal increases the perceived threat and perceived efficacy in individuals which motivates them to change their behaviour confidently. In the same vein, Sutton (1992) refutes the arguments that fear appeal leads to unintended consequences, and argues that fear appeal messages lead to behaviour change when the message that is

communicated is clear to the target audience and when it is complemented by messages that increase self-efficacy and enable individuals to make the change.

4.3.2 General critique in terms of ethics of using fear appeal

On the other hand, some scholars argue against the use of fear appeal because of unintended consequences of fear and its ethical implications. For instance, Hastings et al. (2004) highlight that the use of fear appeal might lead to ethical implications such as increasing levels of anxiety and dissonance among the target group. Hastings and colleagues (2004) also postulate that fear emphasises stigma, especially among the most vulnerable population such as women, adolescents and people of lower socio-economic status, which might widen the social inequity gap. Similarly, Guttman and Salmon (2004) argue that existing public health initiatives hold ethical concerns with regards to using shock tactics and the use of exaggerated messages that might lead to negative emotional responses and to the feeling of blame. Moreover, authors argue that the way public health messages are formed imply that the assumption followed is that there is a causal relation between the accountability of a person's actions and their health outcome. They problematise this assumption and postulate that this framing of health messages is ethically concerning because the social and cultural resources and context of individuals are not considered when examining their behaviour. They claim that the sociocultural context might have an impact in influencing individuals' behaviour and if not taken into consideration, the analysis of a behaviour is simplified.

In the same line of argument, scholars such as Haines-Saah et al. (2015) and Anker (2016) raised the concerns of ethical implications (e.g. stigma and stereotype) of GHWs. For instance, Haines-Saah et al. (2015) in their qualitative content analysis on GHWs, challenge the widely held view that existing GHWs work and argue that they lead to ethical implications such as stigma and stereotypes. Similarly, Anker (2016), in his conceptual paper analysing the paternalistic justification of GHWs from the standpoint of public health ethics, claims that GHWs are paternalistic, which is another ethical implication of GHWs that challenges their effectiveness. Anker claims that the use of fear in GHWs diminishes the "freedom of choice" for individuals by exposing them to gruesome images without their permission.

Moreover, there is evidence which argues that the consequences of the use of fear appeal outweighs its benefits and that fear appeal is not considered defensible (Janis and Feshbach, 1953; Leventhal, 1970; Witte, 1992; Maibach and Parrott, 1995; Hill et al., 1998; Hastings et al., 2004; Ruiter and Kok, 2005; Haines-Saah et al., 2015). For instance, EPPM which

predicts behavioural outcomes of health interventions that use fear appeal proposes that when the feeling of perceived threat outweighs the perceived efficacy an individual is more likely to fall into defensive mechanisms and reject the message (Witte, 1992). A "defensive avoidance [defined as] is the tendency to ignore or deny the negative consequences depicted in the message" (Maibach and Parrott, 1995, p. 67). This is further supported by the literature in psychology which argues that anger might lead to negative consequences and to defensive reactions (Ruiter et al., 2001). Consequently, there is argument for evidence that fear appeal might lead to unintended consequences, with possible counterproductive effects on smoking behaviour.

Furthermore, scholars highlight the potential unintended consequences of fear appeal and propose the need to explore this further and explore alternatives that could reduce those consequences (Witte, 1992; Stewart and Martin, 1994; Hastings et al., 2004; Baldwin et al., 2006; Haines-Saah et al., 2015). Baldwin et al. (2006) argue that feelings of shame and guilt are not justifiable as they could impede self-efficacy which is an important predictor of behaviour change. The unintended consequences of fear appeal highlighted in the literature are disengagement with the message because of communicating the long-term health consequences of smoking; ethical considerations such as increased stigma among users (Hastings et al., 2004; Haines-Saah et al., 2015); defensive mechanisms such as ignoring the GHWs; and impeding self-efficacy, an important predictor of behaviour change (Witte, 1992; Guttman and Salmon, 2004; Hastings et al, 2004; Baldwin et al., 2006; Thompson et al., 2009; Bell et al., 2010; Peters et al., 2013). Anker (2016) suggests that health interventions should not lead to unintended consequences and that rather they should aim to reduce them.

Hastings et al. (2000), in their article on "The broader potential of social marketing" postulate that social marketing interventions have to consider the influence of social and cultural worlds, or what they call "upstream influences" to steer clear of ethical considerations that may result from health interventions (for example, ethical considerations of using fear appeal). Moreover, Hastings and Haywood (1991) argue that cultural context should influence the development of health messages content and might affect the way the target audience perceives and engages with these messages. These insights have been important in the scenario of this thesis for two main reasons. First, it is surprising to see that the importance of social and cultural factors has been stressed upon in social marketing literature as well as in health communication literature, yet they have not been examined in depth in relation to GHWs. The factors or aspects of social and cultural contexts that need

to be considered to enhance the engagement of the target group with GHWs has been rarely examined, a gap that this thesis aims to cover. Second is the stress on ethical considerations that has been highlighted in the literature of social marketing and public health ethics on the use of fear appeal and GHWs. Literature on GHWs that covered ethical considerations was Haines-Saah et al. (2015, 2016) and Bell et al. (2015) and that was on studies with adults. Up to this point, none of the literature on GHWs and adolescents has examined ethical concerns that could be held from GHWs.

While there is a school of thought that justifies the use of negative emotions to motivate behaviour change, it is important not to neglect the unintended consequences of provoking negative emotions, especially on a vulnerable target group like adolescents. Previous studies of GHWs have not dealt with the ethical implications of evoking negative emotions among adolescents.

4.4 Outcomes

In the following subsections, I explore the available evidence of the various outcomes from GHWs and fear appeal health communication by drawing on the literature of GHWs more specifically as well as fear appeal literature more generally. There is consensus in the evidence that shows that the intended outcomes of GHWs more specifically and fear appeal more generally are increasing attention to and awareness of the health message and triggering an emotional response from the health message. However, the literature also indicates unintended attitudinal outcomes such as avoidance of and rebellion against the health message. Moreover, some studies have reported that self-efficacy plays an intermediary role to behaviour change and that it is important for health messages to aim to increase self-efficacy to enhance the effectiveness of the message. Finally, the literature that claims a behavioural change outcome is critically reviewed.

4.4.1 Attention, awareness and cognitive processing increase

Previous research has established that GHWs are more effective compared to text only warning labels, and that they are effective in increasing awareness of, and attention to, the health effects of smoking among adolescents (White et al., 2008, 2015; Hammond et al., 2009; Moodie et al., 2015; Peebles et al., 2016; Peters et al., 2016) and among adults (Fong et al., 2010; Jradi and Saddik, 2018; van Mourik et al., 2020).

Hammond and colleagues (2009) conducted an online survey among adolescents (11–17 years) (n=806) and adults (n= 516) in the UK and examined consumer perceptions of cigarette packs. The study measured smoking status, intention to quit, number of cigarettes

consumed per day and youth susceptibility to smoke. The study results indicated that youth smokers were more likely to *notice* pictorials than text only warnings. Similarly, Peebles et al. (2016) conducted a quantitative study on adolescents (13–17 years) in the US and examined adolescents' reactions (attitudes and beliefs) and social interactions to GHWs compared to text warnings over a period of one month and collected data on recall and attention. The data reported that GHWs caused higher recognition and stronger negative emotional response and triggered more conversations than text only warnings.

Despite the evidence that fear appeal increases attention to and awareness of the message, White et al.'s (2015) study findings indicate that the cognitive processing of the message could wear out with time, thereby indicating that an increase in cognitive processing does not necessarily lead to further positive outcomes or to mean that the GHWs are effective in changing smoking behaviours. White et al. (2008) conducted a school-based survey in Australia and examined the impact of GHWs advertising on adolescents (12–17 years) in 2005 (n= 2,432) and 2006 (n=2,050) smoking uptake stages; before and after Australia implemented GHWs in 2006. The study measured smoking uptake stage, intention to smoke, reported exposure to cigarette packs, knowledge of health effects of smoking, cognitive processing of warning labels and perceptions of GHWs at baseline in 2005 and post advertising for GHWs in 2006. The study showed that GHWs were seen and brought to adolescents' attention and that GHWs initiated discussions about the content of the warnings and increased cognitive processing such as thoughts of quitting. Moreover, the study recommended the use of fear appeal claiming that GHWs that evoke negative emotions reduce the attractiveness of the GHWs and thus make them more salient. Contrary to the study recommendations, a follow up on the same study in Australia in 2008 and 2011 rather showed an overall *decline in the cognitive processing* of GHWs (White et al., 2015). The 2015 cross-sectional school-based survey on adolescents (13–17 years) in Australia, 2005 (n=2,560), 2006 (n= 1,306), 2008 (n=2,303), 2011 (n= 2,716) examined the long-term impact of GHWs on adolescents' cognitive processing of GHWs perceptions and showed that the cognitive processing of GHWs rather decreased from years 2005 to 2011. The decline in cognitive processing through the years was attributed by the authors to the need for a rotation of GHWs. While this could be true, yet it could also indicate the short-term effects of shock on cognitive processing which is an essential prerequisite for a motivational change in attitude.

Overall, the above-mentioned studies indicate that GHWs increase attention and awareness to health effects of smoking and evoke negative emotions among adolescents. Yet it also

emphasises the need to rotate GHWs as the effect of shock might not last for long. Moreover, the evidence seems to be based on a majority of laboratory and online studies (Hammond et al., 2009; Pepper et al., 2013; Peebles et al., 2016), thus providing one perspective on the effectiveness of GHWs in increasing cognitive processing on a longer period of time.

4.4.2 Emotions

Moreover, evidence on GHWs showed that it could increase a range of negative emotions such as fear, disgust, anger, sadness, shock and guilt in adolescents and adults (Andrews et al, 2014; Netemeyer et al., 2015; Nonnemaker et al 2016; Adebiyi et al., 2016; Peebles et al., 2016;Wolf et al., 2016; Bekalu et al., 2019; Drovandi et al., 2019b). It is also claimed that the negative emotional response increases the intention to and motivation to quit (Andrews et al., 2014; Netemeyer et al., 2015; Nonnemaker et al 2015; Adebiyi et al., 2016; Peebles et al., 2016; Wolf et al., 2016).

Drovandi et al. (2019b), in their systematic review which examined adolescents' perceptions of GHWs, indicated that GHWs increased emotional responses such as anxiety, guilt and fear among adolescents. Furthermore, Netemeyer and colleagues (2016) conducted a quantitative experiment on adolescents (13–18 years) in the US (n=349) and examined the effects of GHWs on a broader array of emotions such as fear, guilt and disgust. The results of the study showed that higher levels of fear made smoker adolescents feel more guilty than non-smoker adolescents. Likewise, Wolf et al. (2016) conducted a web-based experiment and explored the impact of GHWs that display physical harm images on American Indian vs Alaska Native adolescents (13–17 years), young adults and adults in the US (N=1,571). The results of the study indicated that emotions such as anger and sadness were provoked as a result of the GHWs among youth. It also showed that disgust was more common among youth rather than adults, but the study results showed no difference between the two communities.

Considering the above-mentioned studies, it could be noticed that GHWs produce negative emotional responses while leaving the question of the effect of negative emotions on behavioural change unanswered. Moreover, the above review of studies indicates that there has been a difference noticed between different population groups such as smoker adolescents and non-smoker adolescents and between youth perceptions and that of adults. In addition, it is noticed that the studies make no attempt to explore the ethical implications of GHWs from evoking negative emotions among adolescents. Consequently, a more comprehensive study would have explored in further depth the factors that influenced these differences.

4.4.3 Avoidance

On the other hand, the literature on GHWs indicated unintended outcomes such as avoiding, ignoring or hiding the GHWs (Moodie et al., 2015; Hardcastle et al., 2016; Nagelhout et al., 2016; Drovandi et al., 2019b; van Mourik et al., 2020). A qualitative study conducted by Hardcastle et al. (2016) examined the attitudes of smokers (n=160) who reported maladaptive responses to GHWs such as attitudes of avoidance, of covering or hiding the GHWs. Likewise, Moodie and colleagues (2015) conducted a cross-sectional follow up survey among adolescents (11–16 years) in the UK, in 2008 (n=1,401) and 2011 (n= 1,373). The study analysed data from two waves of the Youth Tobacco Policy Survey which consisted of household interviews and self-completion questionnaires: three years post-implementation of GHWs to assess the impact of EU warnings on salience, comprehension and credibility, recall persuasiveness and behavioural indicators. Between 2008 and 2011, the sample showed an increase in avoiding GHWs. In addition, the data reported did not show a significant increase in salience of the warnings and no overall change in the comprehension, depth of processing and persuasiveness of GHWs among adolescents in the UK. The authors attributed these results to lack of rotation of the warnings during that period. They also argued that avoiding GHWs is a positive outcome since GHWs seem to be provoking a defence from the target group. While avoiding GHWs could be a coping mechanism, it could be argued that avoidance of the warning label defies the purpose of the message to be noticed. Avoiding or ignoring the GHW message could undermine engagement of the individual with the message.

4.4.4 Rebellion

The use of fear and shock tactics in health communication has been critiqued in the literature for ethical considerations. Other than emphasising stigma, some authors have raised concerns that fear in health communication might be perceived as paternalistic and authoritative, which in turn could lead to dissonance and rebellion (Guttman and Salmon, 2004; Anker, 2016). Peattie (2007) argues that the paternalistic approach might trigger rebellion among adolescents.

In the same line of discussion, the literature in adolescents' health and health communication argues the importance of enhancing self-efficacy among individuals, especially adolescents, to avoid unintended consequences from fear appeal. Hurrelmann (1990) claims that adolescents' perception of divergence between the required action and their own skills or competency might trigger them to develop coping strategies, which are usually unintended

outcomes. In addition, Witte (1992), the scholar who developed the EPPM, argues that fear could create dissonance among individuals' beliefs which might lead to undermining validity of the information and rejection of the message. Witte (1992) suggests that when the feelings of perceived threat outweigh perceived efficacy, the individual is then more likely to fall into the "boomerang effect" and thus reject the message. A boomerang effect implies that individuals react with opposing behaviour to what is stated on the warning message (Witte, 1992).

Moreover, health communication and consumer behaviour literature argue that messages that are perceived as demanding a certain behaviour or response are more likely to be perceived negatively by individuals since they feel it limits their freedom of choice (Stewart and Martin, 1994; Maibach and Parrott, 1995).

Subsequently, it has been suggested by Hastings et al. (2004) and Anker (2016) that to avoid rebellion and a perception of patronising communication, alternative ways of communicating the anti-smoking messages could reduce the unintended consequences. Examples of the alternative ways that were mentioned were the use of humour and positively framed messages.

4.4.5 Reduce self-efficacy

Bandura (1986, p. 94) defines perceived self-efficacy as "people's judgments of their capabilities to organise and execute courses of action required to attain designated types of performances. It is concerned not with skills one has but with judgments of what one can do with whatever skills one possesses". The literature in social marketing and health behaviour has emphasised the role of self-efficacy as a mediating factor to behaviour change (Bandura, 1986; Witte, 1992; Hastings et al., 2004; Thompson et al., 2009) and indicated that a lack of it might interfere with the behavioural outcomes (Baldwin et al., 2006). One of the alternatives suggested is positively framed messages that enhance self-efficacy. It is also believed that the higher the self-efficacy is in individuals, the stronger the engagement with the intended behaviour (Witte, 1992). It is argued that self-efficacy empowers individuals to take responsibility over their actions and this sense of responsibility is claimed to be associated with the intended engagement with a health message (Baldwin et al., 2006; Thompson et al., 2009).

Negative emotions, such as fear, shame and guilt are believed to interfere with self-efficacy and thus might lead to unintended consequences (Baldwin et al., 2006; Popova, 2012). Despite the fact that there are some different perspectives in assessing GHWs on cigarette

packets, the fact that these warnings should be comprehensive and enhance self-efficacy are crucial basic points for effective health warning labels. Some studies on GHWs showed that GHWs did not increase self-efficacy among individuals (Noar et al., 2016; van Mourik et al., 2020). For example, van Mourik et al. (2020) conducted a recent longitudinal study, using data from the International Tobacco Control Policy Evaluation Project (ITC). The ITC survey collects data from several countries on tobacco use measures stated in the FCTC and their impact on behavioural change (https://itcproject.org/about/). The study examined the impact of pictorial warnings among adult smokers in Canada, the Netherlands, the UK, Australia and the US, and showed a difference in the outcomes of individuals among these countries. Dutch smokers did not show an increase in self-efficacy or their intentions to quit. The results also reported that Dutch smokers showed no change in their smoking attitudes as a result of the warnings. Noar et al. (2016) and van Mourik et al. (2020) highlight the increasing interest in exploring the level of self-efficacy in GHWs. Yet, the papers make no attempt to explain the underlying causes or connections between the characteristics of the GHWs messages and the low self-efficacy levels reported in the data. Moreover, van Mourik et al. (2020) do not assess the differences for the reasons why Dutch smokers showed contrasting results from individuals from other countries.

There is not enough evidence in the literature supportive of gain-framed messages of cessation. Yet, the literature indicates smokers' preference for including material in GHWs on advice and benefits of quitting smoking (Gallopel-Morvan, et al. 2011; Hammond, 2011). Consequently, studies on fear appeal in health communication highlight the importance of enhancing self-efficacy in health interventions, especially among adolescents. However, only one study in the literature explored the difference in effectiveness of positively framed messages and fear appeal messages in GHWs among adolescents (Goodall and Appiah, 2008).

4.4.6 Intentions and thoughts of quitting

Some of the evidence available on the effectiveness of GHWs measures it in terms of increasing the intention to quit. Andrews et al. (2016) conducted an online survey of adolescents (n=1,066) and studied the effect of plain packaging and GHWs in three countries, the US, France and Spain. They measured the effect of GHWs and plain packaging on cigarette craving, evoked fear, pack feelings and quitting thoughts. The results indicated that the GHWs reduced cigarette cravings and increased thoughts of quitting. However, it showed that smokers showed fewer positive results with thoughts of quitting. Moreover, participants from France showed less evoked fear than participants from Spain and the US.

The authors recommended the use of negative images that evoke strong negative emotions. The study is interesting in the way it shows the differences in perceptions among smokers and non-smokers and among adolescents from different countries.

On the other hand, a recent longitudinal study by Bekalu et al. (2019) reports that a change in an individual's thoughts of quitting might not necessarily lead to a behavioural change. The study was conducted among smokers in the Massachusetts population in the US (n=1,200) and investigated the effectiveness of negatively framed GHWs causing high arousal on thoughts of quitting and quitting in follow up. The study findings reported that even though thoughts of quitting were significantly higher among those exposed to high arousal messages than among those who were exposed to lower arousal warnings, yet there was no association with quit attempts at follow up (Bekalu et al., 2019). The authors concluded that high arousal negatively framed GHWs do not necessarily lead to a change in smoking behaviour. Thus, higher positive intentions are not always translated to intended behavioural outcome. Subsequently, the authors concluded that GHWs evoke negative emotions and increase attention to them and that these criteria are not enough to conclude that the existing GHWs are effective in motivating behavioural change among adolescents. In the same way, Drovandi et al. (2018) indicate that GHWs were ineffective in increasing quit attempts in smokers. Results from a survey that was conducted among adolescents (15–18 years) in Australia, using an online survey (n=150) while assessing GHWs' effectiveness on a five-point Likert scale suggested that the existing GHWs were perceived as ineffective in triggering quitting among smokers because they were reported as irrelevant.

Also, the majority of the studies that studied intentions and thoughts of quitting from GHWs relied on online experimental designs, thus showing one side of the story. Only one study was a longitudinal one (Bekalu et al., 2019).

4.4.7 Behaviour change and preventing smoking initiation

The results of some studies from the existing evidence on GHWs claim that they increase quitting among smokers and prevent smoking initiation among non-smokers.

For instance, Nonnemaker et al. (2015) conducted an experimental study that examined reactions (attitudes, beliefs and intentions to quit smoking) to GHWs among adolescents (13–17 years), young adults (18–25 years) and adults (25+ years) in the US. The experimental group was exposed to GHWs, and the control group to text only warnings. The study showed that GHWs evoked negative emotions and high cognitive processing among different age groups. Yet, adolescents, unlike adults and young adults, did not show a

significant change in smoking beliefs. Moreover, adolescents who were males, of "white" ethnicity and those who were smokers reported lower scores in quitting compared to other groups. The strength of this study is highlighting the differences in perceptions among participants of different groups (age, smoking status, gender and probable ethnicity). Consequently, it could be argued that these criteria might act as moderators in shaping the perception of GHWs.

Other studies like Vardavas et al. (2009) and Adebiyi et al. (2016) concluded that GHWs prevent smoking initiation among adolescents. Vardavas and colleagues (2009) conducted a quantitative study of non-smoker adolescents (13–18 years) (n=574) in Greece. They studied the effectiveness of GHWs compared to text only warnings in preventing them from smoking through rating their answers to a questionnaire on a 5-point Likert scale. Greece did not have GHWs at that time, so the study was based on the proposed European Union (EU) GHWs. The study results reported that non-smoker adolescents ranked GHWs as more effective in preventing them from smoking than text only warnings.

On the other hand, Awaisu et al. (2013) examined the introduction of GHW legislation in Qatar in 2012 compared to text warnings, through evaluating individuals' awareness and perceptions of GHWs. Awaisu and colleagues conducted a survey of 500 adults in Qatar, a majority of which were males. The study results showed that more than 15 per cent of the participants, a majority of which were smokers, perceived the GHWs as ineffective in changing smoking behaviour. The study calls for more research on understanding the effectiveness of GHWs in the Middle East region, where it is still in its earlier stages.

Despite the lack of evidence on the causal chain leading from fear appeal to behaviour change, a problem that is not specific to GHW messages but poses a problem for any research that tries to establish a causal argument, it could be argued that the evidence on GHWs fall into the theoretical problem of the attitude behaviour gap highlighted in the fields of social psychology and ethical consumption (Shaw et al., 2016). Critics such as Haines-Saah et al. (2015) in their content analysis of existing GHWs problematise some of the literature on GHWs which according to the authors seems to be built on the assumption that over time the negative emotional response from GHWs influence intentions to quit and consequently lead to a change in behaviour among individuals.

In this thesis, the main objective is to understand GHWs' effectiveness among adolescents through exploring adolescents' perceptions and meanings of existing GHWs and how they react to them. This thesis does not intend to establish a causal relation between the

effectiveness of GHWs on changing behaviour. This is not possible given the relatively short time frame of the thesis, which does not allow for a longitudinal study.

Together, the above section on the literature discussing outcomes of GHWs indicates that GHWs are shown to be effective in increasing attention to and awareness of smoking health consequences. Moreover, GHW literature shows their influence on increasing negative emotions, yet that negative emotional response might lead to unintended outcomes such as avoiding the message, rebellion and reducing self-efficacy which is an important dimension for behaviour change. The literature also concludes that while studies' results on GHW effectiveness in increasing intentions to quit and quitting attempts, the causal evidence between fear appeal and behavioural change is considered problematic among scholars in health communication.

4.5 Different groups react differently to GHWs

From the above sections, it could be noted that some studies have identified differences in perceptions of GHWs among different groups and subgroups of the population such as differences between age groups, and between individuals of different smoking status. Yet, the studies do not provide further explanation on exploring the reasons behind these differences and how they influence their perceptions.

Interestingly, the evidence suggests that reactions of smokers vs non-smokers to the GHWs differs and it is shown from the data of some studies that smokers are more likely to discredit and doubt the "effectiveness" of GHWs than non-smokers (Awaisu et al., 2013; Andrews et al, 2014, 2016; Moodie et al., 2015; Nonnemaker et al., 2015; Netemeyer et al., 2016; Drovandi et al., 2018, 2019a**)**. Moreover, GHWs have been perceived as more effective in preventing non-smokers from smoking and either ineffective in making smokers quit or perceived as having an insignificant impact on smokers (Moodie et al., 2015; Drovandi et al., 2018). Andrews and colleagues (2014) conducted a longitudinal design experiment to test whether the graphicness – "vivid display of consequences of smoking on the body" – of GHWs and smoking status impact "evoked fear" and "negative health beliefs about smoking" on adolescents (13–18 years) (n=104) and adults (n=145) in the US and whether these beliefs "influenced thoughts of quitting". The results of the study indicated that graphicness was positively correlated with evoked fear and was not significantly related to negative health beliefs. Moreover, the results also showed that the effect of fear on thoughts of quitting was stronger in adolescents who were smokers, than on young adults. The study was a lab study, given that the US, up until now had not yet implemented a GHW policy,

although it is expected to come into force in 2021 (BBC, 2019). However, it shows interesting results with regards to perceptions of smokers, which might have implications on the existing GHW impact on smokers and how they could perceive them.

In addition, the evidence of GHWs literature also indicates a difference in adolescents' reactions to GHWs by gender (Nonnemaker et al., 2015) and a difference in perception and reaction between adults and adolescents (Andrews et al., 2014; Nonnemaker et al., 2015; Wolf et al., 2016), as well as a difference in the reactions to GHWs in studies that were conducted in more than one study site (Sabbane et al., 2009; Andrews et al., 2016; Hammond et al., 2019; van Mourik et al., 2020). For instance, a cross-cultural, web-based experimental study tested the effectiveness of GHWs on cigarette packages on non-smoking adolescents in Canada and the US (Sabbane et al., 2009). The authors claimed that the purpose of the study was to investigate the effect of different health warning label approaches on outcomes, such as brand attitude, website attitude and smoking intention. The study was carried out by exposing the Canadian and US adolescents to a website that is sponsored by a tobacco industry brand on which the warnings would appear. The warnings were of three types: no warning, text only warning, or text and GHWs. The websites were sponsored by either a familiar cigarette brand or an unfamiliar one. The results showed that GHWs led to lower smoking intentions among the Canadian adolescents, whereas a boomerang effect, higher smoking intentions, were recorded for the US adolescents (Sabbane et al., 2009). However, a weakness found in the design approach was the choice to include adolescents from the United States and Canada, both of which are exposed to different contexts of GHWs implementation policies. During the time when the study was conducted, Canada had implemented a GHW policy whereas the US was still on text only warnings. So, the Canadian adolescents were more familiar with the images than were the US adolescents who encountered them for the first time.

Furthermore, in a recent study by Hammond et al. (2019) which was conducted between 2010 and 2012 among around 8,000 adults and youth (16–18 years), smokers and non-smokers, in different cultural contexts such as China, India, Mexico, Bangladesh, the US, Germany and the Republic of Korea showed text and GHWs and assessed themes such as lived experiences, symbolic images and testimonials on perceived efficacy showed that GHWs were more effective than text and that graphic warnings which portray the negative physical consequences of smoking on the body were perceived as more effective than lived experiences and symbolic images. Yet there was a difference in the extent to which participants from each country agreed on the perceived efficacy of testimonials and of the

use of symbolic images among countries. The authors recommended that future research examines the influence of cultural context on the efficacy of symbols.

The overall evidence on the literature in GHWs indicates that different groups and subgroups react differently to GHWs. Studying the variations among the target audience subgroups could have been helpful in guiding future recommendations for the development of GHWs, because it allows a better understanding of the target group. They do not take into consideration other factors that could play a role in influencing behaviour. Adolescents in particular are more vulnerable and more likely to rebel (Hurrelmann, 1990), which is therefore why I focus this thesis on how adolescents react.

In the next section, I explore the possible factors that could mediate adolescents' reactions to GHWs.

4.6 Factors mediating reaction

Evidence from the literature on GHWs and fear appeal suggest three major message characteristics as well as social and cultural factors that could mediate adolescents' reactions to GHWs. The message characteristics that according to the literature could mediate adolescents' reactions are comprehension of the health message, the temporal relevance of the health messages (long term vs short term) and the novelty of the message. In addition to these factors, the evidence suggests that social and cultural factors play a role in shaping the perception of health messages.

4.6.1 Message understanding

Recent studies indicate that emotions might not be the only dimension that drives the impact of GHWs (Shi et al., 2017; Noar et al., 2020). Moreover, studies in GHWs have signposted a gap in the literature to explore the effects of comprehension and relevance of the warning labels among different population groups (Hammond et al., 2013; McQueen et al., 2016; Noar et al., 2016).

Review of the literature on GHWs and adolescents indicates that there is a relatively small body of literature that is concerned with the way adolescents understand GHWs and how they make meaning of them and the factors they consider when weighing up the harm. The literature highlights unintended consequences such as avoidance, disengagement with the message and a boomerang effect. It raises the question of how to further understand what triggers these responses in adolescents. Is it their comprehension? Or is it how they weigh the harm? So, it is important to understand how they make sense and meaning and perceive

existing GHWs. Two studies reported on the credibility of GHWs (Moodie et al., 2015; Hardcastle et al., 2016). Moodie and colleagues (2015) highlighted the importance of comprehension and perception of credibility of the warning labels to enhance their effectiveness. Similarly, the qualitative study conducted by Hardcastle et al. (2016), which examined the attitudes of smokers, reported that smokers were doubtful of the effectiveness of GHWs on smoking behaviour and often discredited the messages.

According to social marketing and health communication literature, comprehension and relevance of message to the target audience is an important factor that needs to be highlighted and that plays a role in assessing the impact of warning labels (Stewart and Martin, 1994; Hastings et al., 2004; Rimal and Lapinski, 2009; Shi et al., 2017; WHO, 2017b, 2017c; Noar et al., 2020). The discrepancy between the intended meaning of the health message by experts and the perceived meaning by the target audience might lead to the unintended consequences as discussed earlier in Chapter 2. Hastings et al. (2004) indicate that understanding the intended meaning of the health message is crucial in motivating individuals to behaviour change. Similarly, Stewart and Martin (1994) suggest that future research on health warnings shifts from focusing only on evaluating what experts and governments propose as health warnings, to a wider outlook that is open to suggestions in design and content of warnings. Moreover, from a marketing and consumer behaviour perspective, Mick et al. (2004) critiqued earlier assumptions in behaviour change which relied only on cognitive processing influenced by psychology theories. The authors argue that these assumptions overlook the meaning comprehensibility of the messages which is an essential prerequisite for engagement. Furthermore, from a theoretical perspective, semiotics emphasises that a sign does not exist if it is not relevant to the interpreter, and only then could it be engaging and motivating (Neuhauser and Kreps, 2010). The literature on GHWs also lacks studies that look further in-depth on the link between aspects of cultural influences and beliefs on subjective meaning creation, which I explore in further detail in subsection 4.6.4 of this chapter.

In terms of GHWs, there remain several aspects of how adolescents understand and make meaning of GHWs about which relatively little is known. Consequently, this study aims to understand the reasoning of adolescents' perceptions of GHWs to establish an understanding of how adolescents react to GHWs and explore the factors they consider when they are exposed to them.

4.6.2 Long term vs short term

Another message characteristic that was shown to play an intermediary role in the perception of GHWs is the temporality of the message, especially on adolescents and young adults (Goodall and Appiah, 2008; Adebiyi et al., 2016; Drovandi et al., 2018, 2019a). Drovandi et al. (2019a), a qualitative study conducted among young adults in Australia, indicated low perceived risk among young adults who did not perceive GHWs as relevant because they communicated long-term health effects.

In a broader scope, social marketing and health communication scholars have argued that young people may not engage with health messages that they perceive as futuristic (Austin, 1995; Maibach and Parrott, 1995; Hastings et al., 2004). Additionally, Hastings et al. (2004) and Maiback and Parrott (1995), postulate that fear might be more effective with older generations since younger generations perceive threats to their health as more distant. Austin (1995, p. 114), the chapter on health communication reaching out to young audiences, suggests that health communication campaigns that target young people using fear appeal are often rejected by them, as they fail to recognise that some of the appeal of certain behaviours may lie in their forbiddance. Moreover, adolescents might relate more to or find more salient non-health consequences that are more proximal to their interests such as aesthetics and looks (Helweg-Larsen and Nielsen, 2009).

Overall, evidence from the literature on fear appeal and adolescents' health indicates that adolescents are more likely to perceive health messages that communicate short-term consequences as more relevant to them than the health messages that communicate long-term health consequences. The importance of communicating short-term consequences have been shown in only a few studies in GHWs and adolescents.

4.6.3 Novelty

Together the evidence from the literature on GHWs indicates limited effectiveness of existing GHWs (different definitions of effectiveness and shortcomings in available data); scholars explored alternative ways to communicate anti-smoking messages. More generally, evidence on the use of fear in health communication has suggested the need for alternative methods to reduce unintended consequences (Witte, 1992; Hastings et al., 2004; Haines-Saah et al., 2015, Anker, 2016). What messages could work with adolescents to reduce any potential unintended consequences? The literature indicated the potential of positively framed messages and other novel ways in which the message could incorporate different communication channels.

One study by Goodall and Appiah (2008) on adolescents' perceptions of GHWs examined difference in "effectiveness" and compared message framing between fear messages (loss-framed) and positively framed messages (gain-framed) on adolescents' behaviour (Goodall and Appiah, 2009). Goodall and Appiah (2008) conducted an experiment using a questionnaire on 210 students (15–19 years) in Canada, that recruited more non-smokers than smokers. The study aim was to investigate the effects of "gain-framed" GHWs which communicated the benefits of quitting or not initiating smoking and "loss-framed" GHWs which communicated the negative impact of smoking. Scores on attitudes, perceptions of warnings, and behavioural intentions were collected as outcome measures. Results of the study showed that loss framed GHWs had more impact on students' smoking attitudes. The study states that more non-smokers than smokers were recruited for the study, thus implying that this might have had an influence on the results, especially that as we have seen in other research studies, smokers and non-smokers tend to have different views with regards to the GHWs as they are currently framed.

According to the literature, one form of adding messages of support and positive messages in a cigarette pack is "inserts" (Thrasher et al., 2015; Moodie, 2018). Since the implementation of inserts in Canada in 2002, research rarely examined their effectiveness (Thrasher et al., 2015, 2019; Moodie et al., 2018). Brennan et al. (2020) suggested the potential of introducing inserts in Australia. Thrasher et al. (2019) conducted an experiment among 665 adult smokers age 18–50 years to identify message dimensions for inserts that could put smokers off smoking. The messages used in the experiment were "image (vs no image), text type (testimonial vs informational), cessation resource information (vs none), call to action (vs none), and message topic (well-being, financial benefit, cravings, social support)". Results from this study indicated that messages that included pictorials, cessation support messages or financial benefits were considered most persuasive.

Likewise, a qualitative study conducted by Moodie, (2016a), using individual interviews with 12 packaging and marketing experts in the UK, explored ideas for novel packaging approaches such as "inserts", "on-cigarette sticks warnings" and "audio messages" proposing novel ways of disseminating anti-smoking messages. The results indicated that the most persuasive option was the on-cigarette warning, which according to the experts would prolong the effect of the warning as it would be seen even when smoking the cigarette and it might prevent non-smokers and smokers from smoking. They also hypothesised that on-cigarette messages would be off-putting for young people. Besides, experts perceived inserts that communicate positive messages to be complementary to the on-package warning

and hypothesised that it might also lengthen the health communication effect of the warning. Finally, experts suggested that although an audio warning may deter smokers from buying the packs, it might create unintended consequences when smokers find alternative ways to carry the pack. This study gives preliminary results of exploring novel ways to engage with target groups like adolescents. Later, Moodie (2018) conducted another study to examine in more depth the potential of inserts in the UK. Twenty focus groups were held in Scotland in 2015 with a wide-ranging group of smokers aged 16+ to explore their perceptions of inserts being used in Canada. The results of the qualitative study indicated that inserts would enhance visibility and attention to the warning because of their novelty. Yet, participants indicated that inserts should be regularly rotated to keep the messages engaging and that users might throw them away and that they might be easily ignored. Results indicated that the positively framed messages in particular would provide an encouraging and engaging approach to the message. The interesting results of this study are that they indicate a preference for inserts over on-pack warnings, a result contrary to the one in Moodie (2016a), where experts advised otherwise. The study is a lab study, given that Canadian inserts were explored, yet provides results on the potential of insert use in the UK, especially among youth. Furthermore Moodie et al. (2019) conducted a cross-sectional online survey to explore perceptions of inserts in promoting cessation and on-cigarette warnings among young adult smokers (16–34 years), in the UK (n=1,766). The sample indicated that inserts would increase their thoughts of quitting and almost half of the sample showed that they are an encouraging way to quit. Moreover, on-cigarette warnings were less desirable than the standard cigarette warnings.

Furthermore, recent research studies explored novel ways of health warnings on cigarette packages, most of which are recent (Moodie, 2016; Drovandi et al., 2019a; Mitchell et al., 2019; Moodie et al., 2019). The ideas that emerged for novel approaches are audio warnings (Mitchell et al., 2019) and on-cigarette warnings (Drovandi et al., 2019a; Moodie et al., 2019).

Overall, the above-mentioned studies are mostly recent studies, and mostly examine perceptions of adolescents or adults on options that were suggested by experts rather than by the target group. In this thesis, I explore alternative ways for delivery of the anti-smoking message or messages from the perspective of adolescents.

4.6.4 Social and cultural factors

Data from several studies suggest that health and illness beliefs are influenced by the social context and cultural norms (Maibach and Parrott, 1995; Cho, 2011). From a consumer behaviour perspective, weighing the perceived risk, susceptibility, the benefits or costs of consumption might differ among different population groups and this might affect warning effectiveness. Consequently, something that appears to be a long-term consequence for one group might not be perceived as so for another group (Stewart and Martin 1994,p.3): "Some message recipients may be predisposed to believe warning messages, whereas other recipients may be inclined to reject the information."

Moreover, Stewart and Martin (1994), in their review on the intended and unintended consequences of GHWs state that population level interventions are unlikely to produce the same effect among different audiences. The marketing and health communication literature suggests that "consumers" engage with communication messages when they perceive them as contextualised or personalised (Stewart and Martin, 1994; Strahan et al., 2002). The peculiarity of each target group has to be considered and the effectiveness of the intervention has to be measured according to these differences. Hastings et al. (2004) highlight that in terms of efficacy, fear appeal might not always be perceived as relevant with different population groups or in a different cultural context. Consequently, the fact that a GHW is a crude intervention contradicts social marketing and health communication guidance on the importance of targeting and tailoring health messages to the target audience (Baker and Saren, 2010; Wansink and Pope, 2015). Furthermore, Haines-Saah and colleagues (2015) critique the literature available on GHWs as it overlooks the social and contextual dimension. The authors argue that if the messages are not relevant to the context, they might create dissonance. Therefore, for public health intervention, it is vital to understand the intrinsic and extrinsic drivers of a target population's behaviour to enhance the effectiveness of the warnings.

The literature on GHWs and fear appeal communication indicates that social and cultural factors influence the perception of health messages. GHW evidence supports socially oriented labels, especially among younger individuals (Alaouie et al., 2015; Moodie et al, 2015; Adebiyi et al., 2016; Drovandi et al., 2019a) and culturally relevant GHWs (Adebiyi et al., 2016; Jradi and Saddik, 2018). Likewise, Noar et al. (2020) postulate – in their meta-analysis on GHWs' impact on perceived risk – that while communicating harm is expected to increase the perceived susceptibility among recipients to change their smoking attitudes, theories do not usually take into account that a low – or high – perceived susceptibility could

be influenced by beliefs and could be related to cultural definitions and meanings and go beyond the actual message itself. In addition, recent studies such as Heris et al. (2019) and Hammond et al. (2019) emphasise that there is a role that culture plays on young people's perceptions and suggest that not much is known on the effective types of message content in GHWs across cultural contexts.

Adebiyi and colleagues, (2016), conducted a cross-sectional school-based survey on adolescents (13–17 years) in Nigeria (n=544) and evaluated the perceived effectiveness of selected GHWs on smoking initiation among school adolescents. Through an interviewer-led questionnaire, adolescents were asked to identify the GHWs that provoked emotions of fear, anxiety, shock and indifference on a 3-point Likert scale. The study collected data on measures such as demographics, perception of proposed GHWs from the US Food and Drug Administration (FDA); the pictorials covered topics of cancer, harms children, stroke and impotence. Adolescents reacted mostly to the GHW that displayed a message on impotence which provoked fear in the majority of the participants and least to the GHW of stroke. Authors assumed that the more negative the reaction, the more "effective" was the warning label in preventing adolescents from smoking. They attributed the results to suggest that adolescents related to impotence because of cultural relevance among Nigerian males, and with regards to the results of the stroke GHW, because stroke was seen as a long-term consequence that adolescents do not relate to. The study highlights an essential dimension of health warning messages which relate to cultural relevance.

Interestingly, Jradi and Saddik (2018), in their qualitative study with adults in Saudi Arabia, assessed the awareness levels and perceptions of GHWs and reported that participants such as "community leaders", perceived the existing GHWs as "culturally irrelevant" and highly "aggressive". The study findings also suggested mostly high awareness levels supporting GHWs but that attention to GHW details was low. Findings from the study indicated that the effectiveness of the GHWs is low because the information is not clear. The study suggested that future research focuses on enhancing the salience of the GHWs by making them culturally relevant. Moreover, to further support the claim of the influence of cultural norms in shaping the way individuals perceive risk from smoking, an experimental design study was conducted on a sample of n=353 Anglo-Canadian and Chinese participants which indicated that hard-hitting messages in anti-smoking advertisements motivated Anglo-Canadian individuals to quit more than it did among the Chinese sample. The authors in the study attributed the difference in the responses to the different cultural and social contexts in terms of coping with fear between the participants in both countries (Laroche et al., 2001).

This limitation in the literature could be part of the cause of inconsistency in the conclusion of GHW effectiveness on adolescents' perceptions.

Overall, studies on GHWs suggested a difference in perceptions of individuals between different cultural contexts yet did not specifically analyse the social and cultural factors that influence their perception. This underpins the need to explore the effectiveness of GHWs in different cultural contexts. Drawing on the aim of this thesis, which is to establish this communication relationship between context specific and cross-cultural public health communication, this thesis is the first study to compare adolescents' perceptions in different cultural contexts, including the Middle East.

4.7 Research questions

Together, the literature on GHWs and fear appeal in health communication illustrated three main gaps in the literature for GHWs and adolescents. From a review of the literature it seemed that although GHWs have been shown to increase attention and awareness of the impact of smoking, yet the evidence shows possible ethical implications and unintended consequences. The literature on GHWs and adolescents shows a difference in perceptions between adolescents and adults and claims that adolescents are more at risk of unintended consequences. Therefore, this study proposes to recognise the effectiveness of existing GHWs among adolescents, in terms of understanding the meaning they associate with the warning label and how they make meaning of GHWs through the lens of semiotics theory. In addition, review of the literature has shown differences in perceptions between individuals of different social and cultural contexts which could influence engagement with GHWs. Yet the literature did not unravel the factors that relate to the relevance of GHWs with the target group. Thus, this study proposes to recognise the perceptions of adolescents in two different cultural contexts to unpack the social and cultural factors that could influence their perception of GHWs. Moreover, the literature indicates the importance of exploring novel ways of communicating anti-smoking messages on the cigarette pack. Some recent studies indicate growing evidence in this matter. Yet, the available studies on alternative ways of communicating the anti-smoking message on the cigarette pack are proposed by experts. This study, rather, takes a participatory approach to co-creating alternative ideas and messages of communicating GHWs and anti-smoking messages on the cigarette pack with the target group, adolescents. Together these questions aim to provide a better understanding of the process adolescents engage in when weighing health communication messages and to unpack these factors to provide a framework to enhance the effectiveness of health messages.

As mentioned in the integrative chapter, the research aims, and objectives are as follows:

My main focus will be on the under-researched area of cross-cultural similarities and differences in health communication through the lens of semiotics. The study aims to explore the factors that influence adolescents' perceptions of GHWs in a cross-cultural context in order to establish the communication relationship between context-specific and cross-cultural public health and social marketing communication in tobacco control. Moreover, the study aims to explore adolescents' perceptions of alternative methods for GHWs and anti-smoking messages. The study findings will be used to provide implications for health communication and policy.

The following objectives contribute to achieving the study aim:

- to explore the literature of health communication and social marketing on the use of fear appeal in health interventions more generally and GHWs more specifically;
- to explore the meaning that adolescents associate with the existing GHWs in the UK and Qatar by drawing on the theory of semiotics;
- to investigate the different reactions of adolescents among different population groups;
- to identify the mediating factors that influence adolescents' reactions to existing GHWs in the UK and Qatar;
- to identify concepts in the theory of semiotics that apply to public health communication;
- to explore adolescents' perceptions of alternative ways to communicate GHWs and anti-smoking messages through an audience-centred approach;
- to better understand how social marketing and health communication can work together to enhance public health policies.

Consequently, from what has been discussed above on gaps in the literature, three research questions were identified:

(1) What are adolescents' perceptions of existing GHWs that use fear appeal in the UK and Qatar?

(2) What are the factors, identified through theory of semiotics, that play a role in shaping adolescents' perceptions of existing GHWs?

(3) What alternative ways could be used to frame the messages of GHWs?

4.8 Summary

The chapter summarised and discussed the existing literature on perceptions of GHWs among adolescents and identified gaps in the literature. The literature on GHWs demonstrates scarcity in qualitative in-depth insights from adolescents and a dearth in exploring the unintended consequences of GHWs among this vulnerable population. The chapter also justified the use of semiotics as the theoretical lens that could unravel subjective meanings and help enhance the effectiveness of GHWs.

CHAPTER 5: METHODOLOGY

5.1 Introduction

The chapter describes and discusses the methodology of this research. It starts with an overview of the underpinning "social constructionism" research philosophy, and its epistemological and ontological considerations. It then discusses the decision of choosing a qualitative research approach compared to other research designs and explains and justifies the decisions regarding data collection method, sampling size and recruitment (in the UK and Qatar). Subsequently, the details of the pilot study are discussed, the sample selection and timing of the pilot in both countries and the main lessons learnt from it. Details on the topic guide are then explained before discussing the main study design, ethical considerations and notes on reflexivity. The chapter ends by discussing the process of thematic analysis followed and the details of the coding framework.

5.2 Disciplinary and epistemological considerations

In line with the study's aims and research question of understanding the meanings adolescents associate with current GHWs, I argue that social constructionism is appropriate for several reasons. First, according to social constructionism it is important for researchers to acknowledge that individuals are social actors. I argue that individuals are social actors in creating meanings of signs (in the case of this study, GHWs) and that it is important to explore the social context of individuals to help in understanding the meaning they create from these signs or symbols. The underpinning assumption of social constructionism is that knowledge is constructed by individuals and influenced by their interaction within the social world (Charmaz, 2006; Saunders, 2011; Easterby-Smith et al., 2015). It postulates that meaning is created by individuals' social interactions, experiences and system of values and beliefs (Burr, 2006). When studying a health behaviour such as smoking it is important to acknowledge the role of social and cultural factors that might play in an individual's perceptions and behaviours (Bell et al., 2018). Thus, it is important to acknowledge that recipients of the anti-smoking health message play an active role in constructing the meaning of health messages. Social constructionism allows for the exploration and understanding of the subjective meaning that individuals assign for a sign (Easterby-Smith et al., 2015). Finally, social constructionism also aligns with the theory of semiotics (Mick, 1986), the theoretical framework underpinning this enquiry.

Unlike a positivist approach, social constructionism does not assume that reality is fixed, and that knowledge could be measured via unbiased objective measures (Creswell, 2012; Easterby-Smith et al., 2015). In a social constructionism paradigm, the aim is to explore meanings and investigate contexts for an in-depth description of the phenomena rather than establish causal relations such as in statistical associations. Social constructionism takes into account the process from which meanings are developed, negotiated and discussed in a particular context. It is closely associated with qualitative research that aims to explore meanings constructed by a group of people, which is sometimes done via focus groups. In exploring perceptions of GHW messages, it is important to acknowledge the complex and didactic phenomenon which goes beyond understanding the cognitive dimension of the mind, and rather incorporates the subjectivity of individual experiences with the world.

Engaging with participants and building rapport with them was an essential part of the study which according to Saunders (2011) and Easterby-Smith et al., (2015) helped in creating a collaborative environment that allowed the participants to reflect freely and openly on their experiences in the discussion.

5.3 Study design: a qualitative approach

Unlike a positivistic approach which entails reducing the individuals' perspectives to a statistically measurable and pre-coded phenomenon (Berg and Lune, 2014), I adopt a qualitative research design to answer my research questions that seek understanding of the social world of the target group in more detail. The choice of research design is also motivated by the social constructionism research philosophy adopted and which argues that it is essential to study individuals as part of their social world. Social constructionism also acknowledges that each individual might have a subjective perspective based on their personal experience, social world and cultural context (Easterby-Smith et al., 2015). On the contrary, quantitative methods which strive for standardisation take away a naturalistic effect of the interaction and thus make a target group assured to decide according to encoded variables and responses (Fine and Elsbach, 2000).

The aim was not to test pre-existing assumptions but rather to gain in-depth understanding of the participants' subjective meanings and perceptions of GHW labels and their subjective ways to improve them. The underpinning assumption of qualitative methods is that knowledge is developed when understanding the subjective meanings of individual experiences and social encounters (Creswell and Creswell, 2017). In a qualitative research design, the aim is to approach participants with minimal predefined views and explore how

their own views are formed. This allows new insights and opinions to emerge and allows participants to present themselves and the language they use within their social world (Barbour and Kitzinger, 1999; Berg and Lune, 2014). Qualitative methods emphasise an inductive approach to the relationship between theory and research which is intended to allow insights (themes) to emerge from the collected data and build a theoretical understanding of the phenomena rather than test a hypothesis (Saunders, 2011).

Additionally, a qualitative research design was deemed more appropriate to provide informed perspectives of adolescents' perceptions to the use of fear appeal in GHWs. The study explores adolescents' perceptions of the current GHWs as well as their perceptions of alternative messages. This question aimed to uncover new insights from adolescents reflecting on their own stories, and experiences in a way other methods such as quantitative cannot provide in that depth. The qualitative questioning allowed for a better understanding of adolescents' perceptions and attitudes through open-ended questions that allowed more room for emerging ideas.

5.4 The pilot study

Four pilot interviews and focus groups in the UK and three pilot focus groups in Qatar were selected. The aim of the pilot study was two-fold: first, to explore the topic guide and activities used in terms of answering the research questions; this has made it easier for me to familiarise myself with the topic guide and make sure it is understood by the participants and that the terminologies used were specific to the context; second, to explore the methods used and refine the ways to organise the interviews and the focus groups to make the recruitment, recording and transcription better.

Piloting helped to focus later interviews on the relevant and most pressing questions and ideas that adolescents raised. It also facilitated the identification of irrelevant questions which helped in modifying the structure of the topic guide. The topic guide was modified after the pilot interviews to make it more interactive. Further details on the lessons learnt from the pilot study can be found in Subsection 5.4.2.

5.4.1 Sample selection and timing of the study in the UK and in Qatar

Two focus group discussions and two interviews were conducted for the pilot study in the UK. By exploring the GHWs that were discussed the most, participants in the pilot study helped narrow down the number of UK GHWs to be used in the study from 21 to 14 – one GHW from each theme. Access to the participants for the pilot study in the UK was from a convenience sample and a youth organisation that first agreed to facilitate my access to

adolescents. The pilot study in the UK took place over three weeks from February to March 2018.

Three focus groups in male only schools were considered for the pilot study in Qatar. The pilot in Qatar helped explore the appropriateness of the suggested messages and that they were not considered offensive or sensitive. It also helped explore the perceptions of adolescents in Qatar towards GHWs chosen from the UK and their relevance to the discussion. The pilot interviews were recruited from the first school that provided approval over one week in October 2018. It was a male only school, so the three focus groups were males only. When I started the main study, I was aware that the pilot was done with males only. The pilot, thus, could have been restrictive to some extent by looking at a male only perspective. Recruitment of females from schools for the pilot in Qatar was harder to achieve; however, no major differences for the topic guide were noted when females were recruited later for the main study.

5.4.2 Main lessons learnt from the pilot study

The pilot study commenced in February 2018 in the UK before Qatar and some lessons learnt were transferable to the data collection in Qatar.

I learned from the pilot not to assign participants into focus groups or individual interviews as I initially planned but let them decide their preference. Allowing participants to choose their preference of being part of a focus group or in an individual interview had been previously researched with adolescents and it was shown to allow for a more participatory approach in which participants decided on the method that made them feel more comfortable and maximised their participation (Highet, 2003; Lucherini et al., 2017). I initially recruited participants and assigned them to either focus groups or individual interviews. However, during data collection, it emerged that adolescents in focus groups were more interactive than participants in individual interviews. In the field notes I had written that I felt that participants from individual interviews in the pilot had sometimes provided normative responses which was suspicious, and it could probably be that they felt more exposed speaking to me alone than in front of their peers (Field notes: March, 2018). Whereas in the focus groups, I felt that participants were more comfortable in their discussions. Participants in focus groups shared their own independent voice despite the different or similar perspectives from other members of the group. In Qatar I also asked adolescents to choose whether they would prefer to participate in a focus group or an interview. All participants from Qatar were interested in participating in friendship groups and none expressed interest

in participating in individual interviews. A possible explanation may be that Qatar is classified as a collectivist culture and therefore individuals tend to feel more comfortable when they are in a group (Hofstede, 1986).

Moreover, I learned from the pilot to include more interactive activities in the interviews and discussions to facilitate in-depth insights and a more natural conversation. The questions in the topic guide were being discussed in an open-ended approach, for example reflecting on the existing GHWs and then asking participants to come up with a design for the GHW they perceived would be persuasive to avert adolescents from smoking. It was noticed that adolescents were very enthusiastic, and more data came up during their discussion on the design activity (Field note: March 2018-October 2018). The pilot showed that these activities (which will be discussed in further detail in Section 5.5) generated more interactive discussions, better reflection and exploration of adolescents' perceptions of the existing GHWs and their perceived relevance, the reasons for their decisions and their suggested messages, than a question/answer format of discussion. So, I modified two steps in the process: first by starting the interview and discussions with the design exercise, to avoid prompting them into the existing approach of GHWs. Second, I added two more activities to the discussion groups and the interviews, and these were matrix mapping and creating a mood board. The activities will be discussed in further details in Section 5.5. This allowed participants to participate more and engage in discussions more naturally and for new insights to emerge. Furthermore, it was noticed during the pilot study the importance of choosing suitable vocabulary in the topic guide. For example, in the UK the term fag rather than cigarettes was used among adolescents.

5.5 The topic guide

The research questions guided the design of the topic guide, which was divided first into general questions on background and hobbies and second with semi-structured questions for the three activities held in the focus group and interview discussions (Appendix 4). The interview guide is an essential component in qualitative research. It is the schedule that includes questions, prompts for discussions and activities (Berg and Lune, 2014). In this study, the topic guide for the focus groups and individual interviews was similar and allowed further probing when needed. The main themes covered in the topic guide were exploring perceptions, reasons for perceived relevance or perceived irrelevance and suggestions for alternative messages.

Prior to the start of the discussions, a short general background questionnaire was distributed to participants (Appendix 5). The five-minute background questionnaire was handed out prior to starting focus groups or individual interviews as a self-completed questionnaire. The data obtained were used to describe the sample of the study and to help in maintaining a varied sample in terms of smoking status, age, nationality, gender and family affluence. The short questions consisted of a multidimensional scale of perceived social support (MSPSS) to gather information about the participant's social support, which they might not feel comfortable sharing with the group or the researcher during the discussion. It also included questions on family affluence (FAS) that were adopted from the Health Behaviour in School-Aged Children survey (HBSC). The MSPSS and FAS questions have been used in research studies studying adolescents as being questions which are easy to understand and are not offensive (Torsheim et al., 2016).

The discussions started off with an ice-breaking activity on where the participants are from, the activities they do in their free time, the people they hang out with, and asking them about their country and what they like most about it. The guide helped steer the discussion yet kept it open and flexible to enable contributions and some direction by the adolescents (Appendix 4). Before showing the participants any of the GHWs, they were asked whether they could recall the GHWs in their countries and their thoughts about them. The purpose behind asking them to recall the warning labels before showing it to them was to explore the warning messages that resonate with them. The activities that were used to generate an interactive discussion fall into what is known as Zaltman Metaphor Elicitation Technique (ZMET)'s "projective techniques" (Zaltman and Coulter, 1995). Projective techniques have been widely used in consumer and market qualitative research (Nunez, 2015). As Nunez (2015) explains that the significance of projective techniques is that it helps the researcher to understand "attitudes, beliefs, emotions, deep motivations and values" of the participant. These activities usually include association, choice ordering and construction. Details of how these activities were used for this thesis is explained in the following subsections:

5.5.1 Association and choice ordering

Activity A: Placing GHWs on a matrix and generating associations on the GHWs

Then participants were shown the 14 GHWs (one set) from the UK and the only available 4 GHWs from Qatar (see: Appendix 1A & 1B). They were asked to share their perceptions, emotions and whether they think it would put them off smoking. To dig deeper and further enrich the discussion, participants were asked to order the warning labels (UK and Qatar) on

a matrix of least to most persuasive across gender, smoking status and age group. Participants were also asked to associate the warnings to words, thoughts or feelings (e.g. scary, exaggerated, real, disgusting). The purpose of that exercise was to gather more ideas on their perceptions of the existing warning labels. This differs from the usual question/answer design as it is more interactive and tends to trigger more spontaneous answers from the participants (Ryan and Ogilvie, 2011). Word association and choice ordering with the warnings help to uncover attitudes and beliefs that participants might have found difficult to articulate (Belk, 2007). Also, the exercise allows participants to share their views and perceptions of the image or message (e.g. GHWs) in a more spontaneous way thane if asked directly (Porr et al., 2011). The association and choice ordering activity helped participants uncover their perceived meanings of the GHWs and develop their own messages. Figure 3 is an example of how the activity was implemented. Participants were asked to place the GHWs on a matrix while generating associations on the GHWs and reasoning their choices.

Figure 3 An example of matrix ranking of least and most persuasive GHWs to put off smoking in boys and girls *(UK, Interview, 14 years, non-smoker)*

5.5.2 Construction

Activity B: Designing their own GHW

Participants were then asked if they would like to come up with their own messages, whether graphic or not. The purpose of that exercise was to uncover potential innovative ideas and alternative messages that adolescents perceive as persuasive to change their smoking attitudes. By being involved in the collective thinking about the design of the GHWs on a cigarette pack, adolescents seemed to feel more actively involved in the decision of what might be suitable for them. The design activity helped highlight the perceptions of the target group, what is relevant to them and what is not and why. Having participants from two different contexts helped explore social and cultural factors of relevance to GHWs

effectiveness. Figure 4 is an example of the design activity – participants in interviews and focus groups were asked to, draw or write ideas and suggestions of what they perceive would be a persuasive GHW or anti-smoking message for adolescents.

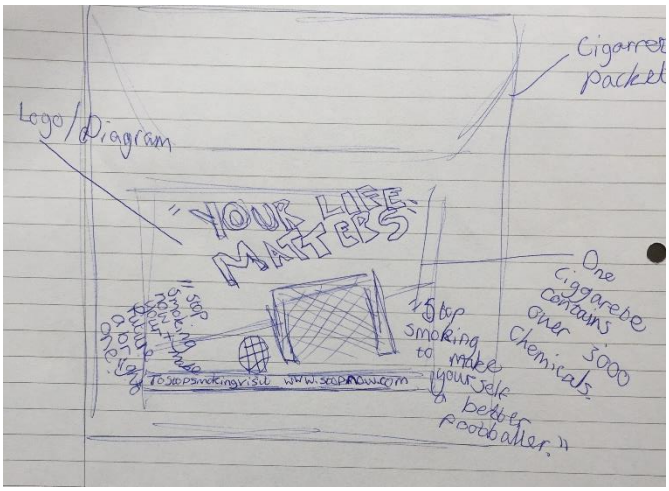


Figure 4 An illustration from a participant showing an example of a positive short-term message: "Stop smoking and make yourself a better footballer" *(UK, Interview, female, 14 years, smoker)*

Activity C: creating their own mood board for GHW messages

Finally, participants were asked to create their own mood boards (charts where they place their preferred messages) of the messages they had created earlier, and messages other groups had created earlier. Participants used ideas from the design activity (of their interview or previous interviews) to place it on the mood board. Participants discussed the reasons why they would choose one message over another to place it on the mood board. This discussion provided a better understanding of the influencing factors in adolescents' perceptions.

The purpose of this exercise, according to Zaltman and Coulter (1995) is to provide participants with active and hands-on experience. This could be observed in my study as adolescents shared their thoughts about which messages GHWs should entail, which factors are important and why, in terms of persuasiveness to adolescents. Moreover, adolescents seemed to generate thoughts in the discussion that might not have been generated in a more traditional way. This is in line with Zaltman and Coutler (1995), who state that this exercise encouraged them to enjoy the discussion and share creative thoughts while brainstorming ideas for effective GHWs during the focus group. Figure 5 shows an example of the mood board exercise, where participants choose suggested messages to place on the board indicating their preferences and why.

Figure 5 An example of preferred messages on a mood board

5.6 The main study

Within-method qualitative triangulation was used during the focus group discussions and interviews by applying varied tasks of the ZMET projective technique. The key word "triangulation" is defined as the use of more than one method or data source to establish a better understanding of the area of interest (Denzin, 2010; Berg and Lune, 2014). It can also be used in the context of data triangulation where the methods are not necessarily mixed in the study. The literature on triangulation within methods in qualitative research suggests that triangulation also helps in refining and strengthening the theoretical connections and that it allows for a view other than the researcher's own (Flick, 2004; Denzin, 2010; Berg and Lune, 2014). Flick (2004) explains that "within-method" triangulation is implemented when more than one technique is used within the same research approach to collect complementary data. In other words, in the case of my study, triangulation is achieved by comparing and contrasting the data from different activities and across focus groups and interviews. These methods are not independent but rather complementary (Flick, 2004). The importance of using projective techniques in this study was to make participants feel more comfortable in sharing their insights but most importantly, as the definition of projective technique means, to "verify" participants' responses through their involvement in different activities that aim to provide informed perspectives of adolescents' perceptions of GHWs (Coulter et al., 2001; Anghelcev, et al., 2015).

5.6.1 Methods

Now that I have discussed the topic guide and activities that took place during the focus group discussions and the interviews, in the following section I discuss the data collection methods that were followed in the main study of this thesis.

I start by discussing the choice of focus groups and friendship groups in the study, and the justification of the group size, composition and interaction level. Then, I discuss the choice of semi-structured interviews and the integration of field notes.

Consequently, I discuss the identification of the study participants in addition to further information on the sampling process. Finally, I present the ethical considerations that were considered for this thesis.

5.6.1.1 Focus groups and friendship groups

Focus groups as defined by Barbour and Kitzinger (1999), comprise group discussions with a small group of participants concentrated around one topic. They involve a qualitative investigation on the subjective experiences, attitudes and views of the group. Focus groups are also characterised by examining the group interaction as part of constructing ideas, which gives more emphasis on the members of the group's views rather than only focusing on individual views. Focus groups are distinguished from individual interviews in the focus on the interaction between group members (Bogdan and Taylor, 1975; Barbour and Kitzinger, 1999; Berg and Lune, 2014).

Friendship groups

Friendship groups are a specific form of focus groups which are deemed to be particularly suited to adolescents (Barbour and Kitzinger, 1999). Friendship groups were chosen for this study for reasons such as the distinctiveness of the target group and the importance of the social network in the field of study. More studies in social sciences are recruiting friendship groups in focus groups rather than a group of strangers (Barbour and Kitzinger, 1999). The uniqueness of the target group in the study, adolescents, emphasised the importance of paying attention to "their social world". This is because, as Barbour and Kitzinger (1999) highlight, discussions adolescents make or the ideas and opinions they form are likely to be influenced and created by the social network they are in. Studies on adolescents' smoking behaviour showed that adolescents' social worlds play an important role in their health behaviour and that it was useful to examine adolescents in their social world within their social groups (Lucherini et al., 2017).

Nevertheless, friendship groups do not come without limitations such as the social desirability bias (Fisher, 1993; Barbour and Kitzinger, 1999). Group members in a friendship group might have established their own hierarchies, beliefs and norms within the group and sometimes there might be a dominant member and a silent one (Barbour and Kitzinger, 1999). Aware of this limitation, the likelihood of desirability bias and the group dynamics

were carefully checked throughout the pilot study. The evaluation of the pilot study suggested that participants seemed to be comfortable and outspoken in their friendship groups and as such it was decided to keep friendship groups in the main study. During the main study, participants also showed enthusiasm and engagement with the discussion and they expressed their agreements as well as disagreements with their group members' views. At points, when I noticed a participant who was not so engaged in the group discussion as other members of the group, I did not find that it was attributable to the fact that they were in friendship groups but more that they were shy by nature. I tried to probe further with those participants or requested if they would like to speak alone in individual interviews. Moreover, combining notes from the pilot study and the field notes, I found that participants of the focus groups were vocal, voicing their agreements and disagreements, which in a way was also needed to examine group interaction which could be shaped by their social network (friendship groups).

5.6.1.1.1 Why focus groups?

Focus group discussions are of relevance to the context of this study for several reasons: first, the nature of the target group in this study. Research studies on adolescents have shown that focus groups with adolescents could generate helpful and insightful data. The focus group is a valuable tool in qualitative investigation as it allows participants to use their own choice of words, set the priorities and emphasise the ideas that interest them the most and establish new insights of their own (Barbour and Kitzinger, 1999). Focus groups are ideal for involving individuals who might be anxious of being the only point of attention for a researcher, which might be common among adolescents (Barbour and Kitzinger, 1999). The pilot study showed that adolescents felt more comfortable speaking up when they were joined by their peers rather than sitting alone with me.

Second, I seek new emerging insights to understand the subjective perceptions of participants and how their interaction within their network might influence their views. The research questions in the study explore adolescents' perceptions of GHWs. To answer these questions, it was essential to keep the format open and ask participants to discuss the GHWs in more detail and explore the reasons for their thoughts on GHWs. The method allows for studying group interaction and dynamics, which is an area of interest to examine in this study. Group interaction in focus groups encourages the exchange of ideas, anecdotes, commenting on each other's points of view and sometimes agreeing or refuting others' views (Barbour and Kitzinger, 1999). This allows for emerging insights in terms of exploring how adolescents think and rationalise health warnings.

Furthermore, focus groups help in examining the social world of the target group and as such help in seeking answers that probe into the subjective stories, experiences, beliefs and views of participants to understand their social context. In the second research question, I seek to answer the question on which factors play a role in shaping adolescents' perceptions of GHWs. Finally, I seek to provide informed perspectives of alternative GHW messages suggested by adolescents. This could only be uncovered by open ended questions and asking adolescents to come up collectively with emerging ideas.

5.6.1.1.2 Determining the group size

In this study, friendship groups were recruited and thus most of the groups were composed of four to five participants, with a minimum of two participants per group and a maximum of six except for one group with seven participants. The size of groups in focus groups differs from one discipline to another and from one target group to another. The literature that talked about friendship group size suggested a friendship group size among adolescents to be composed on average of four to five participants (Ennet and Bauman, 1994). Moreover, Heary and Hennessy (2002) argued that focus groups among children and adolescents are usually smaller than that of adults. There is a debate in the literature on whether a group of two participants is considered a focus group. While having two participants for a friendship group is not ideal and often discussed as a dyad, the loss of a group member was due to failure to show up when interviews were taking place. Having a group of two participants, as argued in the literature, is often critiqued to lack third party mediation and loss of agreements and disagreements interactions (Ennet and Bauman, 1994). However, in the friendship groups conducted with only two participants in this research, participants were voicing out their agreements and disagreements during the three exercises. Specific information on the size and composition of each focus group and interview is presented in Table 5.

5.6.1.1.3 Determining the group composition

Since the focus groups were composed of friends, the groups were predominantly homogeneous in terms of gender, smoking status and socio-economic status. All groups were homogeneous in terms of cultural context. However, there were some exceptions, where some of the groups were heterogeneous, six in terms of gender (with males and females in the same group), and five in terms of smoking status (including smokers with those who were non-smokers within the same friendship group) (Table 5). Having some heterogenous groups might be a result of recruiting friendship groups where it becomes harder to always

ensure that the groups are homogenous. However, I have given special awareness to the power dynamics of groups which were heterogenous to notice social desirability bias and note it down. From my field notes and my own observation of the focus group discussions, each member of these heterogeneous groups voiced their opinions and ideas.

Table 5. Sample size and composition

Focus Group (FG)/ Interview	Country	Gender distribution	Smoking status	Age	Affluence (based on FAS scale)
FG1	UK	2 females-1 male	3 Never smoked	16-16-14	3 High affluence
FG2	UK	4 females	2 Smokers-1 Never smoked-1 used to smoke	18-18-18-17	3 Middle affluence-1 high affluence
FG3	UK	3 males	Never smoked-Used to smoke- tried smoking	14-14-13	2 low affluence- 1 middle affluence
FG4	UK	1 male-1 female	Never smoked-tried smoking	14-16	1 low affluence-1 middle affluence
Interview 1	UK	1 male	Never smoked	17	Middle affluence
Interview 2	UK	1 male	Tried smoking	14	Middle affluence
FG5	UK	4 females	3 Never smoked- 1 Tried smoking	14-14-14-15	2 low affluence-2 middle affluence
Interview 3	UK	1 female	Smoker	18	Low affluence
Interview 4	UK	1 female	Smoker	14	middle affluence
FG 6	UK	2 males-1 female	2 Never Smoked-1 Smoker	17-16-16	2 low affluence- 1 middle affluence
Interview 5	UK	1 male	Never smoked	13	High affluence
FG 7	UK	2 males	2 Never smoked	13-14	2 middle affluence

Interview 6	UK	1 female	Never smoked	14	Low affluence
FG 8	UK	2 females	2 Never smoked	14-14	2 high affluence
FG 9	UK	3 females-1 male	3Smoker-1 Used to smoke	14-14-12-13	3 low affluence-1 middle affluence
FG1	Qatar	7 males	5Smokers-2Used to smoke	17-17-17-17-17-16-16	7 middle affluence
FG2	Qatar	4 males	3Never smoked-1Used to smoke	16-16-16-17	1 high affluence- 3 middle affluence
FG3	Qatar	5 males	4 Never smoked-1Tried smoking	17-16-16-16-15	1 high affluence- 2 middle affluence-2 low affluence
FG4	Qatar	5 males	4 Never smoked-1Used to smoke	16-16-15-15-15-15	5 high affluence
FG5	Qatar	3 males	1 Never smoked-1 Smoker-1 Tried smoking	16-16-15	3 middle affluence
FG6	Qatar	4 males	1Tried smoking-1Used to smoke-2Never smoked	15-15-15-15	3 middle affluence-1 high affluence
FG7	Qatar	5 males	2Tried smoking-1Never smoked-2Used to smoke	16-15-15-15-15	2 middle affluence-3 high affluence
FG8	Qatar	4 males	3 Smokers-1Never Smoked	15-15-16-14	1 middle affluence-3 high affluence
FG9	Qatar	5 males	4Never smoked- 1 Tried smoking	15-15-15-15-15	2 middle affluence-3 high affluence
FG10	Qatar	4 males	4 Never smoked	15-15-17-16	2 middle affluence-2 high affluence
FG11	Qatar	4 females	1Never smoked-3Tried smoking	15-15-15-16	4 high affluence
FG12	Qatar	3 females	3 Never smoked	16-16-15	3 high affluence

FG13	Qatar	2 males-2 females	3Never smoked-1Tried smoking	14-14-14-15	4 high affluence
FG14	Qatar	5 males	2Never smoked- 3 Tried smoking	15-15-15-14-14	2 middle affluence-3 high affluence
FG15	Qatar	5 females	3Tried smoking-2Never smoked	14-14-15-15-15	1 middle affluence-4 high affluence
FG16	Qatar	4 females	4Never smoked	16-16-16-16	1 middle affluence-3 high affluence
FG17	Qatar	4 males	2Never smoked- 2 Tried smoking	16-16-15-14	1 middle affluence- 3 high affluence
FG18	Qatar	3 females	2Never smoked-1Used to smoke	16-16-16	3 high affluence
FG19	Qatar	3 males-2 females	5Smokers	16-16-16-16-17	3 middle affluence-2 low affluence
FG20	Qatar	3 females	3Never smoked	13-13-13	2 high affluence-1 middle affluence
FG21	Qatar	4 females	4Never smokers	13-13-13-13	2 high affluence -2 middle affluence
FG22	Qatar	4 males	4Never smokers	13-13-13-12	4 middle affluence
FG23	Qatar	2 males	1 Never smokers-1Tried smoking	15-15	1 middle affluence-1 low affluence
FG24	Qatar	2 males	2 Tried smoking	13-14	1 middle affluence-1 high affluence
FG25	Qatar	5 females	5 Never smoked	13-13-13-13-14	5 high affluence
FG26	Qatar	5 males	3Never smoked-2Tried smoking	15-15-15-15-16	5 high affluence

In this study, the focus groups followed a semi-structured format of interview using open ended questions within a set of activities. Discussion in a focus group could involve a flexible format of unstructured discussions, a less flexible format of semi-structured questions or totally structured questions (Morgan, 1996; Barbour and Kitzinger, 1999; Michel, 1999; Belk, 2007). Moderator involvement differs with the level of group structure in focus group interviews, where the moderator becomes less involved with less structured focus groups (Morgan, 1996). Open ended questions have shown to be essential in focus groups to allow for new insights to emerge and to explore in further detail the participants' experiences, suggestions, concerns and views (Morgan, 1996; Barbour and Kitzinger, 1999).

Semi-structured discussions are thought to generate rich data and make it easier to compare responses than a completely unstructured interview, especially when the target group is adolescents (Berg and Lune, 2014). It was preferable to place some structure into the interviews to guide the discussion only and not to define it. Within each exercise, adolescents had the freedom to discuss among each other their decisions, agreements and disagreements and this led to rich data and emerging ideas from the focus groups.

5.6.1.2 Individual Interviews

Interviews were adopted in this study to counteract limitations that might arise from focus groups to focus on vulnerable participants who might not feel comfortable speaking in a group and to reduce the social desirability bias. Interviews are a method of qualitative examination based on one-to-one discussion between the researcher and the participant (Lune and Berg, 2016). Like focus groups, they are used to explore experiences, attitudes and perceptions of individuals, but also believed to be effective in tapping into individual experiences. They also aim to elicit data that might be more sensitive or in-depth than focus groups (Barbour and Kitzinger, 1999; Lune and Berg, 2016).

In this study, semi-structured interviews were conducted with adolescents in the UK. This was to allow for the emergence of new ideas and themes that are important to participants and that might not have been previously investigated. The topic guide of the focus groups and interviews was similar, further probing into personal stories was carried out in individual interviews.

5.6.1.3 Field notes

Field notes were used alongside interview and focus group data to help enrich the analysis by taking into account my own reflections (the reflections of the field worker). Field notes are the researcher's notes taken during and after an interview or focus group (Bailey, 1996).

The field notes I took included information on the duration of the interviews and my personal view on focus group interaction, whether there were dominating voices or silent ones and the ways I managed the specific focus group or interview. Moreover, my field notes included physical appearance of participants, their ethnicity and any particular facial expressions (such as facial disgust) or emotions that weren't verbally expressed to help me report the participants better when transcribing. Finally, I noted down as part of the reflective part, my personal views on the discussion, comments on participants' attitudes during the interviews, any interruptions and comments on the setting. For example, a female participant in Qatar in a focus group of four was enthusiastic and talkative and was always the first to answer the questions or to comment. I had to ask other participants in the group, person by person sometimes, to voice out their opinion and ideas to make sure everyone had the opportunity to speak up. I made notes on this as part of my field notes to keep track on participants' discussions to make it easier during transcription. For example, the field notes that I have taken during the pilot study, helped improve the data collection process in the main study, as I noted that participants were more interactive during the design activity exercise and that some participants who were assigned to individual interviews did not feel very comfortable speaking up. Consequently, the main study format was slightly changed by giving adolescents the option to choose between focus groups and interviews and adding additional activities as well as asking participants to do the design activity first. Moreover, notes on the interaction in each focus group, what I have felt and whether my feelings have interfered during the discussion were also reflected upon in the field notes.

Field notes like that usually add richness to the data description that might support understanding the participants better (Bailey, 1996). The reflective journal for each focus group or interview was around half a page to a page long. During the data collection process, field notes were written after each focus group and individual interview.

5.6.2 Sampling

This section discusses the sampling process, by first identifying the target group of the study and the sampling strategy and then explaining the sample size and the number of focus groups and interviews sought for the study.

5.6.2.1 Background on smoking prevalence in Qatar and the UK

This section reviews the statistics on the prevalence of smoking in Qatar and the UK.

5.6.2.1.1 Prevalence of smoking in Qatar

In the following section, I first present the different sources of reporting on smoking prevalence in Qatar and then discuss in further detail the smoking prevalence of youth and adult smoking in Qatar. At the end of this section, I present data that report on the increase in youth smoking in Qatar.

Data sources of smoking prevalence

The latest available information on smoking prevalence in Qatar dates back to 2013. The data are derived from two main surveys, the Global Adult Tobacco Survey (GATS) and the Global Youth Tobacco Survey (GYTS) 2013. The surveys are adapted from the World Health Organisation, which implements a Global Tobacco Surveillance System across countries that systematically monitors tobacco use among adults (Global Adult Tobacco Survey – GATS) and another among youth (Global Youth Tobacco Survey – GYTS) (WHO, 2013a, 2013b).

GYTS is a standardised tobacco surveillance survey which is initiated by the WHO and funded by the country under surveillance. The survey is implemented in more than 20 countries where tobacco use is still high (WHO, 2013b). GYTS is a nationally representative school-based survey of adolescents in the age range of 13–15 years. The aim of the survey is to produce cross-sectional estimates of the prevalence of smoking and tobacco use attitudes among adolescents in each country. A standardised questionnaire and protocol are used in all countries and the data help countries complete their requirements in fulfilling FCTC recommendations. The measures in the questionnaire are focused on the tobacco demand and reduction measures that the WHO summarises under the term MPOWER. The GYTS methodology was the same in each country to allow for comparability. In Qatar, like in any other country to apply the GYTS, the methodology consisted of a two-stage sample design with schools selected according to enrolment size. Classrooms in the selected schools were randomly selected and students in those classrooms were invited to participate in the survey. The questions in the survey were standard key tobacco control indicators and a set of questions that are optional which helps countries adapt the questionnaire to meet the needs of their countries. The main topics in the questionnaire are: tobacco use and cessation (all tobacco products, cigarettes, shisha, smokeless tobacco); second-hand smoking, advertisement and anti-tobacco campaigns as well as access and availability of tobacco

products; and knowledge and attitudes towards smoking. GYTS was conducted in 2013 with a response rate among students in grades 7–9 of 2,109 of which 1,716 were 13–15 years old. The overall response rate of all students surveyed was more than 89 per cent (WHO, 2013b).

Smoking prevalence in Qatar

According to the WHO (2019b) report on Qatar's profile of tobacco epidemic, and the GATS (2013) survey (WHO, 2013a), the prevalence of smoking among adults (15+ years old) in Qatar is around 11 per cent and is comparable and similar to other countries in the GCC region and the WHO EMRO. More than 40 per cent of smokers started smoking before the age of 18 years and around 8 per cent started smoking before the age of 15 years (WHO, 2013a). This shows that adolescents are a critical age group for smoking initiation and draws attention to the need to focus on them to either prevent them from adopting smoking behaviour or encourage them to quit at an early stage. Smoking is still among the highest risk factors in Qatar. It is projected to increase by 30 per cent in 2025 if tobacco control policies do not become more robust (Ministry of Public Health Qatar, 2018[a]).

Alternatively, in terms of youth smoking, Qatar has shown an increase in youth smoking cigarettes. Comparing the prevalence of smoking in GCC countries shows that the prevalence in youth smoking in Qatar is the highest. In Qatar, 2013 data on youth smoking cigarette prevalence are around 10 per cent, compared to 9 per cent and 6 per cent in the Kingdom of Saudi Arabia and United Arab Emirates, respectively (WHO, 2017a). According to data reported in GYTS (2013), the prevalence of smoking cigarettes among youth (13–15 years old) in Qatar between 2007 and 2013 has increased from around 7 per cent to 10 per cent (Table 7). The prevalence of current cigarette smokers among boys was around 13 per cent in 2007 and increased to 15 per cent in 2013. Similarly, the percentage of current cigarette smokers of girls increased from around 2 per cent in 2007 to around 5 per cent in 2013 (WHO,2013b, 2014)

Table 6: Youth smoking prevalence in Qatar

Percentage of current cigarette users	2007	2013
Boys (13–15 years old)	13.4%	14.9%
Girls (13–15 years old)	2.3%	4.7%
Total	6.5%	9.8%

Source: WHO, 2013b (*GYTS: 2013)*

Table 6 illustrates the increase in the prevalence of smoking among adolescents in Qatar. It also shows that the prevalence of boys smoking is greater than for girls. Comparing this to data from the UK, the prevalence of adolescent girls smoking is higher than that of boys (Tables 7, 8). The difference in percentages of smoking among different genders could be attributed to the fact that smoking is socially unacceptable and a cultural taboo for women in Qatar, which could justify the differences.

5.6.2.1.2 Prevalence of smoking in the UK

In the following, prevalence of smoking in the UK is presented by first explaining the different data sources and then reviewing adult smoking prevalence and youth smoking prevalence.

Different data sources on smoking prevalence in the UK

The data presented in this chapter on the prevalence of smoking in Scotland and England are taken from different sources. These are the Scottish Schools Adolescent Lifestyle and Substance Use Survey 2015 (SALSUS) and Smoking, Drinking and Drug Use among Young People in England 2014 (SDD) (NHS 2017; The Scottish Government, 2016, 2017). SDD is a series of the same survey that started in 1982 which collects national data on smoking, drinking and drug use among adolescents from the ages 11–15 years, and secondary school years 7–11 (NHS, 2017). A total of 12,051 adolescents completed the survey from 177 schools in the fall term of 2016.

SALSUS is a survey that provides national data on lifestyle, smoking, drinking and drug use among secondary school students in Scotland. It is a survey on smoking, alcohol use and drug use that took place between Sept 2013 and March 2014 and which collected data from adolescents in schools in Scotland. All local authorities were included; all schools with adolescents within the age group 13–15 years of age in Secondary 2 and 4, were eligible to be included in the study. The data available on smoking rates are taken from SALSUS (Table 8). Around 30 per cent (33,685 adolescents) of all eligible adolescents in Scotland participated in the survey from 283 schools; a total response rate of 60 per cent was recorded. The survey included a self-completion questionnaire of questions on smoking, how family feels about them smoking, smoking at home, buying cigarettes, number of cigarettes, difficulty in giving up smoking, whether willing to give up smoking or if they've ever tried to give up smoking, friends smoking, car smoking, e-cig use, knowledge on cigarette price, brands notice, their attitudes towards smoking (sports-confidence), stress, health impact, general perception about their health, their attitude towards life and themselves, lifestyle

questions, relationship with friends, school, strengths and difficulties (The Scottish Government, 2017).

Smoking prevalence in the UK

Two-thirds of adult smokers in the UK start smoking before the age of 18 (ASH, 2017). Data estimated from the SALSUS 2015 report showed that "2% of 13 years old and 7% of 15 years old surveyed reported being a regular smoker and an average of 13,300 children in Scotland aged 11–15 start smoking each year" (ASH, 2017; Drope et al., 2018).

According to the Office for National Statistics (2018b), data from 2018 on smoking prevalence among adults in the UK were reported as follows: around 14 per cent in England, 16 per cent in Wales, around 16 per cent in Scotland and around 15 per cent in Northern Ireland (Office for National Statistics, 2018b). Despite the decline in smoking rates in the UK smoking remains the biggest preventable cause of deaths (Brown et al., 2018; CRUK, n.d.).

In terms of youth smoking prevalence, Table 7 presents data from the 2014 survey and shows that girls are more likely to be regular smokers than boys (NHS, 2017). Smoking prevalence increased with age with older adolescents (13–15 years) showing higher prevalence (NHS, 2017). The data show that the prevalence of boys and girls smoking in England has decreased from 2006 (9 per cent) to 2014 (3 per cent). The table also shows that girls show a higher prevalence of smoking than boys in that age range.

Table 7: Youth smoking prevalence in England

Countries in the UK	**Survey (year)***	**Age range**	**Smoking prevalence by gender and year (%)**		
England	Smoking, Drinking and Drug use Survey (SDD, 2014)	11–15 yrs old	Gender/Year	2006	2014
			Boys	7%	3%
			Girls	10%	4%
			Total	9%	3%

*Regular smokers defined as smoking 1 cigarette per day. Source: NHS (2017).

Table 8: Youth smoking prevalence in Scotland

Countries in the UK	Survey (year)*	Age range	Smoking Prevalence by age (%)	
Scotland	Scotland: Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS, 2015)	13-15 yrs. Old	13 years old	15 years old
			2%	7%

*Regular smokers defined as smoking 1 cigarette per day. Source: The Scottish Government (2016, 2017).

The percentage among 13- and 15-year-old students who are regular smokers was 2 per cent and 7 per cent respectively (Table 8). However, around 50 per cent of regular smokers who are 15 years old reported that they find it difficult to give up smoking. Also, more than half (55 per cent) of the 15-year-old regular smokers said that they have tried to give up (The Scottish Government, 2016, 2017). This finding might be particularly interesting to probably enhance support and link to cessation services that youth can access. More data from SALSUS show that purchasing behaviour (15-year-olds getting from friends, brother or sister, 17 per cent in 2013), getting cigarettes from parents increased from 7 to 9 per cent in 2013 (Johnston, 2016). From 2013 to 2015, the smoking prevalence among 15-year-old girls has only slightly decreased. Among 15-year-old regular smokers, the average number reported for cigarettes smoked in the last week, was 40 for girls and 44 for boys (The Scottish Government, 2016, 2017).

Although the prevalent data in the UK show a dramatic decline in youth smoking in the last 20 years, the prevalence increases with age. So, the prevalence of regular smokers among 15-year-old adolescents is higher than the prevalence in 11-year-old adolescents (ASH, 2017).

5.6.2.2 Identifying key population of interest for this study

Adolescence is a critical stage with more than 80 per cent of smokers starting during adolescence. Moreover, almost two-thirds of those who smoke during their adolescence become lifetime smokers (ASH, 2017; CDC, 2017). GHW is a population-level intervention that is also targeted at adolescents. In particular the literature identifies adolescents' age range as 12–17 years, when experimentation and smoking initiation starts, with the age range of most smoking initiation to be 15–17 years (Cantrell et al., 2018); whereas a study by

Hansen et al. (2015) indicated that the younger age group of adolescents (12–14 years) also reported high smoking initiation.

The study was conducted with adolescents of 13–18 years. The age range chosen was to capture individuals in their "adolescence age". There is no clear definition on the age range of adolescents in the literature. Yet, the literature on GHWs and adolescents was indicative of a potential age range that is commonly used. The age range in the studies on GHWs and adolescents differed – 15–19 years (Goodall and Appiah, 2008); 12–17 years (White et al., 2008); 12–20 years (Sabbane et al., 2009); 13–18 years (Vardavas et al., 2009; Andrews et al., 2014; Alaouie et al., 2015); 11–16 years (Moodie et al., 2015); 13–17 years (White et al., 2015; Nonnemaker et al., 2015; Adebiyi et al., 2016; Andrews et al., 2016; McQueen et al., 2016; Peebles et al., 2016). Therefore, the majority of the studies used the 13–17 age range, as did this study, yet there were some adolescents, especially in Qatar, who were in their last year of schooling and were 18 years, and those were also included in the study as they hadn't yet moved on to university. The chosen age range was also found to be feasible for capturing members within either a school setting or youth organisations.

5.6.2.3 Developing a sampling strategy

The sampling was done through a purposeful and snowball selection of friendship groups. Purposeful sampling was used to capture diverse backgrounds of smokers and non-smokers, males and females and of diverse socio-economic status and context. The significance of purposeful sampling is that it helps select information rich cases for in-depth insights (Suri, 2011). Snowball sampling was chosen because it helped to make sure that a considerable number of participants could be recruited.

The importance of recruiting a diverse sample was to obtain a sample across different demographic variables and to include factors that might rarely have been examined in the field of GHWs such as context (Barbour and Kitzinger, 1999). The criteria on which the sample was purposefully chosen were gender, smoking status, country, socio-economic status (or affluence) and age range. It was important to explore how adolescents from different backgrounds might perceive GHWs.

5.6.2.4 Sample size

The total number of focus groups conducted in the UK and Qatar was 35 along with 6 individual interviews – a total of 141 participants from both countries.

5.6.2.5 Determining the number of focus groups and interviews

Since I collected focus groups and interviews from two different contexts, I thought at first that ten focus groups and interviews from each country might be a good starting point. Some research studies indicate many of the themes/codes are determined from the first five focus groups. The literature is controversial when it comes to the number of focus groups and/or interviews in qualitative research. Some research studies say that the rule of thumb is to have around 12 interviews, while others say it depends on the heterogeneity of the sample and the research objectives (Barbour and Kitzinger, 1999; Guest, 2014). Other data collection approaches, such as ethnographic studies state that 36 interviews will be a good sample; others say the minimum acceptable number is 15 interviews (Guest et al., 2017). So, a literature review on sample sizes did not provide a clear answer on the adequate number. When I started collecting data, I kept on collecting focus groups and interviews until I found that the themes were being repetitive, and no new emerging insights were provided. The sampling process in the study continued according to theoretical saturation, by reaching a diverse sample to try to cover as many relevant themes and concepts that are important for theory building (Eisenhardt and Graebner, 2007; Golden-Biddle and Locke, 2007). In Qatar, I was interviewing only males in focus groups, until I received approval to interview females and wanted to ensure diversity, this meant that the total number of focus groups in Qatar ended up being higher than the number of focus groups in the UK. After I returned to the UK, I tried to recruit more focus groups or interviews to confirm that no new insights were emerging. I was able to conduct one more focus group, where similar themes were covered and did not receive any further approval from youth organisations to conduct further data collection.

5.6.3 Ethical considerations

Ethical approval was sought from the College Research Ethics Committee at University of Glasgow, on 25 January 2018 (applied for 13 December 2017) (Appendix 6). As for Qatar, ethical approval to contact schools was sought from the Ministry of Education in Qatar (27 September 2018) (Appendix 7) and from one of the schools (25 October 2018) which had its own ethics committee. Moreover, since the study did not involve staff from Hamad Medical Corporation, the governmental hospital and medical research centre, the usual process in Qatar dictates obtaining a “no objection letter” (Appendix 8). The no objection notification was obtained after five months of application process (April–September 2018) from the Medical Research Centre at Hamad Medical Corporation.

This study involved research with adolescents who are considered a vulnerable group in the research context. However, the area of discussion is not considered a sensitive topic and participating in the study holds no or minimal risk to adolescents. Despite that, arrangements to minimise any risk that might pertain to the study were considered.

Forms and information sheets were distributed to participants, schools and youth organisations. The forms included (i) a letter to the youth organisation or the school for approval to grant access to adolescents in their institutions (Appendix 9), (ii) a participant information sheet (Appendix 10), (iii) a parent information sheet (Appendix 11), a parental (opt-out) form (appendix 12), and (iv) a participant assent form (Appendix 13). The forms included information about the measures taken to protect the participants' confidentiality, anonymity and privacy, such as providing pseudonyms, and information about handling the data and storing it following the guidelines of the University of Glasgow.

5.6.3.1 Informed consent

Two consent forms were required for the study, parental consent and the participants' assent. The participants' informed consent was conditional on their parental approval. Copies of the participant information sheet and consent form were kept together. The voluntary nature of the study and the right to withdraw at any point were repeated regularly throughout focus group discussions and interviews.

5.6.3.2 Parental consent

Parental consent in this study followed passive consent of parents, known as the opt-out approach. Participants who were younger than 16 years in the UK (legal age) and 18 years in Qatar, had to obtain parental consent to participate in the study. The parental active consent is a form where the parent or carer provides written approval that allows their children to participate in the study; whereas an opt-out form follows a passive approach and entails that the child is granted approval to participate in the study unless mentioned (signed) otherwise by the parent (Deschenes and Vogel, 1995; Ross and Oxford University Press, 2006). An opt-out approach was considered for the study as it has proven to yield higher numbers of participants and it was deemed appropriate that the nature of the study was not sensitive by nature (Ross and Oxford University Press, 2006) and that the study did not pose a major risk to participants. Moreover, the opt-out approach was followed in the study to avoid excluding relevant participants as was the case in previous studies, especially in Qatar. A study by Nakkash et al. (2014), which aimed to test an intervention on waterpipe

knowledge among adolescents in Qatar, did not achieve the requested sample size because of parental refusal.

Three participants in Qatar returned the parental forms with their parents' signature that they refused permission for their children to participate; two were female and one was male.

5.6.3.3 Confidentiality

The parent and participant information sheets were clear and comprehensive forms that provided the adolescents and their parents with information about the study, information on the study team, the study's main aim, the importance of the study, procedures they need to take such as approve or refuse participation, the fact that the study is voluntary, what the study requires in terms of time and discussion topics as well as ethical considerations on their confidentiality and privacy.

It is important in research studies to maintain confidentiality of participants throughout. This is harder in qualitative research, where even though pseudonyms were used, participants were not completely anonymous to the researcher or to other participants within the group. Although complete confidentiality might not be totally achieved, I aimed to explain to the participants the importance of maintaining the confidentiality of the discussion within the group and their privacy and anonymity during the recruitment sessions and emphasised it throughout the focus groups and interviews.

5.7 Conducting the study

After discussing the sampling strategy and process as well as the ethical considerations for conducting the study, in this section I present the details on the duration of data collection in the UK and Qatar, details on access and recruitment considerations and difficulties in each study site, and on recording and transcribing.

5.7.1 Timing of the main study

In the UK, data collection took place between March and December 2018. Data collection in the UK took a long time due to difficulties in accessing adolescents in the UK, which will be discussed in the following sections (5.7.2 and 5.7.3). In Qatar, data collection took place over two months from October to November 2018. During these two months, I visited a school almost every weekday except when interrupted during exam weeks.

5.7.2 Access and recruitment

Participants in the UK were recruited through youth organisations and participants in Qatar were recruited through public and private schools. Adolescents are considered a vulnerable population in research contexts and as such are usually given extra considerations in ethics and are more difficult to recruit (Shivayogi, 2013). It is a delicate target group, and for that reason it is crucial to consider any distress, anxiety or stigma that might result from discussions about their smoking attitudes or other personal stories (Shivayogi, 2013). Focus groups and interviews might come with a shortcoming of over-dependency on gatekeepers which might illicit two issues. The gatekeeper might screen potential participants they think are suitable and who might or might not be interested in participating voluntarily or who might be known as ideal and might be expected to present "normative" responses. Second, the gatekeeper might pass on information to participants which might miss out the main points or some ethical issues that need to be highlighted (Barbour and Kitzinger, 1999).

To counteract these limitations of recruiting through gatekeepers, I visited each of the premises (youth organisations in the UK and schools in Qatar) at least twice. The first visit to the setting was to meet with potential participants, explain the study, distribute the forms and hang out with them for a while to answer any of their questions. By that, I made sure they fully understood the study, what it entailed, what their role was and what their rights were. I then asked those who were interested to write down their names and had a tentative discussion schedule and interview list (subject to no objection from parents). Sometimes, I left the group allocation to the gatekeeper who might know better the schedules of the adolescents attending. Participants in Qatar were recruited following similar procedures, however, through schools not through youth organisations. Prior to contacting schools, a letter of support was issued by the Ministry of Education in Qatar to allow contact with schools. The discussion schedule was decided with the head teacher in a way that did not interfere with the students' curriculum.

Incentives of £10 gift vouchers (from my LKAS fellowship) were offered to participants in the UK as an appreciation of participants' time since the interviews were conducted outside school hours and in participants' own personal time. A small incentive as appreciation for participation is usually recommended in the UK. In Qatar, no vouchers were used, since the participants conducted the interviews during their school hours. A certificate of appreciation was forwarded to schools at the end of the data collection in Qatar and linked them with the Tobacco Control Center if they would like their students to participate in lectures or workshops that discuss smoking and adolescents.

The recruitment through schools was easier in terms of show-ups and sticking to the schedule, probably because adolescents in schools run to a specific schedule unlike in youth organisations, where no-show rates might be higher.

5.7.3 Recruitment difficulties

The difficulty in recruitment in the UK was the uncertainty in adolescents' attendance. Some days the institution might be crowded and on other days, not so much. In addition to that, since there is no fixed timing of activities or classes, it was harder to catch participants and to guarantee that they would show up. Also, data collection was physically demanding, as all youth organisations required me to travel for sometimes at least two hours to reach the site and because all youth organisations opened their doors in the evening only.

Recruitment through schools in the UK was initially thought of. However, I received feedback that education councils in the UK were overwhelmed with research studies conducted in schools and that it was very time-consuming to seek their approval. I tried to approach Aberdeen City Council to seek their approval, but they did not grant me approval for the above reason. I then decided to recruit through youth organisations in the UK. A list of suitable youth organisations was compiled from online searches and with the help of staff from the Social and Public Health Sciences Unit at University of Glasgow who also suggested some youth organisations they had worked with. More than 40 youth organisations were contacted via email, phone and sometimes visits. I contacted youth organisations to remind them and follow up with them for a response around three times for each organisation. Finally, six youth organisations agreed to assist in adolescents' recruitment.

In Qatar, more than 50 private and public schools were contacted and only five schools approved, one of them was mixed and the rest were all-male schools. The schools that refused to let their students take part in the study suggested that the age range requested was too young to be smoking or to talk about smoking. They also stated that if someone who is a non-smoker is exposed to the topic they might be intrigued and feel like they want to smoke. I had to clarify that point first by showing the evidence of smoking prevalence among this age group in Qatar, and second by clarifying that probably in the current social media and internet world it is very hard to find an adolescent aged 13 years and above who hadn't already been exposed to a cigarette or a pack of cigarettes. Finally, I assured the school gatekeepers that the information from the discussions would not be shared with either the school gatekeepers, the participants' classmates or friends, or their parents and families.

Some school administrators were convinced eventually, and others did not get back to me and did not return my calls or emails of follow up.

Another challenge faced during recruitment was that of recruiting females in Qatar. Smoking is seen as socially unacceptable behaviour for females and as such many schools refused permission to conduct interviews and focus groups with girls. I also changed my recruiting plan and instead of only calling or emailing the schools, I visited around five schools in person, and asked to meet the head of the school to explain the study, what it entails and the benefit of participating in it. None of the female only schools granted me access to conduct the study, despite some of them showing interest at first. I then had to ask a friend of mine who works as a counsellor in one of the schools in Doha to seek approval from the school they work in for access. The documents and letter of participation were forwarded to school head, and after obtaining the ethical approval that is specific for that school, I was able to recruit some girls into the sample. Although the tuition fees of private schools might be higher than public schools, the socioeconomic status is of the participants was with no major variation. Qatar has the highest GDP per person worldwide and as such it was hard to recruit many participants from lower affluence who are also Arabs.

5.7.4 Study sites

The focus group discussions and interviews in the UK took place on the premises of the youth organisations. The gatekeeper arranged private meeting rooms or activity rooms to be used for the group discussions and interviews. Similarly, in Qatar, the gatekeeper was responsible for arranging a room suitable for the group discussions, so the interviews were conducted in classrooms, staff meeting rooms or the library room. The settings chosen in the UK and Qatar for conducting interviews were venues familiar to the participants to make them feel comfortable and safe, which is an important feature in choosing settings for interviews. The setting for the interviews was also an important point to take into consideration. The setting for interviews and focus groups must be a quiet and private place without distractions or anyone who might interfere with the discussion, to maintain some privacy. It is also required to be in a safe place for the participants and the researcher (Barbour and Kitzinger, 1999).

Schools might have a more formal impression on participants than a youth organisation. However, the activities conducted during the discussions might have made participants feel more comfortable and less formal.

5.7.6 Facilitating the groups and interviews

The researcher plays an active role in facilitating focus group discussions by encouraging interaction and being attentive to it (Barbour and Kitzinger, 1999; Berg and Lune, 2014). In the interviews, it was important to establish rapport with the adolescents to make them feel comfortable in expressing their own viewpoints (Gibson, 2012). As a facilitator of the focus groups, I started the discussions and interviews by explaining to the participants about the activities and reminding them of their rights. I started the interviews with a general topic discussion of asking them what they did in their free time, and what they could tell me about their country. I always tried to dress casually when I went for interviews to "blend in" and not be perceived as formal. The way the facilitator dresses up is considered a factor that helps build rapport with the participants (Barbour and Kitzinger, 1999). I also emphasised to participants that everyone might have a different opinion, especially in focus groups and that it is important to listen to all views and respect them all. In some groups, there were some dominant participants and some more silent ones, and I had asked for the more silent participants to comment on their views and encouraged them to speak by probing around some specific questions if they felt comfortable to (e.g. commenting on specific GHWs).

5.7.5 Recording, transcribing and overcoming recording difficulties

I obtained approval from the participants for the use of audio recording and note taking during the focus groups and interviews. The notes were used to aid the recording to help me at first to keep track of the participants' seating plan and to associate it with their numbers and voices. The difficulty during recording was sometimes them talking over each other when they became enthusiastic in their discussion. I tried to ask them to speak one at a time or sometimes to repeat what they said while mentioning their numbers to enable me to attribute the quote to the participant.

I transcribed the interviews within a one-week timeframe of the interview date, first because I was still able to recall the interaction, and second to go over the transcription before upcoming interviews and correct any flaws in my questions or follow-ups. In the UK all interviews and focus groups were conducted in English. In Qatar, some focus groups were conducted in Arabic as some participants were not comfortable speaking or understanding English, while in other groups, participants requested to speak in English, because it was more comfortable for them. As a result, all interviews that had been conducted in Arabic had to be translated into English. Arabic is my native language and I was able to transcribe the interviews directly into English easily, however, some words that have a culturally

embedded meaning were more difficult to illustrate so I kept them in Arabic as well and tried to explain the meaning in English.

A difficulty I faced in transcription was the volume. I was more confident in transcribing the interviews and focus groups myself, first because I had noted down the notes that could help me identify participants' voices with their numbers or seating plan or some words they used. Second, this would keep me closer to the data than an outsider who is not familiar with the discussion and as such might create certain errors during transcription. Transcribing myself also helped me pay more attention and be more aware of the facilitation in subsequent group discussions. I allocated numbers to participants and at the beginning of the recording, I asked each participant to say their numbers to identify their voices. With the use of the notes I took and by asking the participants or repeating the participants' numbers, I was able to reduce any errors that might result from that.

5.8 Analysis

Finally, in this chapter, I discuss my analytic approach to the data, especially in terms of balancing the group picture with the individual one. I then discuss the organisation and coding of the data that helped in developing the coding framework.

5.8.1 Analytical approach: thematic analysis

Thematic qualitative analysis was undertaken for this study. Thematic analysis is the process of identifying patterns and emerging themes from the data (Boyatzis, 1998; Silverman, 2001; Berg and Lune, 2014). According to Charmaz (2006), emergent systemic themes is when the analysis of themes from one focus group or interview serves as proxy for other interviews to "test" the themes or explore them further (Charmaz, 2000; Onwuegbuzie et al., 2009). Accordingly, I applied the analysis by bringing together similar themes and comparing similar and contrasting themes among participants from the same country or across countries. Moreover, themes were grouped and analysed throughout the data collection process.

Following the interpretative perspective of the study, to reflect on the group dynamics, I triangulated the data collected from participants in the focus groups with my notes in the reflective journal (field notes) where I had written down my interpretation of the group dynamics and individual voices. In the focus group analysis, the context of the group and its dynamics was important. It was important to note down participants who presented their individual voices, opposed or agreed on certain points of discussions and to pinpoint the

points of discussion where the whole group construct an agreement. Focus groups are often critiqued for being a tool where sometimes one participant might have a dominant voice and might alter views of others in the group (Barbour and Kitzinger, 1999). Even though this is true, it is also representative of a real-life situation. The groups I interviewed were friendship groups and as such it is the social network that participants hang out with which in turn "creates" or builds their understanding and perception of issues.

5.8.2 Organising and coding the data: development of the coding frame

Data from the discussions in the focus groups and interviews were transcribed verbatim and photographs of the as activities of the matrix ranking, mood board and designs were taken during the focus groups and interviews and added to the transcription for analysis. The information from the short background questionnaire was also added to the transcript to give an overview of the description of the sample. Some of the data were collected in Arabic (12 focus groups) and I translated it into English and checked it against recording and translation accuracy.

The analysis followed the constant comparison analysis by Corbin and Strauss which is characterised by three phases: open coding, *a priori* and axial coding (Corbin and Strauss, 2008). The initial coding, which occurred as data were being collected, aimed to identify emergent codes. The initial manual coding known as open coding was to identify interesting perspectives and discussions and then narrowing it down in the next phase. The initial coding was cross-referenced with a sample of the transcripts by the supervisors' (TA, HW, SH) independent coding. There was broad agreement on the codes identified. The second phase is when the codes are narrowed down and grouped into categories. During this phase theory driven codes are identified from the data. These codes are based on the literature review and the theoretical lens. The third stage, axial coding, is when codes are studied across criteria such as gender, smoking status, context to identify relationships to other codes (Silverman, 2001; Saldaña, 2015).

The data were fed into Nvivo V.12 for further organisation of the codes and patterns detection. Nvivo is a data management tool, widely used in qualitative research. It is a researcher driven analytical tool, which is inherently subjective (Bazeley and Jackson, 2013). The initial coding resulted in a total of 116 nodes. The codes were then narrowed down in the next stage to 20 codes and then related/assigned to three overarching themes, which were aligned with the three research questions. Table 9 relates the codes and sub-themes to the three main themes of the study.

The study findings are reported in the findings chapter (Chapter 6) and discussed against the literature and the theory of semiotics in the Chapter 7 in the discussion chapter.

Table 9. Definition of codes

Theme	Sub-theme	Code type	Description of sub-theme
ADOLESCENTS' PERCEPTIONS OF GHWS	**GHWs increase awareness and emotional appeal**	*A priori*	This theme covers the perception of adolescents that GHWs increase awareness of adverse impact of smoking and increase negative emotional appeal
	Unintended consequences of fear	*A priori*	This theme covers the unintended consequences of existing GHWs that might interfere with adolescents' engagement with the warning labels (e.g. effect of fear wears off shortly; ethical concerns and emphasise stigma; adolescents ignore or avoid the message)
RELEVANCE OF THE MESSAGE TO ADOLESCENTS	**Understanding the intended meaning of the GHW**	Theory driven	The theme reveals how adolescents understand the messages on GHWs (e.g. misunderstanding of messages, importance of understanding the intended meaning)
	Message characteristics	Axial	The theme identifies message characteristics perceived by adolescents as important to enhance the relevance of the GHWs (e.g. perceived proximity; proximity link with cultural context; perceived authenticity; link of gender roles with authenticity)
	Social and cultural context	Axial	This theme covers adolescents' perceptions on relating GHW to their social and cultural context (e.g. communication preference; role of religion in the perception of GHWs; importance of social relationships; link to parenting style, role of religion)
ALTERNATIVE MESSAGES	**Communicate short term consequences**	*A priori*	This theme covers the perception of adolescents on the importance of alternative GHWs and anti-smoking (e.g. short-term social and health consequences of smoking (e.g. Aesthetics, sports, relationships)
	Incorporate positive messages	Axial	This theme covers the adolescents' views on their perceived relevance to positively framed messages in changing adolescents smoking.
	Other novel approaches	Axial	This theme covers the perception of adolescents on the importance of including innovative messages for the cigarette pack which might help change their attitude yet goes beyond the image (e.g. audio packs, dissuasive cigarettes, foul odour cigarettes; delivery of message) and adding another principle of the marketing mix (e.g. concept of exchange; price)

5.9 Facilitator skills, persona and reflexivity

In qualitative research, being reflective of one's own biases and standpoints is a strength rather than a weakness of the method. It reflects that the researcher is being transparent and reflexive throughout the study processes in data collection, data analysis and the dynamics of managing the relationships with participants in terms of power and self-identification (Saunders, 2011). However, I was conscious of my own standpoints and noted down my reflections as part of the field notes during the data collection process (Easterby-Smith et al., 2015).

Throughout the fieldwork, I realised that it was harder to build rapport during interviews, where the participant was in a one-to-one discussion with the researcher. I tried to maintain a friendly and polite as well as non-judgemental attitude assuring the participants that I was conducting the interviews to listen to them and not to talk about what they say to anyone else and that it was important to me to know how they exactly feel and perceive the GHWs. It was in interviews when some participants opened up about their family's lifestyles or habits of smoking and related it to their own more than in focus groups.

Participants often seemed to be curious about my smoking status and sometimes asked me questions on tobacco control policies in general. I told them that I am a non-smoker but also tried to answer their questions in a way that does not involve any judgement or leads them to one side and rather explained that the main purpose of the tobacco control policies is to help smokers quit.

There might be a debate on the involvement of the researcher during the focus group discussion, where some researchers argue that the facilitator must maintain neutrality and objectivity throughout the discussion and others have debated that notion (Barbour and Kitzinger, 1999). The latter point of view states that the facilitator's role or impact is "diluted" in a focus group discussion as participants would be addressing each other and as such might become less aware of the role or presence of the facilitator (Barbour and Kitzinger, 1999). I was conscious that my accent sometimes might have sounded slightly different from that of the participants (English vs Scottish and Lebanese vs formal/classic Arabic), yet it seemed to me that participants were able to understand me well. Moreover, in the interviews and discussions I emphasised that I was not related to the school or gatekeeper of the youth organisation. I was interrupted a few times by school administrators during focus group discussions. I had to make it clear to them and the students that their contact and the information they provide is only accessible to me and that I abide by the ethical

guidelines mentioned in the information sheets and that any disruptions risk confidentiality. I wrote down in my reflective journal that this did make the participants feel more comfortable in sharing their thoughts with me and that participants expressed this during the discussions. In interviews and focus group discussions, whenever I mentioned that the study aims to explore adolescents' perceptions and explore what messages could work better for adolescents and that it is important to come from them, participants seemed to feel relaxed, comfortable and engaged *(Field note- 8 March, 2018, UK).*

5.10 Summary

The chapter explained the rationale of choosing a qualitative research method. It explained in further detail the choice of conducting friendship groups and interviews, accompanied with a combination of activities known as the projective technique. At the end of the chapter, an overview of the sample description is provided along with identifying and defining sub-themes within the three main themes: Adolescents' perceptions of GHWs, relevance of the GHWs to adolescents and alternative approaches to fear appeal.

CHAPTER 6: FINDINGS

6.1 Introduction

Analysis of the data identified themes using theory driven coding which have been grouped together to align with the research questions of this thesis. The three overarching themes are, "adolescents' perceptions of GHWs", "relevance of the message to adolescents", and "alternative approaches to fear appeal" to reduce unintended consequences. The first theme comprises two sub-themes, GHWs increase awareness and emotional appeal, and unintended consequences of fear. The second theme includes three sub-themes, understanding the intended meaning of the GHWs, message characteristics and social and cultural context. The third and last theme includes three sub-themes, communicate short term consequences, incorporate positive messages, and other novel approaches. I refer to quotes from participants in the UK and Qatar to highlight interesting similarities or differences in the data. I also denote images of some examples of designs of GHWs by participants.

6.2 Describing, interpreting and reporting the data

Since there are two study sites, a separate findings chapter provides a comprehensive overview of the data, first highlighting the similarities and differences that emerged from participants in the UK and Qatar. The discussion chapter (Chapter 7) provides a further interpretative dimension to the data by linking them back to the literature and the theoretical framework. The data in this chapter are reported as themes, and quotes from participants were used to illustrate examples and support the themes; sometimes, more than one quote was used to illustrate differences or similarities between participants in the UK and those in Qatar.

6.3 Sample characteristics

In the UK, an overall of thirty-three participants were interviewed in nine focus groups and six individual interviews (Tables 10 and 11). In Qatar, 108 participants were interviewed in 26 focus groups (Tables 10 and 11). The average age of the participants in both countries was similar, 14.94 and 14.97 years in the UK and Qatar respectively.

Table 10 Sample characteristics according to smoking status (UK and Qatar)

	UK Sample			Qatar Sample		
Smoking Status/Gender	Male	Female	Total	Male	Female	Total
Current Smoker (n)	2	6	8	12	2	14
Used to Smoke (n)	1	2	3	7	1	8
Tried smoking (n)	3	1	4	16	7	23
Never smoked (n)	7	11	18	38	25	63
Total (n)	13	20	33	73	35	108

Table 11 Sample affluence (per FAS scale)

Affluence	Low Affluence	Middle Affluence	High Affluence	Total
Number of Participants in the UK (n)	12	14	7	33
Number of Participants in Qatar (n)	4	39	65	108

The number of females in Qatar is smaller than that of males since many of the schools for girls in Qatar refused to grant access to conduct the study. This could be due to the idea that in Qatar, smoking among women is not socially acceptable. Moreover, I contacted more than 50 public and private schools in Qatar for recruitment. Although the tuition fees of private schools might be higher than public schools, the socio-economic status of participants had no major variation. Qatar has the highest GDP per person worldwide and as such it was hard to recruit many participants from lower affluence who are also Arabs.

6.4 Adolescents' perceptions of GHWs

In this section, I present adolescents' perceptions of GHWs from the UK and Qatar; these are divided into two sub-themes: GHWs increase awareness and emotional appeal; and unintended consequences of fear. During data collection, the matrix activity allowed adolescents to rank the GHWs on a chart to identify the least and most persuasive to put them off smoking. It was also an opportunity for adolescents to share their insights on the reasons for their ranking of the GHWs, which unravelled important dimensions to consider in the development of GHWs.

The findings indicated that participants perceived the existing GHWs on the cigarette pack to be effective in raising their awareness of the anti-smoking message as well as increasing

their attention and recall of the message. Participants also disclosed that the existing GHWs increased the emotional appeal of the message. The kinds of emotions which were reported mainly included a range of negative emotions, including fear and disgust (as probably intended given the fear appeal used in the GHWs), but also arguably fewer intended emotions, such as shame, blame and guilt. The data also suggested that the emotional effect of fear appeal only lasted for short periods of time before it wore off, and that the GHWs thus do not necessarily seem to be as effective in motivating adolescents to quit smoking as expected.

6.4.1 GHWs increase awareness and emotional appeal

The findings of this study showed that adolescents from Qatar and the UK were aware of the purpose of GHWs in communicating the adverse impact of smoking. They were able to recall some of the messages and pictorials before I showed them the GHWs. Participants from both countries alike were knowledgeable about most of the adverse consequences of smoking, such as cancers, lung diseases and teeth damage. When asked to rank the most and least persuasive GHWs on a matrix, the GHWs that were always ranked as most persuasive in putting adolescents off smoking were those on the impact of smoking on the teeth and gums (referred to in text as teeth damage GHW – see Appendix 1B) and the GHW that communicates the message that smoking causes lung damage GHW (referred to as lung damage GHW – Appendix 1B).

However, awareness of the GHW purpose and knowledge about the adverse impacts of smoking did not seem to be sufficient to put adolescents off smoking. Participants from both countries indicated strong negative emotions and reported that the existing GHWs make them feel sick, and annoyed. Their emotional reactance towards the warning labels was always obvious and they showed disgust against the message.

The UK GHWs provoked negative emotional reaction among participants, more than the ones that exist in Qatar and more than the warning labels that the participants designed. Qatar GHWs were often perceived as more abstract and less “graphic”, as the female participant (P) in a focus group (FG) from the following quote denoted.

> Participant (P): the ones in the UK are more graphic
> P: the UK ones are more disgusting
> P: and that is just a cigarette (referring to the Qatar GHW)
> N: which ones do you think are more offputting to you?
> All: the UK ones
> P: they are more effective but not really effective (UK, FG, females, non-smoker and tried smoking, middle affluence, 14 years)

Moreover, participants most often expressed physical disgust over the warning labels and used terms such as “this is disgusting”, “scary” and “disturbing” to illustrate their reaction to the warning labels. Respondents who were smokers often blamed themselves and felt ashamed of smoking. The negative emotions associated with the GHWs might interfere negatively with their behaviour.

> P: As soon as I see it I feel like I don’t wanna see it, it gives me the shivers. Cause I don’t want that happening to me, cause the pictures look disgusting. (UK, interview, female, smoker, low affluence, 18 years)

Although the participant in the above quote from the UK was a smoker, yet she felt scared after looking at the GHWs, some of which she perceived as new to her. She kept blaming herself and felt ashamed and bad for herself. She stated that she would like to quit as soon as possible and then she stopped looking at the images, saying they were making her feel sick. At that point I asked her to stop looking at the GHWs if they were disturbing her and asked her to let me know if she was feeling alright, if she needed any further advice and whether she would like to continue. We ended up continuing to chat but rather on her suggestions for alternative warnings. It could be inferred that the emotional reactance of the participant to the warnings might have prompted her to think of quitting, but as a smoker she was already exposed to these warnings. Her response might be also explained as a matter of social desirability, yet the blame and shame feelings were noticeable and important to report on because of the unintended consequences linked to them *(Field note – 13 June 2018, UK)*.

Similarly, participants from Qatar always showed disgust and anger when looking at the existing GHWs, especially GHWs from the UK. Participants from Qatar felt more disgusted by the UK’s GHWs and this could be because they were also novel to them. Participants seemed to have stronger emotional responses to GHWs they were not familiar with, which is in line with the idea of rotating the GHWs.

> P: The UK GHWs are more effective than the Qatar ones because they show what could actually happen, but they are also not persuasive. It is only a picture. (Qatar, FG, non-smoker, middle affluence, 15 years)

Although participants in Qatar had not been exposed to the GHWs from the UK before, many participants seemed familiar with the “type of messages” communicated and recalled a few, such as the teeth damage GHW and the lung damage GHW.

In addition to the above, among participants from the UK and Qatar, it was noticed that smokers felt more negatively about the GHWs than non-smokers did, an intended consequence of GHWs. It was noticeable that non-smokers were more likely to hold more

moralistic views and were also more likely to be in favour of the use of fear appeal. Fear appeal was also more likely to be supported by those Qatari participants who came from traditional backgrounds and more religious ones also supported the use of fear appeal on GHWs.

6.4.2 Unintended consequences of fear

Alarmingly, the findings indicated that the majority of existing GHWs in the UK and Qatar were not perceived as persuasive in discouraging adolescents from smoking. The findings illustrated that the existing GHWs could result in unintended consequences among adolescents and lead to disengagement from the health message. The unintended consequences that could be identified from the data were: (1) effect of fear is not sustained; (2) ethical considerations such as emphasising stigma make adolescents feel worse; and (3) avoiding or ignoring the health message.

6.4.2.1 The effect of fear appeal wears out with time

As GHWs evoked disgust and subsequent negative reactance, some participants in the UK and Qatar alike suggested that the disgust could only last for a few minutes and that its effect on adolescents wears out with time, as the quote below states:

> P: The non-smokers maybe they will look at the harm and won't do it, but from my experience it is something that when you see the package you say ohh this could happen, but over a while you start not looking at it. At the beginning you think this could harm but after a while, you just forget it. You won't recognise that it is there. (UK, FG, male, smoker, low affluence, 16 years)

This view of wearing out the effect of the gruesome images was a recurrent theme among participants from the UK and Qatar alike. This effect might be due to that fear has short-term influence, or their habituation of hard-hitting anti-smoking messages in general. This finding could indicate that negatively framed messages do not necessarily motivate adolescents to quit or change smoking attitudes since according to the participants it might not last long enough to keep them thinking about it. It is also important to note that in Qatar, the same GHWs have been in place since 2012 and hadn't changed since then which could also contribute to desensitisation towards the messages and the wearing out of its emotional impact.

6.4.2.2 Ethical concerns and emphasising stigma

It appeared to me that one camp of the participants already held a negative image of the smoker, while others thought that smokers needed more love and support. Nonetheless, both

camps agreed that the images on the GHWs emphasise the negative picture of smokers and that the current framing did not help them but made them feel stigmatised. The findings from both countries suggested that the negative depiction of the smoker in the current GHWs increased stigma against smokers, who might be the most in need of hope.

> P: Like the teeth one, you would be embarrassed walking around with it like this and people would ignore you. (Qatar, FG, male, non-smoker, middle affluence, 13 years)

> P: I will put "don't think of it as quitting, think of it as gaining", because it is trying to show a positive way into quitting
> N: Why do you think showing a positive way to teenagers matters?
> P: Because they might start thinking they are not actually as bad as they seem. (UK, interview, female, non-smoker, middle affluence, 13 years)

The participant from Qatar indicated rather that even though the teeth GHW was perceived as most persuasive and relevant to adolescents, yet it was perceived as "embarrassing" to hold it because of its disgusting image. The participant from the UK, on the other hand, stated that she suggested rather positive messages to reduce the existing stigma against smokers and engage them better with the message. Some participants shared pre-judgements on smokers (stereotypes) and how everyone looked at an adolescent smoker and their background and added that the negatively framed messages on the existing GHWs did not seem to reduce this pre-judgement.

Most of this perception was due to adolescents' judgements; some participants also referred to describing smokers by referring to the existing GHWs (e.g. the GHW that shows a naked man to communicate risk of impotence, was associated with homelessness and hunger that was perceived as linked with smoking).

Participants mentioned that the existing GHWs used a paternalistic tone which added to the stigma around smokers. Participants in Qatar mentioned that the authoritative tone of the GHWs might trigger the sense of challenge and rebellion against the warning message, as one of the participants claimed in relation to the existing GHWs in the UK and Qatar:

> P: (adolescents) they like to think that they are given the freedom of choice to decide whether they want to smoke or not. (Qatar, FG, female, used to smoke, high affluence, 15 years).

In the focus group discussion of the above participant, participants were constantly referring to adolescents as rebels. They highlighted that messages that make stigma worse and sound authoritative motivate adolescents to rebel against the message and rather do the opposite. They suggested that a better way to communicate and convince adolescents was to empower them by making them know they were responsible and have a freedom of choice.

Finally, participants from both the UK and Qatar stated their refusal of the current GHWs, because of the paternalistic approach they communicate. They often commented that the overuse of fear in some GHWs held a counter-effect, made them laugh and made them want to smoke as a result. Furthermore, participants also stated that the current GHWs made adolescent smokers' feel worse, by making them feel more down and judged upon. Some participants indicated underlying stereotypes of "smokers" as "bad people" or of "bad influence", and they indicated that the existing GHWs emphasised these stereotypes.

In addition, participants stated that the existing GHWs invade ethical issues. Such as the participant from the quote below when he reflected on why he thinks the existing GHWs are disturbing and irrelevant.

> N: And why does that disturb you?
>
> P: First because it's a picture of somebody who could have died or somebody who is alive and had an operation and died which is just disturbing. so it's like invading other people's privacy it's too graphic because if you're an adult and you smoke and your children pick it up and they're like what's that Mum or Dad and then you will have to explain that and there is no way you can explain that at an early age to them". (UK, interview, male, non-smoker, 13 years)

The above quote illustrates some ethical concerns of using photos of strangers and exposing involuntarily gruesome images to children, which is an unintended outcome.

This analysis showed that those who were from lower socio-economic status (SES) backgrounds felt most disturbed by the use of fear and that the GHWs made them feel worse. Participants mentioned that the use of fear to convince adolescents to avert from smoking might lead to worsening adolescents' wellbeing. For example, a male participant from Qatar who used to be a smoker stated that the current GHWs might trigger negative emotions which might have detrimental effects especially for vulnerable adolescents who could be already passing through tough times. He stated that the existing GHWs communicate a message that life is not worth fighting for and that if someone was feeling down, such messages do not help them. A similar rationale in how fear might lead to worse consequences on adolescents was repeated several times during the group discussions and the interviews, mainly from participants who were smokers or former smokers. This finding raised the issue of health inequality from the GHWs which could be reinforcing negative emotions and negative thoughts and stigma on those who are most vulnerable.

In a country like Qatar, the stigma against smoking, especially female smoking, is stronger than in the UK, thus highlighting further ethical implications in the existing GHWs and

widening the gap of inequality in society. This finding was not noticed among participants in the UK, who on the contrary found it relevant.

6.4.2.3 Adolescents ignore or avoid the message

The common findings between the UK and Qatar suggested that adolescents tend to ignore the warning labels because of the gruesome image used. They stated that it provoked a feeling of disgust and that encouraged them (smokers) to cover the GHWs to avoid the warning image. Disengaging with the message meant that the message was not reaching adolescents. This disengagement with the message challenges the purpose of GHWs which must reach everyone and motivate them to think about their behaviour rather than let them look away.

Participants in the UK and Qatar showed signs of disengagement with the anti-smoking messages of GHWs. It emerged that adolescents might ignore the health message or cover it by a "tin" cover to avoid exposure to gruesome images.

> P: They make you feel sick.
> P: This is why people start getting cigarette package covers, cause no one wants to see those images
> P: Yeah they put it in tins. (UK, FG, females, 17–18 years, smokers and used to smoke, middle affluence)

> P: People might not even look at these, they just take it off.
> P: Yeah they might ignore it
> N: Why?
> P: If somebody is 13, this is just too much.
> N: What do you mean by too much?
> P: Make it less graphic than this
> P: Because somebody would say these are fake, it is just a picture. (Qatar, FG, males, 13 years, non-smokers, middle affluence)

The above quotes reflected a common response especially from participants who were smokers. As the participant mentioned, existing GHWs use of fear appeal which was causing disgust and discomfort led them to disengage with it and to find ways to cope with the discomfort, such as covering the messages. Similarly, in Qatar, covering or avoiding the GHWs was also a recurrent theme and people associated the response with the fact that the images are too graphic and exaggerated.

6.5 Relevance of the message to adolescents

Participants reported that they perceived the GHWs as ineffective in changing their smoking attitudes and more importantly that they were irrelevant, and they could not relate to them. During the matrix and the design activities, some reasons of disengagement with the GHWs emerged. These reasons were attributed to the warning label messages content and design as well as the lack social and cultural relevance of the GHW messages.

First, the findings showed that adolescents' meaning creation of the GHWs did not always match the intended meaning of the GHW. This insight could be attributed to several reasons in the content and the design of the GHWs. Second, various message characteristics were identified as important to enhance the relevance of the warning labels, including the perceived credibility and temporal relevance of the health message. Participants in the UK and Qatar shared the common views that messages should relate to their own experience and be authentic. However, their perceptions of what was perceived as authentic or proximate differed. Finally, the engagement with the GHW message was closely related to the social and cultural context of adolescents. Participants from the UK and Qatar shared common cultural factors that seem to be vital for perceived relevance of the health message.

6.5.1 Understanding the intended meaning of the GHWs

Some of the GHW meanings were harder to understand and participants often asked me for an explanation. Respondents perceived that the language influenced adolescents' understanding of the meaning of the GHWs. If the message is not perceived as relevant to the target group, it might create a barrier to understanding the intended meaning of the GHW. For example, findings from participants from Qatar and the UK showed that some of the terms used in the current GHWs were perceived as difficult to pronounce and understand (e.g. infertility, mortality, impotence). Participants, in particular those who were in the group of the lower SES often did not understand the meaning of the words or the accompanying pictorial.

> P: For the first one (pointing at the impotence GHW) I would say the language. There has also been sometimes that I'd see someone look at the package and say hmmm … like dunno what mortality means …
> … I can't imagine that there is a lot of people that know what fertility means
> …. make it so the young people know what they are talking about … not those fancy words.
> (UK, FG, male, non-smoker, low affluence, 16 years)

The above quote from participant from the UK who could not understand the meaning of infertility and mortality indicates a drawback of the existing GHWs. GHWs are supposed to also reach those who are vulnerable and include those of lower SES, yet the findings do not seem to support that they currently do.

Not only that, participants in some instances perceived the wrong meaning of the GHWs such as being "funny", "cool" or a wrong meaning. For example, the skull GHW, which was supposed to communicate the risk of death from smoking, was often perceived by participants from both countries as encouraging smoking and sometimes perceived as cool. Moreover, some participants even those who were non-smokers perceived some of the images to be cool to carry them around. They perceived that carrying a packet with a skull on it was actually appealing and cool for adolescents. The GHWs that were perceived as cool were mainly the ones found in Qatar.

> P: I actually think the snake one is cool like you want a snake on a cigarette that it doesn't look off putting I think oh yeah it's cool I actually want to smoke. (UK, FG, female, non-smoker, low affluence, 18 years)

> P: This one (skull GHW) is not gonna be persuasive
> N: Why?
> P: Guys like pictures of skulls
> P: yeah. (Qatar, FG, males, non-smokers, low and middle affluence, 15 years)

> P: "I find this (stroke GHW) very funny ….
> N: Why?
> P: Because he is not dying. If someone was dying in front of you, you won't be like oh okay I know where I wanna put this. I wanna put it in front of a cigarette package. Let me just take a picture of it and send it to them … you know what I mean." (UK, FG, males, non-smokers, low affluence, 14 years)

The above quotes illustrate that the meaning of the warning label was misunderstood and led the participant to say that the messages would make them want to smoke as they perceive it as cool.

Another example of a GHW that was misunderstood was the "smoking mother and child GHW", which was supposed to communicate second-hand smoking, was not understood and was often perceived as fake or ethically incorrect, since in their opinion parents would never do that to their children. Participants from Qatar and the UK thought that the GHW did not meet its purpose and its meaning was not well understood and because it was perceived as fake; that no parent would puff the smoke on their child.

> P: I don’t think parents would do that (parent puffing smoke in the face of a child). They will actually turn around and blow it away. (UK, FG, female, non-smoker, middle affluence, 14 years)
>
> P: Basically obviously smoking could harm people yet but for example my mum yeah was smoking when she was pregnant with me but I wasn't affected thank God but this picture the one with the mother and the child blowing smoke on the child this annoys me you know I see that a bit of abuse. (UK, FG, female, smoker, high affluence, 17 years)
>
> P: See here he is blowing smoke in the child’s face and this is so unrealistic cause most parents if they smoke it is either in another room or outside the house. (Qatar, FG, female, non-smoker, high affluence, 15 years)

The participants in the above quotes discredited the warning label and perceived it as unrealistic by reflecting on their own experience at home and with their parents.

The above viewpoints were especially important when ensuring that GHWs also reached vulnerable populations, who might have varied educational levels. Having text that might not be comprehended by those individuals, or unrealistic images might defy the purpose of GHWs in the first place.

6.5.2 Message characteristics

Participants discussed several factors in the content of the current GHWs that influence the way adolescents understand the warnings and perceive their persuasiveness. There were two different issues we need to be aware of: credibility, authenticity and closeness/proximity. From the findings, credibility is defined as the level of trust between the target group and the communicator source. Perceived credibility is how much a participant trusts the source. Perceived authenticity refers to the level of personal resonance that the target group perceives of the health message. It has been illustrated from the study findings that there is a link between authenticity and proximity to the social and cultural underlying assumptions that create how adolescents perceive GHWs.

6.3.2.1 Perceived long-term health effects

Findings from the UK and Qatar showed that there were some common factors that adolescents from both countries shared when making sense of GHWs. Participants indicated low perceived risk and stated that adolescents might disengage with GHW messages because they showed long-term health consequences. Respondents perceived them as too far from happening to them and they often stated that they might stop smoking before anything bad happened to them.

The GHWs that were perceived as most irrelevant were perceived as such because they were too distant, such as the stroke GHW, the eye blindness, and the cancers (throat and mouth). Respondents often did not relate to these GHWs and always ranked them as least effective in changing adolescents' behaviour, as shown below.

> N: And how effective do you think they are for teenagers to make them stop smoking or prevent them from starting?
> P: Not particularly effective because all are long-term health effects so people at our age will not think of long term in that case. A lot of people our age kind of think different, they will not think in 13 years what will happen. They probably think in 5 or 6 years. (UK, FG, low to middle affluence, female, non-smoker, 16 years)

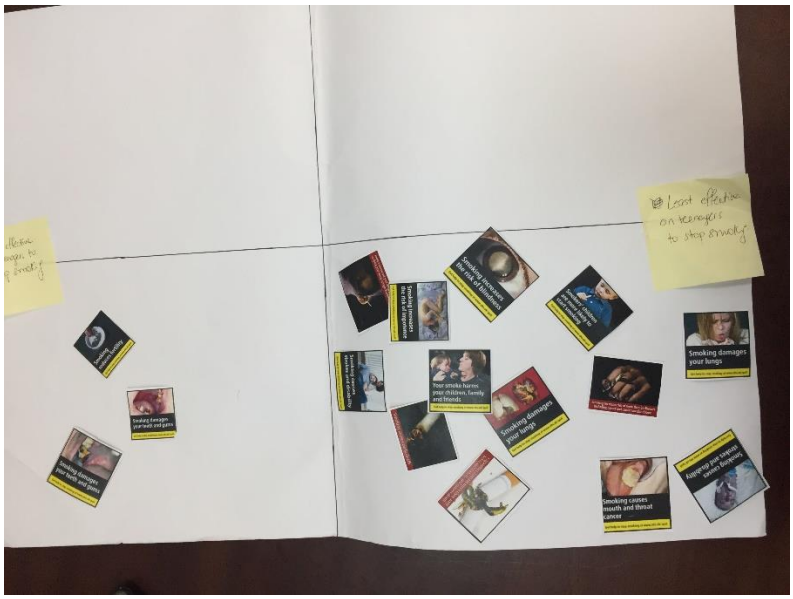


Figure 6 GHWs ranking of short-term consequences as most persuasive *(Qatar, FG, males, smokers, 17–18 years)*

As in Figure 6, the matrix activity often showed the GHWs that were ranked as most persuasive were the ones that communicated short-term consequences. In Qatar especially, males ranked the GHWs of the impact of smoking on fertility as most persuasive. I talk more about this point later in the section.

It was also noticeable that in the design stage, participants often drew on topics that were short term such as the impact of smoking on looks (faces), the impact of smoking on their family and close friends, the impact of smoking on their education and of having social relationships.

Participants perceived most of the GHWs in the UK and Qatar as of low perceived risk of the dangers of smoking because the health warnings seem to communicate long-term health effects.

> P: This only happens if you continue and continue. So, some people look at it and they would say this is not going to happen to me, I have been smoking for only a year. (UK, FG, female, non-smoker, middle affluence, 14 years)
>
> P: These are ineffective because all are long term. For example, a message I heard on who smokes lives till 50 years and who does not till 70 years is very long term.
>
> P: Teenagers will say I will stop eventually and none of this will happen. (Qatar, FG, males, non-smokers, middle affluence, 15 years)

As the above quotes show, participants stated that adolescents do not think that they would for example get cancer unless they smoke for a long period of time. They also suggested that adolescents usually believe that they would stop smoking before an adverse effect of smoking might happen to them. They don't expect that the risk applies to them, because they might not be aware of the addictive nature and the fact that they are likely to smoke in the future; because they are confident – against current evidence – that they will stop later.

Although participants were knowledgeable of the harmful health effects of smoking, this was not enough to make them perceive the warning label as persuasive. Participants explained their answer by suggesting that adolescents were more concerned with risks of short-term consequences such as for example consequences of smoking on looks and their performance in sports.

Moreover, participants stated that GHWs showed old people which might make them disconnect from the warning labels and suggested showing images of young people instead of adults. The stroke GHW combined more than one reason for disengagement, that of being long term and exaggerated. Participants in the UK and Qatar also questioned why the images always used adults and none of the messages seemed like targeting adolescents. They suggested incorporating more messages and images of adolescents that they could relate to. All participants when asked to come up with a design for a potential GHW often drew a young person and they only used adults in their drawings when it resembled a parent.

This showed the importance of relevance to their social context and these interests that are mostly short-term when thinking about how adolescents perceive GHWs.

6.3.2.2 Time-bound relevance link with cultural context

However, there was a difference between participants from Qatar and the UK on what was perceived as short term or long term. For example, some messages resonated better among participants from Qatar than participants from the UK and were perceived as short term and

relevant and vice versa, such as the "smoking causes impotence and infertility in men GHW" – which is a UK warning. For example, participants in Qatar often ranked the "smoking causes impotence and infertility" GHW as relevant and showed high perceived risk. They stated that they perceive it as a short-term consequence to males in Qatar. Males in Qatar stated that they think about marriage by the time they reach 18 years old. Unlike insights from participants in Qatar, participants from the UK did not find the infertility GHW persuasive in changing adolescents' smoking attitudes. The warning label was perceived as irrelevant among participants in the UK, as it was seen as a long-term health effect. So, it could be possible that the "impotence and infertility" GHW seem short term to some cultures and more distant for others.

Fertility seems to matter more to men who are likely to be concerned with building a family soon than with men who are not concerned (yet) with a possible lack of fertility Thus, having children and being fertile is of more immediate concern to Qatari males. The reaction towards the fertility GHW is thus a stellar example of the importance of portraying short-term risks which are of immediate relevance to adolescents.

> P: I choose the fertility and teeth GHW
> N: why?
> P: If he is young and saw this GHW, he would evaluate the risk for later on if he gets married
> …
> P: Also fertility and teeth
> P: When someone reaches teenage and when they get older they want to have children and a family
> P: The most important thing among guys is being healthy to have kids.
> (Qatar, FG, males, smokers, low and middle affluence, 17 years)

The above-mentioned perspectives from participants in the study not only showed the importance of the relevance of short-term communication messages, but also uncovered an underlying cultural factor that perception could be attributed to.

6.3.2.3 Perceived authenticity of the communication

Participants attributed the reasons they perceived some of the GHWs as least persuasive in changing their smoking attitudes firstly because they communicated long-term health effects and secondly because they were perceived as irrelevant, "fake" and "exaggerated". For example, the stroke GHW, which was supposed to mean that smoking causes stroke and disability, was perceived as fake. Participants from both countries justified their answer by stating that the warning label looked like someone posing for the camera or photoshopped.

Similarly, the GHW of the burning hand was always perceived as ineffective in changing adolescents' attitudes to smoking because it was perceived as fake and unrealistic. Participants backed up their responses by relating it to real life experience; they mentioned that they had seen no one's hands get burnt "like that" because of cigarette smoking.

> P: The hands one is not effective at all
> N: Why?
> P: This will never happen
> P: It is unrealistic. (Qatar, FG, former smokers and smoker, males, middle affluence, 16 and 17 years)

Besides, respondents felt that the warning labels did not reflect their reality and they discredited them by commenting that the use of the message is unrealistic and that it did not happen in real life. They frequently referred to their real-life experiences to discredit health messages and argued that the images depicted consequences isolated from their social context and that they did not match what they themselves experienced in their everyday life. Participants from both countries related the GHWs to their individual stories and agreed or disagreed with messages accordingly. When asked to rank the GHWs on a matrix of most to least effective, often personal stories and experiences that relate to the GHWs were shared and discussed with the group. It appeared to me, therefore, that creating the meaning of GHWs is embodied in the social and cultural context as well.

6.3.2.4 Credibility and trust of message source

In addition to the perception of existing UK and Qatar GHWs as exaggerated, participants questioned the credibility of the sources of the images which made them perceive the message as fake. It seemed that communication through the existing GHWs did not build trust or credibility of the source to recipients (adolescents). For example, participants often asked for testimonials of people their age as a more credible approach than the existing GHWs.

> P: Instead of stating facts, put stories of people, it will feel more real
> P: Yeah this actually happens to people, or direct them to website with information that is trusted. (Qatar, FG, females, non-smokers, affluence, 13,14 years)

> P: In my opinion none of these messages are persuasive to teenagers
> N: Can you think of messages that could be?
> P: A message from his father, someone they trust could advise him like a friend. (Qatar, FG, male, tried smoking, affluence, 15 years)

The above quotes show that participants asked for communication that could allow them to trust the sender or that gives the sender credibility, whether it is through displaying testimonials; or by communicating messages from trusted people. Moreover, by questioning the ethics of the messages, they indicate that they don't trust the person/institution which puts them.

Moreover, it seemed that if participants perceive the source of communication as trustworthy and credible, it is more likely that they engage better with the messages. Participants often questioned why smoking which is considered a harmful behaviour is not considered illegal. They state that this makes them question the intentions of GHWs. One participant thought that the tobacco industry is responsible for choosing the images displayed and perceived it as the companies showing good intentions.

Another example of the influence of a credible message source was that of a female participant who recently quit smoking and said that it would be better if GHWs were framed in a way that did not impose on adolescents an action to do and rather came from a trusted source. She told the story of when her parents discovered that she smoked and how they brought a religious figure (Sheikh)-perceived as a credible message source- to speak to her. Participants in Qatar, appeared to perceive religious figures as trusted sources (*Field notes – 31 Oct 2018, Qatar*). She stated that the Sheikh explained the impact of smoking not only on her but also on the people she loved. She commented on that discussion that it felt like it was her choice to make and this was the reason she was convinced to quit, and she did. This example held many themes within it in addition to the credibility of source, but also to the communication style – away from an authoritative tone – it also really emphasised the importance of a trusted source on the credibility of the message and the motivation to change the smoking attitude. That also indicates that communication via GHWs could seem crude and that the reason why the communication was successful was also that it was personalised.

6.3.2.5 Link of gender roles with authenticity of the message

The study findings show the potential influence of societal gender roles on the way adolescents create meaning from GHWs. The warning label that showed a pregnant woman is supposed to highlight the effects of smoking on pregnant women and the foetus. Participants in Qatar understood the meaning behind the GHW; however, they did not engage with the warning label and thought it was culturally unacceptable. Justifying their answer by the fact that smoking among girls is a cultural "taboo", they appeared to find the pregnant woman GHW as irrelevant and unfitting to the context and as such ineffective in changing adolescents' attitudes towards smoking.

The stigma against women who smoke in Qatar might influence the way participants perceived the relevance of the warning label. When discussing their disapproval to the warning, participants from Qatar often talked about the societal role given to men, which are less stigmatising and offer a higher level of freedom than women. This observation might be an underlying reason for example for the participants that made them discredit the pregnant woman GHWs and authenticate the impotence GHW.

> P: The pregnant woman one is not that effective. Especially among the Arab societies this does not really apply. In Arabic societies it is very rare to see a woman smoking, once every few months I see a woman smoking
> P: Whereas you see a man smoking, everyday. (Qatar, FG, males, smoker, low affluence, 15 years)

In Qatar participants mentioned that smoking among women was a cultural taboo, so the pregnant GHW immediately becomes perceived as irrelevant. Although the quote represents insights from males, this view was also held by groups of females. Participants in Qatar perceived this warning label as irrelevant since it is intended to speak to women, and none perceived it as speaking to males and the impact of their smoking on women.
On the other hand, participants in the UK, especially females, related to the GHW that communicated "smoking could lead to premature birth – showing a pregnant woman" and thought it would be effective to change the smoking attitude of female adolescents. Especially in individual interviews, females elaborated on the importance of the pregnant woman GHW, and they stated that it was important for them to know this fact as this might happen to them soon.

6.5.3 Social and cultural context

The findings of this study suggest that the recipient of a GHW actively creates meaning according to predisposed beliefs and norms as well as experiences and social interactions. Cultural and social factors play a role in the meaning-creation process. I then explore the factors. In this section I highlight social and cultural factors that emerged from the focus groups and interview discussions and which emphasise the importance of tailoring GHWs. So, factors from the above section on message characteristics might sound repetitive here as relevance factors like closeness and authenticity were closely associated with the underpinning of social and cultural beliefs and practices.

6.5.3.1 Communication preference

In addition to the above factors on message characteristics, the findings suggested a link between GHW perception of persuasiveness and the preferred approach of communication.

In order to allow adolescents to identify with the messages, several factors on adolescents' preference of communication style emerged. Participants suggested that adolescents would rather be spoken to as adults and as friends. A communication style that involves identifying adolescents as mature without an authoritative approach but rather appealing to their rationale and understanding receptivity were suggested to be important to enhance the persuasiveness of GHWs to adolescents. The study showed that adolescents' meanings of the GHWs are highly subjective, deeply contextualised and impossible to predict with absolute certainty.

Another common finding between participants from the UK and Qatar was that adolescents preferred the messages that did not depict an authoritative tone. They also suggested that messages that give adolescents the responsibility and freedom of choice as a preferable option to the current framing of the GHWs.

Some of the following analysis will appear to be more relevant to the section of alternative approaches to fear appeal. Yet, I decided to include them under the social and cultural theme because they have shown some influences from the social and cultural world of participants. Participants in the UK favoured a more direct approach in phrasing the statements on GHWs and favoured more positively framed messages that communicated the benefits of quitting smoking to the existing negatively framed messages. Participants in the UK also stated that the UK GHWs used a passive tone in communication. Participants perceived this approach as not inclusive or persuasive in engaging them with the anti-smoking message of the GHW.

> P: The messages are a bit passive, so instead of saying this COULD harm, say this WILL harm. Something that is very strong. (UK, FG, male, smoker, low affluence, 17 years)

The participant from the above quote stated that adolescents would prefer a more proactive voice in anti-smoking messages which could deliver an assertive and engaging message; whereas in Qatar, participants preferred an indirect phrasing of the messages to "sound like advice" and a combination of fear appeal and positive messages. It also appeared to me that when they did not totally disagree with fear appeal, participants in Qatar stated that a more friendly way of communication of the anti-smoking message is preferred.

6.5.3.2 Importance of social relationships

Figure 7 shows an example of a design proposed by one of the participants and which communicates a message on the impact of smoking on loved ones. The theme was recurrent among adolescents from Qatar and the UK and they reported that they would think more of the warning and impact of smoking if the impact on others, their families or on friends is

communicated. My findings suggested that adolescents in both countries held family values and showed that they might care for others (their family and loved ones) more than they care about what smoking could do to them.

Figure7 Illustration of a potential GHW design that sends the message of the effect of smoking on others *(UK, FG, females, 13 years, non-smoker)*

My data suggested that communicating the impact of smoking might be more impactful if it showed effects of smoking on others, close ones. From the design exercise, participants discussed the need to identify with the message by displaying messages that are considered relevant and short term to them, but also that showed the effects of their smoking on their loved ones like family and friends. It appeared to me that the message showing the impact of smoking on their close ones might be more impactful than on a message communicating smoking consequences on their health.

> P: They might not have a girlfriend and their girlfriend might leave them as well. If I was in charge of the smoking warnings I would put that. (UK, FG, male, non-smoker, middle affluence, 13 years)

> P: Your loved ones don't want to see you like that
> N: Why do you think this would be effective?
> P: It might touch someone emotionally but make them feel that they are loved. (Qatar, FG, non-smoker, middle affluence, 12 years)

The findings suggested that there might be a link between one's views on relationships and their understanding or perceived persuasiveness of the GHWs. These study findings illustrated the importance of social relationships in creating meaning of what adolescents might perceive as acceptable and relatable.

Although participants from both countries always referred to their parents while thinking about the impact of smoking on their relationship with their parent, there was a difference in the type of relationships that the participants in the UK and in Qatar highlighted. Participants

in the UK mainly referred to how smoking could affect their relationships with their mothers. The impact of their smoking on their relationships with their mothers was a major concern to participants in the UK (*Field notes – 6 March 2018*).

However, in Qatar, participants always referred to the father-son relationship and how smoking might impact the trust in this relationship. According to the findings, adolescents were often afraid they might disturb their relationships with their parents, so they tended to lie about their smoking behaviour and as such do not seek help.

For instance, a focus group from Qatar when asked to develop GHWs stated:

> P: Your dad will not be happy if he sees you smoking. (Qatar, FG, males, smokers and non-smoker, middle affluence, 15 years)

Moreover, participants in Qatar kept emphasising their concern for their future as husbands when relating to the infertility GHW. In the discussions in Qatar, there was a continuous emphasis on the role of the relationship with the father and as a husband. Adolescents often suggested messages relate to the male figure, which appeared to me as associated with the social relevance of the male gender role.

6.5.3.3 Link to parenting style

Participants from Qatar referred the way the current GHWs were framed to the parenting styles (authoritative vs authoritarian) they experience and are common in their culture. When asked about their thoughts of the existing GHWs and their persuasiveness to avert adolescents from smoking, participants in Qatar often associated their preference (fear appeal vs positive messages) while discussing how their parents would deal with such situations. For instance, it appeared that participants who had an open relationship with their parents favoured positive framing of the messages whereas those who appeared to have a more reserved relationship and were expected to be grounded favoured a combination of fear appeal with positive messages.

Participants reported that fear does not always work with adolescents and that a more open and friendly approach could be more engaging. They stated that GHWs sound authoritarian, which to some sounded similar to how their parents would communicate with them and they stated that this type of communication might sometimes lead to unintended outcomes.

> N: Why do you think scaring adolescents does not work?
>
> P: I think teenagers are just used to being scared like in these (pointing at GHWs). For example, my friend smokes and his parents grounded him when they knew and asked him to leave the house. He is now staying at our

friend's place and still smoking. He does not care anymore, he lost hope in life.

P: Yes I think making teenagers scared does not work with everyone, especially if they are used to it. (Qatar, FG, male, low affluence, 15 years)

In the above quote, participants reported that existing GHWs might not be engaging because it sounds like a paternalistic type of communication and commented that the use of fear appeal might lead to unintended consequences. One participant related the discussion of rejecting the current communication framing of GHWs to her personal experience, when her family knew she was smoking and the way her family approached it. She suggested that had her mother spoken to her with an authoritarian approach she wouldn't have quit smoking.

6.5.3.4 Role of religion in the perception of GHWs

The commonality between participants from both countries was that the more a participant held a more conservative and traditional view, the more likely they were to accept messages of fear appeal (*Field notes: 26 November 2018*). The "role of religion" on perception of GHWs was a common theme among participants in Qatar, but not in the UK, where it never emerged as a relevant theme to adolescents.

From the discussions among participants in Qatar, anti-smoking messages that link it to religion were perceived as relevant and persuasive in putting adolescents off smoking. Below is a quote from a focus group, where when participants were asked to design an alternative message; they stated:

P: There is something in religion that we can write, what is the verse?
P: (mentions a verse from Quraan) ... ولا تلقوا بأيديكم إلى التهلكة
*translates to: "make not your own hands contribute to your destruction"
P: Yeah we can put
(Qatar, FG, males, smokers, middle and high affluence, 18 years)

The above quote showed that messages about the importance of tackling religion in connection with smoking is a message that might resonate with adolescents in Qatar, specifically not verses but messages that are religious. Religion being an important part of the culture in Qatar might mean it adds an important anti-smoking message that is relevant to the context of the adolescents.

6.6 Alternative approaches to fear appeal

Participants revealed potential alternative approaches to existing GHWs through the design exercise. The purpose of that exercise was to collect themes of topics, messages, ideas that adolescents perceive as relevant to changing their smoking attitudes. The findings indicated

a preference for health messages that communicate short-term consequences and social consequences rather than just long-term health consequences; a preference to add positively framed messages that enhance hope and self-efficacy among smokers; and novel ideas such as adding a bar code on the pack, using testimonials and audio warnings.

6.6.1 Messages to communicate short-term consequences and be more relevant

Participants from both countries suggested ideas to make GHWs and anti-smoking messages more persuasive for adolescents. First, participants in the UK and Qatar pointed out that all the warning labels address adults and that the fact that no adolescents were displayed on the warning labels did not help in making it resonate with them. The absence of any adolescent or young person on the GHW was often questioned by participants. Participants suggested that having a young person on GHWs would allow adolescents to identify better with the messages.

Second, participants in the UK and Qatar alike suggested adding messages that related to non-health consequences (e.g. messages on looks, social consequences of smoking). They reported messages that could be perceived as more relevant and motivating adolescents to be focused on the impact of smoking on their sports performance and on their social relationships more than on health consequences such as acquiring stroke or cancer. The participant's following quote and Figure 8 illustrate examples of adolescents emphasising short term consequences that are relevant to them such as the impact of smoking on their looks.

> P: What would appeal to teenage girls is the effect of smoking and acne.
> (Qatar, FG, females, smoker, affluence, 16 years)

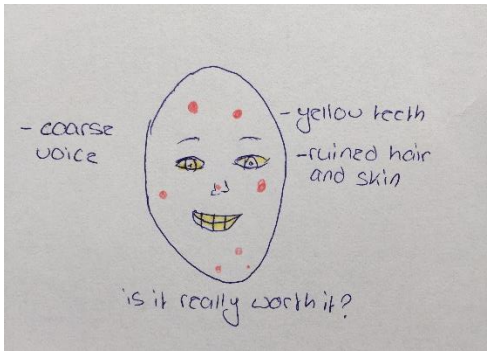


Figure 8 Design for a GHW message that shows the impact of smoking on looks *(Qatar, FG, females, tried smoking, 16 years)*

When asked to reflect on existing GHWs, participants like the one below often referred to messages they perceive are more relevant than the existing ones, and these messages usually communicated short term consequences.

> P: Yeah they're disgusting. It puts me off for a little bit, but I don't think about the picture when I buy a pack of cigarette and say let's look at the picture. The only thing that might put me off smoking is if the prices were to go up cause already I now pay £8. (UK, Interview, female, smoker, middle affluence, 18 years)

As the above design and quotes denote, participants' perceived relevance was closely associated with short-term consequences and consequences that were of interest to them, such as the impact of smoking on education and the financial burden.

6.6.2 Incorporate positive messages

Participants repeatedly talked about empowering adolescents not only by giving them information on quitting attempts but also by letting them feel that they were responsible for their choices. Adolescents, especially in Qatar, asked for resources that adolescents could use such as quit lines or helplines that are most importantly confidential. This study indicated the importance of examining an alternative framing of the GHWs by adding positive messages that enhanced adolescents' self-efficacy. Participants indicated that the feeling of empowerment would reduce stigma against smokers and would give hope to adolescents who were most in need.

Participants stated that adolescents are always bombarded with hard-hitting messages, especially on the topic of smoking. Participants justified their answers usually with a similar rationale, which was that positive messages could give, especially smokers, hope and help them take the right decision of quitting smoking, rather than making them feel bad.

Furthermore, the findings showed an interesting relationship between smoking status and preference for positive messages as well as cultural differences. Smokers appeared to be more in favour of positively framed messages than non-smokers on messages they perceive as off-putting. The reason behind the difference could be that some non-smoking participants held moralistic views and believed that smokers should prioritise their health above anything (*Field Notes: 18 November 2018*). Smokers, on the other hand, suggested that messages that enhance one's confidence might work better with smokers. Smokers repeatedly mentioned that positively framed messages provide them with hope and that they could empower them to quit, whether by providing smoking cessation information or by just assuring them that they can quit and the benefits they could gain from quitting smoking.

Participants in Qatar suggested incorporating positive messages with fear appeal messages. They suggested positive messages such as adding helpline numbers and support messages on GHWs. They added that it is important to add helpline information to GHWs to give adolescents in Qatar the option of calling and receiving help without their parents knowing. Participants in Qatar reported that many of the parents did not know that their children smoked, and as such children were afraid to seek help.

Participants in the UK favoured positively framed messages that showed the benefits of not smoking or quitting, as well as empowering messages. They always referred to messages that reflected a positive attitude towards oneself and that boost self-confidence among adolescents. They justified their choice by stating that it is unfair to let adolescents feel annoyed. When exploring positive messages participants in the UK favoured messages that communicated positive attitudes towards oneself.

> P: I dunno what to say exactly but … Something like to boost their confidence to make them feel like they will not be judged or left out. (UK, FG, female, non-smoker, middle affluence, 13 years)
>
> P:Yeah I would say, cause it is like these are very graphic. See if you put more positive messages like football, they'll be better at it. More people will stop a lot of people who smoke they like sports and they want to stick in but they can't and they can't stop. And like graphic images like that it is not helping them
>
> …
>
> N: And you decided to choose the positive approach? Like stop smoking now and make your future a brighter one and the better footballer message?
>
> P: Because like I don't like people annoyed. Like they could get better of something if they stop smoking. Their future could be like so much brighter, they could do so many things. They cannot do it if they started smoking as a teenager. By the time they're 40 they'll have so many diseases like cancer, they're gonna die. But if they don't smoke, after 40 they can live wherever they want. (UK, interview, female, smoker, low affluence, 14 years)

The above quote reflects on the insight from a female 14-year-old smoker in the UK. She favoured positive messaging that would reflect hope for smokers. She mentioned that the reason she smoked was to fit in and go out with her "cool" friends. She said that positive messages provide more hope to smokers than negatively framed messages. It appeared to me that participants who shared having a vision for themselves and their future were majorly in favour of positive messages. It seemed that the choice of positive messages means that more messages resonate with adolescent dreams e.g. around the future being open (*Field notes: May-October 2018*).

Nonetheless, there was a difference in preference of positively framed messages among participants from both countries. It was shown that in the UK, adolescents supported the use of positively framed messages; in Qatar, there was a discrepancy between some participants supporting a combination of negatively framed messages and positive messages and another that supported only the use of positive messages. It appeared to me that the closer the participants were to talking about traditions and religion held moralistic viewpoints, the more they were in favour of using fear appeal.

6.6.3 Add the concept of "exchange"

In addition to incorporating positive messages in GHWs, participants suggested new messages for GHWs and other novel ways for anti-smoking messages. Adolescents' perceptions on alternative ways of GHWs and anti-smoking messages were explored through the design activity and the mood board activity discussions.

Participants mentioned that adolescents might have got used to the way anti-smoking messages are delivered and that this might be a reason for the existing GHWs to have little effect. They thus suggested innovative ways of communicating the warning labels which they assumed might better grab the attention of adolescents.

The commonalities between participants from Qatar and the UK were their suggestions on messages that encourage thoughts about what the recipient might gain in exchange for giving up smoking, e.g., giving up smoking in return for saving money, or buying new shoes, or having a girlfriend, or having a perceived healthier alternative such as e-cigarettes.

> P: … and this one here about saving. You could be spending that much money on cigarettes but if you don't smoke you can save that money up and go on a holiday and buy shoes or a phone. (UK, FG, female, non-smoker, middle affluence, 13 years)

For instance, the idea indicated by the participant in the above quote was repeated several times and in different forms. Participants often suggested that when you offer adolescents an option of giving up smoking for something they liked, they would most probably do so.

6.6.4 Add another principle of the marketing mix

Moreover, participants recognised that GHWs constituted only one element of tobacco control and that it was limited. They identified the pack as one piece of the marketing mix. The below quote shows an example of a suggestion to add "Price" to motivate individuals to quit smoking.

> P: The pictures alone are not going to be persuasive; they should make cigarettes more expensive. (Qatar, FG, male, tried smoking, 14 years, low affluence)

The above quote illustrates a perception that was repeatedly mentioned among participants in the UK and Qatar. Participants highlighted that more elements must be included to enhance the persuasiveness of the message such as adding links to smoking cessation products and services, recognising the pack to its handiness and involving it better and lengthening the effect of communication through novel ideas that are discussed in the next section (6.6.5).

6.6.5 Novel ways

Participants were creative in suggesting alternative GHWs and they highlighted that being innovative was important in creating or maintaining interest among adolescents. Innovative approaches that were perceived as persuasive included: placing warnings on the inside of the seal of the pack, placing messages as inserts inside the pack, and developing warnings on the cigarette sticks themselves. The rationale that participants provided was that adolescents would be more likely to take notice of what was inside the pack rather than the outside of it. Messages such as "You are stronger than addiction" were among the suggested messages on cigarettes. Participants justified that by saying that adolescents sometimes have access to individual cigarettes instead of a whole pack and by having a warning label on a cigarette, you will be sure to reach the user (Figure 9).

> P: When you open and you read that it tells you to stop smoking, cause the ones on the pack outside you will see them once and that's it for an hour or so. Whereas from the inside, every time you want to take a cigarette you will see it. (UK, FG, female, non-smoker, middle affluence, 14 years)

Furthermore, participants also suggested adding warnings on the inside of the seal of the pack or inside the pack, such as inserts. They also added that by adding audio warnings to the packs, the message could better grab their attention, and make it harder for them to ignore it which could engage adolescents better with the anti-smoking message. Moreover, adolescents suggested adding barcode warning labels on the packs that could direct adolescents to videos linked to it and which could also deliver an engaging message as the ones previously suggested.

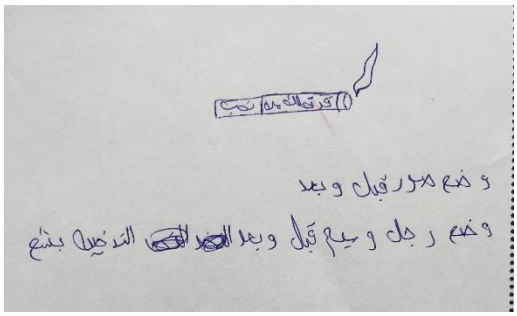


Figure 9 Design of a GHW suggesting on-cigarette warning that says: "*Think of your loved ones*". It also displays two statements suggesting adding pictures of looks of people before and after smoking *(Qatar, FG, male, tried smoking, 15 years, high affluence)*

During the mood board exercise, the participants of the following quote reported the reasons of why an on-cigarette warning could be more effective.

> P: A message on the cigarette itself. Because the message will keep on coming up and reminding you. You will throw the pack eventually but the cigarette you will not. Some people are removing the cigarette from its pack and put it in a metal pack instead. When the warning is on the cigarette itself then they cannot hide it.
>
> P: The warning on the cigarette itself will be the most effective, because the teenager will see it every time he wants to smoke, and it will stick in his mind" (Qatar, FG, males, tried smoking, high affluence, 15 years)

In addition to that, participants suggested other novel ways such as adding inserts and messages to the inside seal of the pack or creating a pack with a foul odour that could dissuade adolescents from buying a pack. They also suggested displaying messages from celebrities or testimonials to communicate harm and stated that celebrities are a trusted source for adolescents and testimonials could be from other adolescents whose lives had been affected by smoking.

6.6.6 Delivery of the message

Finally, as a novel way of message delivery, social media platforms were suggested by participants. The platforms suggested were Snapchat and Instagram that adolescents use to portray a social status, and this appeared several times in the discussions among participants in Qatar. For instance, participants suggested that it would be beneficial to use the platform to promote anti-smoking messages.

> P: Probably start with social media … cause this is what everyone uses. (UK, FG, female, non-smoker, middle affluence, 14 years)

> P: From the images they post on social media so that they show people that they're smoking they're cool and stuff gives them a high status … and it does … yeah media makes it look cool. (UK, FG, male, non-smoker, low affluence, 13 years)

The above quotes showed that participants' insights on innovative ways to communicate anti-smoking messages also included incorporating other modes of message delivery such as social media that could influence adolescents' smoking attitudes and their perceptions of GHWs.

6.7 Summary

Findings from participants in the UK and Qatar indicated several commonalities. Participants in both countries indicated that the existing GHWs might lead to unintended consequences. The findings suggest that the concepts of perceived proximity and perceived authenticity have relevance in enhancing their engagement with the message. Moreover, they highlighted that adolescents weigh the messages against their personal experiences. They finally suggested different alternative messages such as positive messages, messages that communicate short-term consequences and other novel approaches such as audio recordings and foul odour packs.

However, participants from both countries also revealed some differences. The meaning of some GHWs were perceived as relevant in one country and not in another. What is considered as proximate for adolescents in Qatar was not necessarily considered as so among participants in the UK. Moreover, what was considered as an authentic communication also differed between participants from both countries. Furthermore, participants showed differences in their preferences for styles of communication.

CHAPTER 7: DISCUSSION

7.1 Introduction

In this thesis, I compare and contrast adolescents' perceptions of existing GHWs in the UK and Qatar. I also investigate the alternative pathways that adolescents perceive to be effective for delivering anti-smoking messages using the tobacco pack. The data are analysed through the lens of the theory of semiotics which is widely used for studying the meaning of signs and symbols in linguistics, psychology, natural sciences and marketing (Kotler, 1987; Zakia and Nadin, 1987; Echtner, 1999). The findings of this study indicate similarities among adolescents from Qatar and the UK on three levels: requests for warning messages to be authentic and proximate to the target group; preference among adolescents to incorporate positive messages and to tailor health messages to their social and cultural worlds; and the need to extend the communicative part of the cigarette pack to include other dimensions of social marketing. On the other hand, adolescents' perceptions also indicate differences within each category. Adolescents in Qatar and the UK identify different preferences for communication, different health beliefs influencing their perception, and different dimensions of what they consider proximate and authentic. The implications of this study are further discussed in the conclusion (Chapter 8).

In this chapter, I first discuss the use of fear appeal in existing GHWs as effective in achieving its intended outcome such as drawing attention to the anti-smoking message, raising emotional response and increasing awareness of the impacts of smoking. My data provide some insight in relation to which GHWs do not seem to be effective for adolescents and highlight that some existing GHWs could be associated with unintended consequences. These findings are discussed within the literature on the ethical implications and the unintended consequences of the fear appeal framing.

Consequently, I discuss the contribution of the thesis to the theory of semiotics, by adding concepts of authenticity, proximity, novelty of messages to the relationship between the sign and the object and by tailoring messages to social and cultural context. I discuss findings that the meaning of GHWs is a socially constructed phenomenon and position this within the influence of the social and cultural contexts in shaping adolescents' perceptions of GHWs. I also discuss adolescents' insights on the alternative approaches to fear appeal, before concluding the chapter by discussing what the study adds to the methodological discussion in public health research with adolescents and present the limitations of the study.

7.2 Reactions to fear appeal

This study provides empirical evidence from adolescents in the UK and Qatar that fear appeal in GHWs increases attention and awareness to the message on the cigarette pack but is not always effective in reaching them and rather sometimes creates a counterproductive response to the message.

My findings provide evidence that existing GHWs are not always effective, which complements recent GHW work on adolescents, young adults and adults that GHWs were perceived as ineffective in changing their smoking attitudes (Drovandi et al., 2018, 2019a, 2019b; Bekalu et al., 2019). Moreover, Haines-Saah et al. (2015) critiqued the existing assumptions in formulating GHWs. They argued that tobacco control policies such as GHWs have been formulated around negatively framed messages based on the assumption that individuals respond to hard-hitting messages by reducing the threat and stopping smoking or avoiding smoking. My study findings are in line with these studies that show that adolescents perceived existing GHWs to be ineffective in changing adolescent smokers' perceptions and attitudes towards smoking. However, because of the nature of the studies, previous studies did not allow participants to explore further the reasons why they perceived GHWs as ineffective. My study provides dimensions such as those discussed in section 7.3 on the factors, they consider would enhance the effectiveness of GHWs for adolescents.

Moreover, in accordance with the study findings, previous work has demonstrated the potential of unintended consequences from fear appeal health communication (Witte, 1992; Maibach and Parrott, 1995; Hasting et al., 2004; Bell et al., 2010, 2015; Haines-Saah et al., 2015; Lupton, 2015; Hardcastle et al., 2016). Along that line of discussion, Hastings et al., (2004) postulate in their conceptual paper that fear appeal might not be effective in persuading vulnerable populations such as adolescents of the harms of a behaviour and argues that its use might lead to unintended consequences. Previous studies, however, do not provide empirical evidence from adolescents' perspective on unintended consequences, nor do they explain the dimensions that individuals weigh when constructing the meaning of GHWs. This study provides evidence from adolescents' perspective in different cultural contexts who demonstrate common general insights from adolescents. Yet the study also illustrates the differences within each subgroup on what could be considered as relevant and persuasive to them and what is not. In addition to the conclusion from my findings that fear appeal might lead to unintended consequences among adolescents, my study suggests that fear appeal is not effective with certain target groups in specific contexts.

In the following section, findings on the unintended outcomes of the existing GHWs are discussed. Findings in this study exemplify that adolescents' perceptions of the existing GHWs entail unintended consequences similarly among adolescents from both countries. The unintended consequences are shown to be: perception of paternalistic communication of fear in GHWs; perception that existing GHWs emphasise stigma and stereotypes against smokers; and that existing GHWs provoke the attitude of avoiding the message.

7.2.1 Paternalistic communication

One of the reasons why adolescents disengage from fear appeal messages is their perception that the warning labels are paternalistic. Austin (1995, p. 114) and Anker (2016) recommend that health messages should be formulated in a way that does not sound paternalistic, especially to adolescents, and postulate that messages which are perceived as patronising might have a counterproductive effect.

Likewise, my findings show that fear appeal was perceived by adolescents as paternalistic in nature which seemed to cause some adolescents to rebel against the message. Some adolescents suggested that the gruesome images are intimidating and make them want to smoke, causing unintended responses. This aligns with research on health messages and adolescents that indicate the potential to rebel against messages that adolescents perceive as patronising (Hurrelmann, 1990; Guttman and Salmon, 2004; Hastings et al., 2004; Baldwin et al., 2006; Thompson et al., 2009; Bell et al., 2010; Peters et al., 2013). My study adds to the existing body of literature's empirical evidence on the reactions of adolescents to an existing health policy (GHWs) that uses fear. Therefore, the study raises awareness of potential areas of improvement to enhance the effectiveness of GHWs, based on adolescents' insights.

From a theoretical perspective, the theory of semiotics supports the findings on avoiding paternalistic communication could enhance the autonomy and the active role that the social agent plays and moves away from a paternalistic and a passive role of the target group. Thus, findings support the proposed theory of semiotics in examining GHWs and its recommendation to avoid paternalistic communication.

From a social marketing perspective, it is maybe more important to get a better participatory approach when developing health communication messages to reduce the unintended consequence, which interferes with the engagement of a message. When the intended meaning of a health communication message does not reach the target group correctly, the purpose of the intervention may be compromised. Also, if the wrong meaning was perceived,

that could create potential counterproductive effects of the warning labels. This point highlights the importance of engaging adolescents during the development stage of GHWs, to reduce the deviance between the perceived meaning and the intended one.

7.2.2 Emphasising stigma

Biernat and Dovidio (2000) have defined stigma as a characteristic that labels the carrier as flawed and thus places them in an inferior position to individuals. Stigma marks someone as being different from a specific social norm with reference to a social group (Biernat and Dovidio, 2000). My findings showed that GHWs triggered a feeling of disgust and shame towards oneself and towards smokers. My findings therefore illustrated that the existing GHWs might have the potential to emphasise stigma against smokers. The findings suggested that adolescents felt discomfort as a reaction to the GHWs which also made them aware of the negative image of smokers and that these warnings make it worse. Adolescents considered smokers to come from bad backgrounds or to experience psychological stress. Most of this perception was due to adolescents' judgements; some participants also referred to describing smokers by referring to the existing GHWs. Participants in this study stated that the current GHWs increase negative feelings towards adolescent smokers, which might make them feel down and judged upon. This feeling of disgust poses a question on its role in engaging adolescents with the anti-smoking message

Along this line, other scholars have argued that stigma may be stopping individuals from seeking help and promote avoidance or coercive reactions (Baldwin et al., 2006; Thompson et al., 2009; Haines-Saah et al., 2015). Moreover, the literature on shame and stigma suggests that shame impedes self-efficacy, which is an important factor for smoking cessation (Baldwin et al., 2006; Frohlich et al., 2012). In a similar way, in their review on public health campaigns, Guttman and Salmon (2004) suggest conducting ethical analyses for public health campaigns prior to their implementation. They criticise the use of fear appeal imagery because they argue that it has the potential to stigmatise people. They argue that even if "shock tactics" motivate some individuals to change their smoking attitude, it is on the other hand stigmatising to those who engage in the behaviour because it represents a negative image of those who have the illness or engage in the respective behaviour. Similarly, Haines-Saah and colleagues (2015) conclude from their content analysis of GHWs that the existing messages emphasise stigma against smokers.

Scholars have argued that stigma has an adverse influence not only on a person's health behavioural outcomes but also on their social behaviours (Biernat and Dovidio, 2000; Lewis

et al., 2011; Haines-Saah et al., 2015). The negative images used on cigarette packages could be considered a more subtle type of stigma, and this type is argued to produce negative health and social behaviour outcomes. Lewis and colleagues (2011) in a qualitative study among Australian adults on female obesity and stigma found that participants rarely challenged stigma and rather embraced self-blaming for their actions which according to the authors might leave individuals disempowered from changing their behaviour and lose self-esteem.

Likewise, the findings showed that adolescents rejected some of the GHWs that portray images about female smokers or mothers and perceive them as being "incorrect". Smoking among women is considered socially unacceptable in the Arab world (Maziak et al., 2014). Accordingly, the GHW that showed a pregnant lady was often met with rejection, arguing that it was irrelevant in the context of Qatar, since smoking among females in Qatar was perceived as socially unacceptable and as defying the role of women in society. My findings suggest that the negative depiction of the smoker in the current GHWs increases stigma against smokers and women smokers, who might be the most in need of hope. This observation aligns with Hastings et al. (2004), who state that individuals who feel marginalised are more likely to feel worse after exposure to negative appeals.

My study is of importance because it provides systemic information from adolescents that existing GHWs have the tendency to increase stigma against adolescent smokers, which no previous study on GHWs and adolescents indicate. The study has implications on health communication through highlighting the importance of evaluating the ethical implications of health messages.

7.2.3 Emphasising stereotypes

Often stigma involves a stereotypical implication as well. Stereotype is defined as "the process of generalising from an observable physical characteristic to a set of assumed traits" which most of the times reflect faulty or negative views (Biernat and Dovidio, 2000, p. 88). Negative stereotypes might have influence on an individual's cognitive processing as it plays a role in the way information is processed (Biernat and Dovidio, 2000).

My findings indicated that smokers are often perceived as deviant and blamed by others. They were often described by participants as "bad" people or "people with not much ambition". Similarly, in their qualitative content analysis on the GHWs in four countries, UK, Australia, Canada and France, Haines-Saah et al. (2015) found that the existing warning labels emphasise the stereotypical implications against certain groups of the population who are already socially marginalised (i.e. mothers who smoke, are obese, or are of low socio-

economic status). This argument shows individuals who engage in the behaviour as deviant, feared or avoided and blamed. Similarly, Shevalier (2000), in a content analysis on tobacco control messages on adolescents, proposes avoiding images that trigger stereotypes and judgements of deviance from tobacco control messages because they might induce unintended consequences especially for adolescents.

This study, however, is the first study to show the ethical implications of GHWs from the perspective of adolescents. The study thus suggests that public health communicators should be careful when designing fear-based health communication messages for adolescents and consider the potential perception of adolescents of these messages. The study also suggests that ethical dimensions should be considered in health communications theory that seeks to anticipate the effects of fear appeal messages.

7.2.4 Avoiding the message

In addition to the ethical implications of generating stigma and stereotype among adolescents, the data of this study reported another unintended outcome of adolescents' response to GHWs, which is avoiding the message.

Fong et al. (2010) and Nee-Nee et al. (2019) argue that the fact that many smokers tend to hide their packs is a positive sign of engagement. Fong et al.'s (2010) data reported that adolescents tend to hide the pack because they want to avoid looking at the graphic images. Similarly, Nee-Nee and colleagues (2019) argue in their observational study on the effect of standardised packaging on displaying the tobacco packs in New Zealand that the packs used among smokers were mostly being placed on the opposite side (face-down) most of the times compared to previously branded packs. Yet, it can be argued that the process of hiding the pack is a sign of individuals not being able to cope with the emotions evoked by the GHWs, building reluctance or rebelling against the message. Avoidance of the message could further be explained, from a social psychology perspective, where fear is also perceived to lead to anger, which is supposed to lead to action, and according to Ruiter et al. (2001) the resulting action is often unpredictable and usually varies among different population groups. Moreover, Ruiter et al. (2014) argue that fear can interpose into our brain practices that control emotions and that interrupt the comprehension of information presented to us. The findings of the thesis confirm the arguments by Ruiter et al. (2001, 2014). Adolescents of this study discuss that they would avoid or cover GHW messages. Adolescents who were smokers suggested that they often try to cover up or avoid looking at the GHWs because they are too disgusting. They state that they tend to cover the warning label or ignore it to avoid looking at the gruesome images, which make them feel "sick".

Moreover, the results of this thesis on disengagement with the message mirrors results from previous studies on covering and hiding GHWs (Moodie et al., 2015; Nagelhout et al., 2016). In two longitudinal studies, one conducted in the UK (Moodie et al., 2015) and the other in the UK and France (Nagelhout et al., 2016) adolescents reported an increase in hiding the packs and avoiding the GHWs. The findings from this thesis confirm what has been mentioned in the literature on covering up and avoiding GHWs, as a coping mechanism to deal with stigma, by providing insights from adolescents in different cultural contexts.

Overall, the findings of this study suggest that fear used in existing GHWs does not always lead to the intended outcomes that are expected by government and experts. The study suggests that the original assumption of a correlation between GHW perception and negative attitudes of smoking seems to be based on a theoretical misrepresentation. My qualitative data suggest that a misperception of adolescents' reaction to GHWs might exist. My data show that adolescents often did not understand the meaning of the warnings or did not perceive them as relevant. Therefore, the study proposes that the correlation between the "sign" and its meaning "object" is more complex than in the original framework.

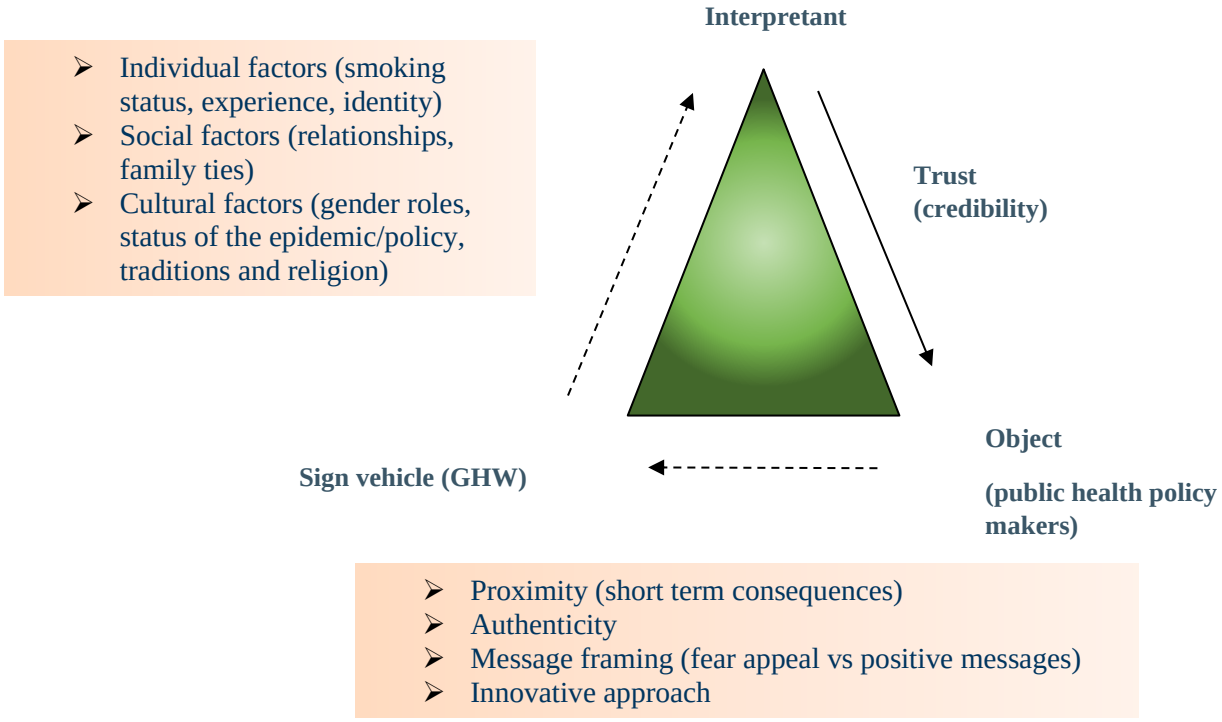
7.3 Theoretical contribution: factors that could elevate GHWs effectiveness

Based on my analysis I expanded Peirce's theory in order for the perceived meaning (interpretant) of GHWs (sign) to be aligned with the intended meaning (object). The dimensions needed to enhance this alignment in meaning are perceived authenticity, perceived proximity, tailoring to social and cultural context and incorporating different channels of communication (Figure 10). The thesis thus makes a theoretical contribution by adding new concepts informed by the empirical findings (e.g. proximity). The newly suggested dimensions provide a framework for the health communication and social marketing field to enhance the effectiveness of the health messages. Semiotics, the study of signs, which is mainly used in linguistics and marketing, has rarely been used to study a public health issue. In the theory of semiotics, which was built on assumptions similar to those of natural sciences, the meaning is usually understood from the sign as it is intended, whereas this study shows that this assumption is not always correct when dealing with socially constructed signs.

Also, semiotics has been underutilised in public health communications and as such this study makes an incremental contribution by identifying concepts in socially constructed semiotics relation and sub-concepts that apply to health communications. By applying semiotics to understand the meanings that adolescents associate with existing GHWs, the

thesis first provided a new perspective in investigating the effectiveness of pictorial health messages. Second, it dissected the dimensions of warning labels' relevance in terms of content and framing, thus providing an in-depth exploration of studying GHW effectiveness and relevance. By understanding the meaning that adolescents associate with warning labels, the thesis uncovered dimensions that adolescents weigh upon health messages, which is important to ensure that they engage with the message.

Figure 10: Message dimensions from this thesis added to the theory of semiotics



In summary, the thesis makes a theoretical contribution to Pierce's theory by providing insight into which factors need to be taken into account in order to make sure that the intended meaning matches the interpretation. This theoretical contribution also has an implication for health communication, which could use it as a framework against which to evaluate intervention.

In the following section, I discuss findings from both countries that indicate the need for authenticity and proximity in GHWs. An interesting finding from this study indicated that what was perceived as authentic and proximate differed among adolescents from the UK and Qatar. This difference which could be attributed to the differences in the social and cultural contexts emphasises the importance of tailoring GHWs to the target group.

7.3.1 Authenticity

Authenticity is argued to steer the social agent towards what resonates with them, in accordance with their own interests and beliefs. The concept of "authentic" has been defined in Stanford Encyclopaedia (2014), as "To say that something is authentic is to say that it is what it professes to be, or what it is reputed to be, in origin or authorship". The article goes on to suggest, "But the distinction between authentic and derivative is more complicated when discussing authenticity as a characteristic attributed to human beings". Along that line of discussion, in his book on "Ethics of Authenticity", Taylor (1992, p.90) argues that authenticity is "a language of personal resonance", and that an individual's motivation, or needs (e.g. addiction, need to maintain a self-image) might sometimes overshadow rational choice. Authenticity in a personal sense is different. It is important to distinguish between what is authentic and true to one's own self. Thus, in the context of this study, perceived authenticity as how the message is received reflects truth to oneself. A health message could be believable yet not necessarily perceived as authentic; meaning that it might be perceived as having authenticity regarding origins of products yet not necessarily have a personal resonance.

In the literature on authenticity, the importance of the concept for health communication, and its role in motivating the target group towards certain behaviour have been discussed by Petraglia (2009), who considers the relationship between authenticity and health communication and education and argues that the health message has to be in sync with the target group's previous personal stories and experiences and further argues that "persuasion is at the core of authentication" (p. 179). In other words, convincing the target group that the health information is relevant to their everyday life is essential for their engagement with the message.

Similarly, my findings showed that adolescents frequently referred to their own subjective experiences to discredit the GHW or agree with it. GHWs that were perceived to have high authenticity were those relatable to their everyday life (e.g. looks, sports, education, family activities). My findings indicated that authenticity of the GHWs was an essential quality that adolescents from the UK and Qatar looked for when evaluating the health messages. The findings of this study showed that adolescents in the UK and Qatar often discredited the existing GHWs, because they believed that the messages were isolated from adolescents' worlds and their everyday life. Adolescents perceived the existing GHWs as irrelevant, exaggerated and fake. Findings from both countries shared the view that "authenticity" of GHWs is an important factor for social marketers to consider.

On the other hand, adolescents from the UK and Qatar had different perspectives on what was perceived as "authentic" to them and what was not. This difference constitutes one of the main contributions of this thesis. Taking into consideration the definition of "authenticity" mentioned above, the findings are expected, and what is perceived to be authentic for one group with specific social and cultural context might differ from another. In other words, authenticity is a socially constructed concept that is created as a function of the social and cultural context. According to this definition, what sounds credible or authentic for one person might not be authentic or credible for another person. When the messages are perceived as not authentic to their reality, it creates a feeling of dissonance and distrust.

Findings from Mitchell et al.'s (2019) study on students' perception (16–17 years) in Scotland on standardised packaging reported that adolescents viewed existing GHWs as believable. My findings complement findings from Mitchell et al., (2019), yet differ slightly in that they relate perceived authenticity of a GHW to a contextual and personal relevance (i.e. a health message could be believable but not necessarily perceived as "authentic" to a specific group). Participants in my study shared the view that GHWs were just a picture which sometimes they perceived as not real because it did not resonate with them. According to adolescents' perceptions of GHWs, the health message needs to be contextually relevant to adolescents to enhance the communicative power of the picture being used.

Furthermore, interestingly, my data highlighted that the perceived authenticity of a health message is also achieved when the target group "trusts" the communicator or the source of the message. For instance, adolescents in my study problematise the irrelevant warnings which according to them questions the authenticity and trust of the source, e.g. intention of governments who call for implementing GHWs yet still legalise smoking. Expanding on this perspective of relationship building, which is taken from commercial marketing, Hastings et al. (2004) question the type of relationship health communicators are trying to build with the target group by using fear appeal. They question whether the customer-source relationship has been thoroughly studied or established when using fear appeal in health interventions. My findings seem to echo Hastings et al. (2004), who argue in their conceptual paper that discrediting the message might also disrupt the source-target group relationship. They postulate that when the target group perceives the health messages as exaggerated it might have a negative effect on their perception of the credibility of the communicator. The target group needs to feel that the information they are receiving is from a credible source to enhance their engagement with the message and motivation for behaviour change. People might discredit a message, or a communicator based on their life experiences. Likewise, my

findings highlight the importance of the communication source that is perceived as trustworthy to enhance the engagement with the health message and further add informed insights from adolescents on the importance of the relationship of the communicator with the target audience in enhancing the authenticity and relevance of the health message. My study, however, is the first study to indicate a relation between adolescents' trust with the source communicating GHWs. The study has implications on health communication, by emphasising the need to build rapport and trust between the communicator and the target audience to enhance the effectiveness of the health message.

In the same line of argument, recent social marketing developments address the role of building long-term relationships such as particular resonance for targeting behaviours which are often high involvement and multifaceted and where trust is particularly important (Stead et al., 2007). To achieve this relationship, the literature in social marketing argues the need for in-depth exploration and knowledge of the target audience and their context. This study brings awareness, through a qualitative exploration of adolescents' perceptions, that certain dimensions in health messages could be added to enhance the communicative power of the message.

From a theoretical perspective, the importance of authenticity as a concept that is assessed based on individuals' context and experiences states that signs are conceptualised better as personal experiences not as objective realities. Peirce's framework does not seem to capture the factors that might influence meaning. My study identified the concept of authenticity as an important factor to consider when evaluating signs. This contribution also provides health communication with a framework to use when developing and accessing health interventions.

Overall, it could be concluded from the above that adolescents value the authenticity of the warning label and consider it a contributing factor to the perceived relevance of the GHW to motivate a change in their smoking attitude. According to my knowledge, authenticity of GHWs has been rarely examined in the health communication literature. This study raises awareness on the importance of considering the authenticity of the health messages to enhance the effectiveness of GHWs.

7.3.2 Proximity

In a chapter review by Crowell et al. (2013, p. 131), on "Psychosocial Stress, Emotion Regulation, and Resilience in Adolescence", the scholars mention social proximity as an important dimension to consider when studying adolescents' responses and behaviours.

They state that adolescents use their "social proximity" and the feeling of a sense of belonging to relate to a message of communication and to regulate their emotional affect. They justify it by stating that humans as social agents are hardwired to utilise closeness to their social network to regulate stress and emotions. Therefore, health messages that are delivered as testimonials and through celebrities are an example that could work with adolescents since they perceive them as proximate (Coan, 2010; Crowell et al., 2013).

Moreover, adolescents in my study disengaged with the existing GHWs because they perceived them as too futuristic and that they do not communicate an immediate threat. They often ranked the dental disease GHWs as the most persuasive because it showed the short-term effect of smoking on the colour of the teeth. Moreover, in their design exercise, adolescents often drew young people and illustrated the impact of smoking on looks, teeth and their social relationships with their peers and families. Likewise, in Adebiyi et al. (2016), a study that explored adolescents' perceptions of GHWs in Nigeria, found that adolescents rather disengaged with and found irrelevant the GHWs that were too futuristic such as the stroke GHW. Interestingly, a recent qualitative study among university students in Australia by Drovandi and colleagues (2019a) explored the perceptions of university students (smokers and non-smokers) of GHWs in Australia and their perceptions of on-cigarette warnings by conducting three focus groups and eleven phone interviews. Results of the study highlighted the potential of on-cigarette warnings, a similar finding to Moodie et al., 2018. The study results also showed that young adults did not perceive the Australian GHWs as effective because of proximity problems in the GHWs. Moreover, my study findings are in line with Alaouie et al (2015) on adolescents in Lebanon, and Drovandi et al. (2019b) on young adults in Australia whose data reported that adolescents perceive messages on financial and economic consequences as more relevant than those on health consequences. While the results complement the results of my study in terms of highlighting the importance of proximity in GHWs, yet my study provides a more exhaustive exploration of the concept of proximity and defines it more broadly than being characterised only by short-term vs long-term consequences. My study, however, adds to the existing literature on GHWs and proximity, that it identifies and raises awareness of a concept important in the health communication framework. It also brings in informed insights from adolescents in different cultures and highlights a cultural dimension with the concept of proximity.

Likewise, in terms of the literature on adolescents' health, my findings are in line with previous research which suggests that short-term health consequences are more relevant to adolescents than long-term health consequences (Austin, 1995; Smith and Stutts, 2003;

Tamvakas and Amos, 2010). Austin (1995, p. 115) states that communicators should relate short-term health consequences to adolescents rather than long-term health consequences. Austin (1995) and Tamvakas and Amos (2010) argue that adolescents are interested in their physical appearance and that they are at an age when they try to establish their social identity. As such, aesthetic consequences could be more convincing than lung diseases and cancer to motivate them to change their smoking attitudes. Similarly, Meyrick (1993), in a review on anti-smoking campaigns states that short-term health effects such as impact of smoking on breath and skin might be more engaging to adolescents than long-term health effects. My study adds – to the previous literature on adolescents' health communication – empirical evidence and informed insights on a health intervention in two different cultural contexts. It also raises awareness on what specific short-term consequences are considered relevant to a specific target group and which might differ from the other. The study provides a framework for health communication and health policy to tailor health messages that are "proximate". It also adds that proximate should be achieved as a perception from adolescents and not as experts perceive it, thus providing a framework against which health interventions could be assessed.

Furthermore, my data suggest that there might be a link between perceived authenticity and perceived proximity that would be interesting for future studies to examine. Perceived proximity and perceived authenticity could have affected the levels of perceived risk shown in my data. For instance, when a message was perceived as proximate and authentic (e.g. teeth damage GHW), the data reported higher levels of perceived harm and engagement with the message. Thus, my findings can point to the existence of a relationship between dimensions such as perceived authenticity, perceived proximity and perceived harm.

Therefore, it is crucial for social marketers and health communication specialists to incorporate dimensions such as perceived proximity and perceived authenticity in their communication frameworks to influence perceived risk and severity. The challenging bit will be the subjectivity of these dimensions and the importance of contextualising the messages to the audience group.

7.3.3 Social and cultural dimensions that influence GHWs perception

In this thesis, by comparing Qatar and the UK, I was able to identify some cultural and social dimensions that seem to be relevant to adolescents' perceptions of GHWs. The comparison suggested that differences exist with regard to the preferences of health messages among adolescents from different social and cultural backgrounds. The need to take account of the social and cultural context of a target group has repeatedly been stressed in the health

communication literature (DiClement et al., 2013; Haines-Saah et al., 2015; Nagelhout et al., 2016). The literature has also stressed that it is important to understand the perception of the target group to develop the type of communication that might be relevant to them (McLeroy et al., 1988; MacFadyen et al. 1999; DiClement et al., 2013; Mead et al., 2015; Haines-Saah et al., 2015, 2016; Adibiyi et al., 2016; Nagelhout et al., 2016; Wolf et al., 2016). However, the social and cultural factors have rarely been examined in detail.

This study raises awareness over important social and cultural dimensions that could serve as a framework in health communication for the development and evaluation of health interventions. These dimensions are: recognising the importance of social relationships; recognising the difference in gender roles; the influence and role of religion and other social and cultural norms and beliefs.

7.3.3.1 Tailoring communication to the target group

Literature on communication across cultures suggests two types of communication, low-context communication is defined as communication that is direct, and high-context communication is communication that is predominantly indirect and relies on cues. The literature on communication across cultures argues that examples of societies that are more likely to embrace low-context communication are individualistic cultures (e.g. European countries) and societies that are more likely to prefer high-context communication tend to be collectivistic cultures (e.g. Arab countries) which prefer indirect communication (Hall, 1989; Neuliep, 2016). Cho (2011, p. 113), in his book on Health Communication Message Design, states the importance of having an audience-oriented health message, with a focus on cultural details that play a role in how the target group notices, recalls, perceives and processes health messages.

My findings suggest that different cultures have different preferences with regard to communication. For example, adolescents in the UK preferred messages that were normative in nature and direct. Whereas adolescents in Qatar preferred messages that were indirect. This finding is in line with previous literature in communication that provides the anthropologist perspective and which suggests that countries such as European countries that were categorised as high-context cultures prefer more direct communication than countries such as Middle Eastern countries that are categorised as low-context cultures and prefer communication that is more abstract and depends on cues (Hall, 1989).

Besides, interestingly, the findings suggested a difference in communication preference between smokers and non-smokers, where smokers appeared to report that positive messages

might be more persuasive than negatively framed messages than did non-smokers. This is in line with previous literature that showed differences in perceptions and attitudes of smokers and non-smokers towards GHWs (Andrews et al., 2014, 2016; Nonnemaker et al., 2015). It appeared from the literature that smokers were also less likely to engage with the existing GHWs because they were desensitised to these messages. Acknowledging the differences in perceptions and attitudes to GHWs between smokers and non-smokers as well as between Qatar and the UK is significant in informing tobacco control policies and social marketing health programmes. For example, health interventions and messages specifically targeting smokers might be different from those for non-smokers.

My study is the first to highlight the preference in communication in terms of GHWs between two different cultural contexts. More specifically, this study is the first to explore the perceptions of adolescents from the Middle East over GHWs. By exploring perceptions of adolescents from different cultural contexts, this study raises awareness over the importance of studying the target audience's social and cultural context and tailoring health interventions to enhance their effectiveness.

7.3.3.2 Models of health and illness: cultural beliefs could shape perceptions of health messages

Another factor that seemed to influence adolescents' perceptions of GHWs was the cultural norms and beliefs such as existing models of beliefs over health and illness. Berry (2007) in her book on health communication discusses the influence of culture on beliefs of health and wellness. Berry (2007, p.58) states:

> people from different ethnic backgrounds have different explanatory or personal models of health and illness, and these in turn will influence the course and outcome of the medical consultations.

Berry (2007) explains how the belief systems of a community influence their perceptions of health and illness. She gives the example of Middle Eastern countries that are influenced by Islam. Berry states that in Islam, sickness is perceived as a test of belief in God and that life and death are predetermined for every person by God. Allen (1988) in his paper on Islamic art argues that an icon is more likely to be treated as a sacred object since it shows a real physical representation, a notion forbidden in Islamic culture (Allen 1988).

In their book on the influence of beliefs systems and religion on consumer behaviour in marketing, Minton and Kahle (2014) argue that it is important to study the influence of belief systems on consumer behaviour especially in multicultural studies. They define belief systems as constructions of beliefs, values and norms that are influenced by religion and

cultural guidelines and the transfer of knowledge and education in educational institutions and key people. The belief system according to Minton and Kahle (2014) is constituted of values that embody the consumers' beliefs in having a purpose in life, the desire to enjoy life, the significance of family, necessity of moral behaviour and the striving for success. They highlight the importance of studying these values to understand the target audience and thus their behaviour. The authors claim that religion and tradition define the normative behaviour for the target audience across several generations and they acknowledge that it is not easy to establish the relation between religion for example and consumer behaviour, especially that one core of the belief system could be influenced by the other, yet they argue the significant role that these belief systems play.

My study confirms the literature in health communication on the influence of religion in shaping models of health and illness and aligns with the literature (Berry, 2007; Minton and Kahle, 2014) on the influence of belief systems such as accomplishment in life, having a vision for life, setting standards for success, wish for enjoyment in life and traditions on perceptions of the target audience. Yet, my study provides empirical evidence from a social marketing and health communication perspective that highlights the role of tradition, faith and other belief systems (purpose in life) in influencing perceptions of adolescents on health messages. The study has implications for social marketing and health communication. First, the study highlights the significance of understanding the belief systems to strengthen the development and design of health interventions in tobacco control. Second, it also has an implication for adapting health interventions into the belief systems of a certain cultural context. By exploring informed views from adolescents from two different cultural contexts, my study brings awareness of the importance of understanding models of health and cultural beliefs of the target group to tailor health interventions accordingly and make them resonate better with the target group. It is the first study to explore these dimensions in the Middle Eastern region, thus providing ideas for future research to explore in more depth the role that belief systems play in understanding and engaging with tobacco control policies.

7.3.3.3 Social agents play an active role in health communication

Literature has argued that when the target group, and specifically adolescents, are given control and responsibility over their behaviour, they are more likely to engage in the desired behaviour (Maibach and Parrott, 1995; Anker, 2016). In social marketing, it is argued that for a message to be effective, information alone is not sufficient, and the message has to be targeted, informative, promote trust with the communicator or the source, enhance efficacy and ownership or responsibility of action (Austin, 1995; Hastings et al., 2004; Berry, 2007).

The underlying assumption of GHWs and some health interventions is that the target group are passive recipients of the health message and that information alone will be sufficient to make them aware of the risks of their behaviour and as such change their behaviour and quit smoking (Brookes and Harvey, 2015; Haines-Saah et al., 2015). Brookes and Harvey (2015) argue that an underpinning assumption is that meaning is not transmitted to the recipient, but rather that they actively create the meaning according to a complex interplay of the belief systems and sociocultural dimensions. Similarly, Haines-Saah et al., (2015, 2016) argue that studying the effectiveness of GHWs on changing attitudes should not be seen as unidirectional and predictable but rather a holistic one that examines the recipient and their specific social and cultural world. My study findings align with the before mentioned arguments on considering the individual as a social agent who makes meaning within their social and cultural context. The study provides empirical evidence of different perspectives from adolescents in different cultural contexts, thus offering a systemic insight into the similarities and differences and highlighting social and cultural factors that could help in the development and evaluation of health messages.

Individuals or recipients should be studied as social agents, meaning that they play a proactive role in creating meaning of the GHW in an interactive way that is not simple, by interacting with the GHW, their social world, experiences, beliefs and cultural norms. Likewise, studies in the literature on marketing and health communication indicate that consumer behaviour or change in behaviour aims to examine the "interaction" of individual peculiarity with the specific circumstance, experiences, cultural contexts and environmental stimuli with the perception, which might help in providing a more vigorous interpretation for the behaviour/perception (Stewart and Martin, 1994; Hastings et al., 2004; Haines-Saah et al., 2015).

One way that illustrates a rather complex interaction that moves beyond perceived efficacy and perceived threat has been discussed in the literature of social marketing – the concept of "exchange" (Hastings and Saren, 2003). Individuals are believed to evaluate the cost and benefit, tangible or intangible, of abiding by the health message or the health behaviour communicated in the health message (Hastings and Saren, 2003). A consumer might have to evaluate the costs and benefits of complying with certain behaviour (Stewart and Martin, 1994). The concept of exchange highlights that it is important to acknowledge that an individual undergoes a complex interaction with the message in choosing the subjective outcome.

The interaction that happens between how the consumer perceives the subjective benefits and costs of engaging or not in a behaviour has to be considered when studying the effectiveness of warnings in general, and this could apply similarly in GHWs. For example, an individual might reject a health message even if they were attentive to it, if their perceived cost of complying with certain behaviour is seen as greater than their perceived benefit. If adolescents who are believed to be driven to smoking to "fit in", or to establish their "self-image" and belong to a social group (Amos and Bostock, 2006; Tamvakas and Amos, 2010) perceive that by complying with the health message they might be left out, their perceived cost of complying with the behaviour might be perceived as higher than the benefit, which is usually communicated as long-term health effects and that might seem too futuristic for them.

Along that line, my findings illustrated that adolescents often weigh the harm of smoking according to their subjective costs and benefits. In other words, even after they receive the health message on the cigarette pack, if the harm communicated in the message does not outweigh their perceived benefit from smoking (e.g. social group, self-image), they are unlikely to change their behaviour. Therefore, it is important for health communication intervention to extend the communication channel of GHWs beyond promotion only and add the principle of "exchange" which could elevate the relevance of the intended behaviour among the target group.

From a theoretical perspective, if we go back to Peirce's original semiotics theory, it is assumed that the relation between the sign (GHW) and the interpretant (the meaning that the social agent attributes to the sign) is simplistic and predictable. People do not exist in an isolated world (Hurrelmann, 1990; Bell et al., 2015; Haines-Saah et al, 2015). The social agent perceives a sign and does not necessarily understand its meaning as intended. Rather an interaction with the social and cultural world and individual experiences shape their perception, thus the importance of understanding the wider environment of the target group to develop effective health communication. It is evident in the literature that health communication theories are enhanced by engaging the target group in the development, contextualising the initiatives or policies to improve the engagement of the target group and create impact (Neuhauser and Kreps, 2010). Analysis of the active meaning that adolescents associated with GHWs helped uncover social and cultural factors that could shape their perception. The use of a semiotics framework disentangled the social construction characteristic of the semiotic meaning of GHWs as perceived by adolescents in the UK and Qatar.

Overall, it can be concluded that this thesis highlights the importance of involving adolescents in the process of developing GHWs. The findings highlighted the importance of tailoring GHWs to the target group and showed that what experts might think resonated with the target group did not always match with the intended meaning. Consequently, the study raises awareness that cultural and social factors play a role in the meaning-creation process. The study explores these factors in two different cultural contexts and identifies dimensions that are deemed relevant to the target audience in the study. The study thus provides a framework for health communication to build upon when evaluating health interventions.

7.3.4 Alternative pathways and different communication channels

The study also provides informed viewpoints from adolescents to change the fear appeal approach and focus on suggestions by adolescents on alternative pathways that could reduce the unintended consequences of GHWs. My findings show that adolescents are calling for positively framed messages and other alternative approaches. The findings of this study provide informed perspectives from adolescents that suggest that we could get the message across with potentially reducing unintended consequences.

Currently only one marketing strategy, "promotion", which is explained in the introduction is used in GHWs which entails providing the public with knowledge and information on the adverse impacts of the behaviour. The literature on the importance of combining the different aspects of the marketing mix in order to reach intended outcomes, states that adding further concepts to the marketing mix, such as co-creation, could enhance the effectiveness of the health intervention (Gordon, 2012).

My data suggest adding other factors that could augment the social marketing interventions and enhance GHWs effectiveness. Indeed, the findings show that current GHW framing is not enough in all situations and that communication alone might not be sufficient. The pack design of GHWs could also be improved by providing brief cessation information or information about reaching out to these services. Having information about nicotine replacement therapy (NRT) and counselling services which could play a role in empowering adolescents and thus enhance self-efficacy belief since they provide links to support services.

In this section, I discuss first the findings from this study on including positively framed messages as an alternative to the existing fear appeal in GHWs. I also discuss novel ways of communicating anti-smoking messages that participants of the study suggested.

It has been argued in the literature that fear appeal only works among individuals that exhibit high self-efficacy (Witte, 1992; Thompson et al., 2009). Health communication models such

as HBM and EPPM emphasised the importance of high self-efficacy levels for behaviour change (Rosenstock, 1974; Witte, 1992). EPPM suggests that fear appeal fails when perceived efficacy is low, leading to unintended consequences such as avoiding the message, or defensive effects such as smoking more. Self-efficacy influences behaviour positively according to previous health behaviour models (Bandura, 1986; Witte, 1992; Thompson et al., 2009). In their meta-analysis on the effectiveness of fear communication, Peters et al., (2013), conclude that efficacy is very important for fear appeal to work.

Evidence shows that if individuals are provided with positive messages that empower them or provide them with resources to adapt and change their attitude, they might feel more empowered and thus more capable of engaging in the behaviour (Guttman and Salmon, 2004; Hastings et al., 2004). The literature also suggests that the people who already feel disempowered, or of lower socio-economic status or psychologically distressed might feel worse after being exposed to fear appeal campaigns as it could add more defensiveness and anger (Hastings et al., 2004; Lupton, 2015). The use of negative emotions (fear appeal) might also create defensiveness among the vulnerable population which might cause them to want to smoke more (Thompson et al., 2009). It has been postulated that the use of fear appeal in tobacco control and public health communication has negative consequences on consumers, specifically those who are most vulnerable such as adolescents and individuals of low socio economic status, but rather might be helpful for those with more resources and higher self-efficacy (Hastings et al., 2004; Thompson et al., 2009). Underprivileged communities usually exhibit lower self-esteem (Batty and Flint, 2010; Fujiwara et al., 2019), which might already impact their engagement in the recommended behaviour. Positively framed messages are believed to enhance self-efficacy, an important factor for behaviour change (Hastings et al., 2004).

Adolescents in this study suggested positive messages that have the potential to increase self-efficacy and empower adolescents. According to them, positive messages have the potential to give them hope to change their behaviour. The results of this study are in alignment with studies that highlight the importance of self-efficacy in changing smoking attitudes; this study's findings show that positively framed messages might have potential to engage adolescents more with the anti-smoking message than the use of fear appeal alone. Specifically, my data show the potential of adding positively framed messages to enhance the persuasiveness of GHWs.

There was a difference on preference to positive messages; smokers favoured positive messages more than non-smokers did. Also, participants in Qatar and the UK, who tended

to be in favour of the use of fear appeal, were believed to have held moralistic views and were mainly non-smokers. This difference in perspectives highlights an underlying societal reason which could be the normalisation of the use of a fear appeal. It has been highlighted that cultural beliefs play a role in shaping communication and that it should be incorporated in intercultural communication (Berry, 2007). This thesis adds information about adolescents' perception of GHWs in the Middle East, an understudied region in terms of GHWs and juxtaposes two different cultures.

My study provides systemic insights from adolescents on the potential of positively framed messages; a suggestion that has been put forward by adolescents. Only one study in the literature on GHWs and adolescents explores the potential of gain-framed messages (Goodall and Appiah, 2008). However, this study "tests" suggested gain-framed messages on adolescents' perceptions. My study adds to the existing information in the literature on the potential of positively framed messages by providing suggestions given by adolescents themselves. It raises awareness on the importance of tailoring even positively framed messages to the target group.

My study allowed for exploring alternative ways to fear appeal in health communication that could also potentially reduce unintended consequences. Other than providing links to cessation products and services, my findings indicate an additional approach to extend the communicative power of GHWs, such as adding inserts. Canada has been the only country to implement inserts with cessation information and positive messaging (Canadian Cancer Society, 2018). Thrasher et al. (2015), the only study that investigated inserts in Canada, showed that while reading the on-pack warnings decreased, inserts reading increased and was associated with enhanced self-efficacy because they held hope messages. The study collected data in five ways among adult smokers from an online platform in Canada (2012–14). Younger adults and those of higher socio-economic status reported higher percentages of reading inserts. Smokers who reported reading inserts showed better positive outcomes in terms of quit attempts than individuals who did not. Moreover, packaging and marketing experts in a qualitative study in the UK stated that inserts might prolong the communication effect of the warnings; however, they stated that they could easily be ignored especially by young people (Moodie, 2016).

My findings complement Thrasher et al. (2015) and Moodie et al. (2018), by suggesting that adolescents are in favour of adding inserts inside cigarette packs with positive messages or brief counselling advice and information on cessation services. This finding could suggest a measure that could be piloted and evaluated in the UK, based on the Canadian template

which seems to have proven effective among a certain group of adolescents. The problem might remain that inserts might not reach adolescents of low socio-economic status (who are more likely to be smokers). Positive messages on inserts could be added and could be a way to manifest a combination of the use of fear appeal with positive messages in the literature. It is important to keep in mind the importance of tailoring the messages, even the ones on inserts and positive messages to the target group.

On the other hand, it could be argued that warnings on cigarette sticks are harder to ignore, so it comes with a default communicative power. It might be easy to get rid of the inserts or ignore reading them without affecting the product value itself; my findings illustrate the potential of "on-cigarette" warnings.

On-cigarette warnings have been gaining increased interest recently as a new type of communication on a product (Moodie, 2016; Moodie et al., 2018; Drovandi et al., 2019a; Mitchell et al., 2020). A Scottish focus group study by Moodie et al. (2019) on on–cigarette warning labels found that warnings on cigarette sticks have potential especially with young people. Similarly, on-cigarette warnings were perceived as engaging among young adults in Australia (Drovandi et al., 2019a). A recent qualitative study that consisted of eight focus groups conducted also in Scotland among adolescents (16–17 years old) showed that an on-cigarette warning such as "smoking kills" was perceived as embarrassing and was perceived as less attractive than normal cigarettes but that it did not put adolescents off from smoking (Mitchell et al., 2020).

Findings of my study could add to current evidence on on-cigarette warnings and their potential on the importance of "tailoring" the warning messages to the target group. In that case it will be interesting to explore in future research a different message on the cigarette stick, which is perceived as more relevant to the target group than the "smoking kills" message.

Moreover, my findings also suggest novel ideas for improving the pack design such as adding audio warnings to the cigarette packs. Audio packs could be a crucial component of a staged approach to counselling services whereby the pack creates the first level of counselling and refers the smoker to enhanced services (e.g. quit line, GP appointments, peer-community, etc.). These ideas could augment GHWs which currently only provide information on the adverse consequences of smoking to include links to cessation products and services such as NRTs and cessation clinics. A qualitative study in Scotland explored the perception of audio warnings on cigarette packs among individuals 16+ years in twenty

focus groups. Results indicated that younger smokers perceived audio warnings as off-putting and hard to ignore among adolescents. However, participants also indicated that the audio recordings might make them feel stigmatised and this pushes them to cover them up (Mitchell et al., 2019).

Other novel approaches that were suggested by adolescents in my study were the use of celebrities, acknowledging the role of religion and health beliefs, testimonials, cartoons and humour, foul odour packs, barcode and on-cigarette warning. In line with my findings, Hoffman et al. (2017) argue that celebrities or testimonials could be a form of adding authenticity to the warning label. Furthermore, the findings of this study illustrate again the importance of authenticity not only of the message but also of the source that the communication is coming from. For instance, the potential role of religion, which was highlighted in this study as an influence on adolescents' perceptions of credibility and authenticity of the message, could play a role in enhancing the perceived authenticity of health messages and trust with the communication source in specific contexts (e.g. Qatar). The findings are thus in line with previous research by Hastings and colleagues (2004) who argue that alternative messages to fear appeal should be explored in health communication. The above discussion highlights the importance of exploring target group preferences and of considering innovative ways of message framing and message delivery that are contextualised.

From a social marketing informed perspective, inserts are a new type of communication on a product; while my findings and previous studies might have shown the positive engagement of individuals with inserts (Thrasher et al., 2015; Moodie et al., 2018) it is important to study their impact over time and whether they might wear out. Moreover, other alternatives that are also shown to be promising and might have a higher communicative power are on-cigarette warning sticks. My study provides insights that are driven by adolescents, the target group, instead of only using experts' opinions and testing government suggestions.

In practice, social marketers and public health professionals consider that novelty is key to sustain salience of the health message yet acknowledge that maintaining effectiveness of tailored novel messages is challenging. GHWs are one element of a wider and more comprehensive tobacco control policy (FCTC). It is, thus, useful to provide the environment that is supportive of such enhancements to the GHWs policy. Participants of this study suggested that an increase in price could enhance the reduction and prevention of tobacco consumption among adolescents. In line with the FCTC recommendations, which state

measures such as restricting access, availability and sale and increase in prices of tobacco products, these regulations could together enhance the effectiveness of the tobacco control policies in lowering the prevalence of smoking among youth. Along that line of discussion, Fong et al. (2006) in their paper on the conceptual framework for the ITC policy evaluation project of the FCTC, suggest that each tobacco control policy recommended in the FCTC should have psychosocial and behavioural outcomes. Yet the authors of Fong et al. (2006) argue that considering the wider infrastructure and combining more than one policy together could enhance the behavioural change of individuals, especially if they were reluctant to change their behaviour. In addition to that, it is crucial to acknowledge and examine the competitive environment in which the behaviour change of reducing smoking prevalence is considered. For example, the tobacco industry has historically shown that while it tries to stop tobacco control policies, it also manipulates the policies and always strives to be innovative and capture youth's attention (e.g. novel ways of tobacco packaging) (Moodie and Hastings, 2011). Overall, this discussion highlights the importance of acknowledging the wider infrastructure of which tobacco control policies exist. It also underscores the different scales and actors who play a role in influencing the complexity of implementing tobacco control measures, such as GHWs policy.

Although studies, most of which are recent, explore novel ways of communicating anti-smoking messages, they seem to examine novel ways that were suggested by either experts or governments. This thesis provides insights on novel ways suggested by adolescents. Exploring suggestions by the target group provides a framework for health communication too. The study adds value in terms of designing studies which further explore the effect of these novel approaches.

7.4 Empirical contribution

The study offers lessons learned of health communication on cigarette packages to other health communication areas and products such as e-cigarette health warnings, waterpipe health warnings, alcohol warnings and those for sugary food and beverages, which are gaining increased interest in the current academic and political discussions. Recent academic studies have emphasised the importance of strengthening health warnings on alcohol and sugary and sweet food and drinks (Ares et al., 2019; Winstock et al., 2020; Grumman and Brewer, 2020; Hobin et al., 2020; Vallance et al., 2020). These studies showed that there has been an increase in awareness, attention and emotional appeal from the warning labels but highlights future research and policy directions for the necessity to elevate effectiveness, strengthening salience of health warnings on alcohol and sugary products (Hobin et al., 2019;

Winstock et al., 2020; Grummon and Brewer, 2020). An interesting study that analyses a large sample of data from the annual Global Drug Survey (GDS) delivered in more than 25 countries on alcohol health warnings specifies the requirement to improve personal relevance of the warning labels (Winstock et al., 2020). Similarly, another experiment on health warnings on sweet products among adults in the US shows that while health warnings increase awareness and emotional appeal, they do not influence beliefs and attitudes (Grummon and Brewer, 2020). My study highlights a similar trend in the evidence on tobacco health warnings, in that it increases awareness and attention, yet does not necessarily influence attitudes of adolescents. Furthermore, my study proposes the need to contextualise health warnings on tobacco products, a finding that can be also applied to health communication of other products.

Furthermore, the thesis adds to the methodological discussions of conducting public health research with adolescents by illustrating the effectiveness of projective techniques with adolescents, thus allowing them to share their points of view on a specific intervention. This approach could be used in the pre-testing phase of health messages for a campaign, a programme or a health policy. Projective techniques have rarely been used to study a public health issue. The approach is more common in the field of commercial marketing (Zaltman and Coulter, 1995; Nunez, 2015). This technique provided a platform for adolescents which is more interactive than in a one-direction question-answer format focus group or interview. It also allowed for a triangulation of answers through the different activities involved.

Finally, this study has reiterated the importance of interdisciplinary research. Using social marketing principles has emphasised the importance of the "consumer" centred approach that could influence the development, design and evaluation of health communication. This is in line with Hastings and Haywood (1991) who have stated the importance of bridging the gap between social marketing and health communication through emphasising the role of the target group. The thesis brings in empirical evidence on GHWs and adolescents to emphasise the importance of understanding insights from the target group which could help enhance the effectiveness of GHWs (i.e. alternative ways suggested by adolescents; importance of authenticity, proximity and social and cultural context).

7.5 Limitations

This study does not come without limitations. First, the study sample shows a difference in size between the UK sample and the Qatar one. However, I treat the data as unified samples, and while the difference in the size is not ideal, it was inevitable with the recruitment

difficulties in the UK. Qualitative scholars disagree on quantifying the sample in qualitative research (Mason, 2010). Despite that, reporting on the sample size is still crucial in qualitative research and for further publications. Although the steering concept of qualitative sample size is "theoretical or thematic saturation" (Charmaz, 2006; Mason, 2010), it is argued that it could be achieved early on and within the first few interviews (Mason, 2010). In Mason's article on the sample size used in 560 PhD qualitative studies, it was shown that the majority of PhD studies indicated a sample of less than 30 participants per study. Reflecting on the core purpose of this study, which is to study adolescents' perceptions of GHWs, the cultural context becomes a subordinate theme within this broader aim. Accordingly, the sample is approached as a unified sample, so it is assumed that adolescents in both countries also have shared circumstances. Nevertheless, I explored the cultural differences closely in relation to perceptions of GHWs as an essential theme. Moreover, diversification of the sample in Qatar was harder to achieve. As a result, it was harder to recruit females in Qatar, which resulted in a sample in Qatar that is mainly constituted of males and in a higher number of focus groups. The number of focus groups was higher in Qatar as I received approval to interview females at a later stage during the data collection.

Another limitation could be argued, which is social desirability within focus groups. It is argued in the literature on qualitative research on focus groups that participants might be influenced by the more dominant opinions of the group which may distort the individual voices (Morgan, 1996; Barbour and Kitzinger, 1999). The data in this study were triangulated by conducting individual interviews with participants who might not have been vocal during the discussions. This was one of the main reasons individual interviews were also chosen as another qualitative method of investigation for the study. Despite that, social desirability did not appear to be an issue during data collection. Participants appeared to be more vocal and comfortable during focus groups than during interviews (*field notes: March 2018*). They voiced their own opinion even if it was not in harmony with others.

Third, the study findings could be argued for limited generalisability and indeed qualitative research is known in the literature to generate limited generalisability. However, the term "generalisability", according to Smith (2018) as expressed in the literature means "statistical and probabilistic generalisation" which is truly attributed to quantitative research only and is not applicable to epistemological or ontological stances of qualitative research. Qualitative researchers, especially in anthropology and social science have argued that qualitative research rather makes a different type of generalisation, "vertical generalisation" which is also termed as "analytical generalisation" (Stephens, 1982; Hastrup, 2004; Smith,2018).

This type of generalisation is reasoned to be a conceptual or theoretical generalisation. In other words, when the study identifies and adds new concepts to an existing theory or identifies a new theory, which can explain the phenomena under study, it shows analytical generalisation (Hastrup, 2004; Smith, 2018). Analytical generalisation is curious about meaning creation. According to Smith (2018), if the identified concepts are of value to explain meaning construction, challenge them or explain a transformation, analytical generalisation could be accomplished regardless of the size of the population under study. A similar argument is found in Bell et al., (2015), where the authors argue that the generalisability in qualitative tobacco control research is often compromised. The concepts that were added into the theoretical framework of this study (i.e. authenticity, proximity) could be considered as analytical or theoretical generalisations of concepts to the theory of semiotics and health communication. These concepts could be studied when developing and evaluating health messages.

Lastly, it could be argued that the study is a laboratory study that artificially introduces the GHWs to participants and that participants were only shown the GHWs as images and not on the cigarette package, where they are usually seen. This has been acknowledged since the start of the study, however, from past research on waterpipe smoking among adolescents in Qatar (Nakkash et al., 2014), it was shown that consent of the gatekeeper and parental consent in Qatar as well as ethical approval to conduct research on smoking among adolescents was difficult to attain. This was attributed to cultural beliefs, where smoking is considered a taboo topic among young people and especially females. Thus, I decided to focus only on the messages, without incorporating what might be perceived as intrusive or encouragement to smoke (the cigarette pack). The process of data collection did not show this as an obstacle in how adolescents perceived the GHW images, but rather they engaged in the discussions clearly. It has also been assured to me throughout the data collection, especially in Qatar, that the topic of smoking is still reserved within adolescents as I received rejections from girls only schools, from parents, and schools.

7.6 Summary

In summary, this thesis has made three main contributions to knowledge. The study sheds a light on adolescents, a vulnerable population and the ethical implications and unintended consequences that might result from existing GHWs. The study offers a contribution by providing empirical evidence on adolescents' perceptions of GHWs from the Middle Eastern area, an under-researched area. Moreover, the study provides empirical evidence on aspects of the social and cultural context that are considered relevant to adolescents in the UK and

Qatar. This has implications for health communication and social marketing in emphasising the importance of understanding the social and cultural world of the target group when developing and evaluating health interventions. Second the thesis makes a theoretical contribution by adding to Peirce's theory of semiotics concepts of perceived authenticity, perceived proximity, novelty and tailoring to enhance the effectiveness of health communication and better align the interpretant with the object. Therefore, the study provides a framework for health communication and social marketing to account for the mentioned dimensions and to tailor health messages to the target group when developing, designing and evaluating health messages. Moreover, to my knowledge, the study could be the first to apply Peirce's semiotics to studying a health communication topic. Finally, the study informs the methodological discussion of research with adolescents and applies an interactive method called "projective technique" that is highly used in market and consumer research and used it to explore the perceptions and motivations of the target group on a health communication topic.

CHAPTER 8: CONCLUSION

8.1 Introduction

The thesis makes a theoretical and an empirical contribution to knowledge, adds to the methodological discussions in public health research with adolescents and offers policy implications. The study makes an empirical contribution by adding to the body of literature on the unintended consequences of fear appeal and GHWs. The study is the first to address the ethical considerations of GHWs on adolescents. It identified stigma and stereotype as potential ethical considerations to avoid when developing new GHWs. This contribution could also have implications in considering these factors in the development of health communication in other areas of health promotion such as e-cigarettes, alcohol and sweet and sugary food.

The theoretical contribution to Peirce's semiotics theory is set in recognising the dimensions to enhance the development and the design of health communication messages and which help align the "interpretant" (perceived meaning) with the "object" (intended meaning). This contribution could guide the development of further health communication. Furthermore, the study is the first to identify social and cultural factors that are shown to influence adolescents' perceptions of GHWs. Factors such as communication preferences in each cultural context, the gender roles and what is perceived as authentic and proximate in each cultural context. Identifying these factors is important for tailoring health interventions to the target group and thus helping to contextualise and adapt health messages and health policies to be relevant to the target audience.

Also, the thesis shows novelty by informing the methodological discussion on participatory research with adolescents. The methodological approach which is usually used in consumer and market research is shown to be transferable to other areas of public health. The study also is among the first to identify alternative messages of GHWs in a participatory approach. Using an audience-centred design, the study raises awareness of potential alternative messages such as positive messages that communicate social consequences relevant to adolescents and the importance of contextualising these messages as mentioned above. Therefore, the study adds to the body of literature on alternative and novel ways of health communication on the cigarette pack. It also helps guide the development of future GHWs.

The study connects social marketing and health communication to enhance the effectiveness of GHWs that could be used as lessons learned to contribute to other health communication

areas and health policy which will be discussed further in section 8.3. Furthermore, the study identifies adding principles from social marketing to enhance the effectiveness of GHWs. Adding tailored and relevant messages the study contributes to enhancing the effectiveness of GHWS to achieve their intended meaning and reduce unintended consequences.

Finally, the thesis provides policy implications and lessons learned to health communication on other products such as alcohol, waterpipe, sugary drinks as well as responding to pandemics such as the recent COVID-19.

The research questions I set out to answer were: (1) What are adolescents' perceptions of existing GHWs that use fear appeal in the UK and Qatar? (2) What are the factors, identified through semiotics theory, that play a role in shaping adolescents' perceptions of existing GHWs? (3) What alternative ways could be used to frame the messages of GHWs? To answer these questions, I conducted a qualitative research design and used a combination of projective techniques; association of meanings and construction of mood boards with adolescents during focus groups and interviews. The study was conducted in two countries, the UK and Qatar, which allowed for comparison. The data were analysed through the lens of semiotics theory, which to my knowledge has never been used in health communication.

In this final chapter of the thesis, I draw on the key findings from the study by answering the research questions. Subsequently, I highlight the significance of this thesis and its relevance to other areas of health communication and public health. Finally, I provide recommendations for policy implications and suggestions for future research.

8.2 Answering the research questions

In this section, I revisit the research questions of the thesis and provide a summary of the study findings that answer these questions.

RQ1: What are adolescents' perceptions of GHWs (existing and alternative) in the UK and Qatar that use fear appeal?

Based on the qualitative analysis, it can be concluded that, first, fear appeal often does not lead to the desired attitudinal change among adolescents. The study clearly states that GHWs using fear appeal are not always effective among adolescents and in several cases, have unintended negative consequences.

These findings are broadly in line with Hastings et al. (2004), Anker (2016) and Haines-Saah et al. (2015) who argued that fear appeal is not necessarily the most suitable form of framing in tobacco control. While my findings are generally compatible with the mentioned

studies, they provide novel insights into some areas that are highlighted by the scholars as gaps in research. Haines-Saah et al. (2015) suggested that research which explores how social and cultural contexts influence smoking behaviours is needed. Hastings et al. (2004) hypothesise that fear appeal has differential effects on adolescents compared with adults. Neither of the above-mentioned studies, however, provides an in-depth exploration of adolescents' perceptions of existing GHWs or discusses suggestions for appropriate ways of framing from the target group themselves. By examining adolescents from different cultural contexts and exploring their preferences with regard to the framing of health messages, my thesis uncovers dimensions from the socio-cultural contexts and communication preferences that are relevant to the target group in the reception of health messages.

The study provides informed evidence that fear appeal is not only ineffective in certain situations but can cause unintended consequences, i.e. negative reactions and stigma, which are counterproductive to the originally intended aim. The study also raises awareness on the potential of alternative messages to reduce the inadvertent consequences.

RQ2: What are the factors, identified through semiotics theory, that play a role in shaping adolescents' perceptions of existing GHWs?

The study provides an insight into a vulnerable and under-researched population. Research on adolescents' perceptions of GHWs in Qatar and the Middle East has not previously been examined. Furthermore, adolescents' perceptions of GHWs in general was predominantly discussed from a positivistic perspective which does not allow a detailed understanding of socio-cultural dimensions that shape the phenomenon. The existing literature simply suggests that fear appeal might work differently in different cultures (Hastings et al., 2004; Sabbane et al., 2009; Mead et al., 2015), yet little research exists which empirically explores the role of socio-cultural factors in the reception of anti-smoking messages. Sabbane et al. (2009) was among the few studies that provided a cross-cultural study on the perception of GHWs, between the US and Canada. These two countries can be argued to cover two cultural contexts which are fairly similar. My study, however, adds to the body of literature on cross-cultural public health communication and highlights the differences and yet the similarities of adolescents' perceptions of existing GHWs from the UK and Qatar, two very different cultural contexts. Factors such as *perceived authenticity* and *perceived proximity* were deemed important to enhancing the relevance of GHWs among adolescents. Yet the social and cultural factors that shape adolescents' perceptions of what is proximate and what is considered authentic were unravelled in this study. Therefore, the study provides a

framework for social marketing and health communication on the dimensions to consider when developing, designing and evaluating health messages.

Furthermore, by using the semiotics theory, this study draws attention to how social agents, adolescents, make sense or create meaning of signs. Within this context of public health communication, we need to operate with the understanding of the socio-cultural worlds of the target group and incorporate concepts of perceived proximity and authenticity in developing health communication messages to elevate the relevance and engagement with health communication messages.

RQ3: What alternative ways could be used to frame the messages of GHWs?

The study's approach opened up opportunities to explore alternatives of fear appeal in GHWs from adolescents' perspective. The data showed that alternative approaches such as health warnings on inserts, audio packs and other novel ideas have the potential to engage adolescents with the health message which to date, have not been used. The findings also show that there is huge potential in exploring the effectiveness of positively framed messages in GHWs.

Furthermore, the study contributes to highlighting promising potential alternatives of extending the communicative effect of the cigarette pack through several approaches. Primarily, by thinking about the tobacco pack as only one communicative tool within a wider marketing mix, the study suggests the need to enhance the communicative effect by linking it to other products and services (e.g. cessation services and NRTs). Additionally, the study indicates that inserts and other novel methods could be relevant and promising in engaging adolescents with GHWs despite the fact that inserts have been implemented in Canada for more than 15 years but have not been implemented elsewhere in the world. Lastly, this study stresses the potential of positively framed messages that enhance self-efficacy among individuals. Not much has been achieved in terms of exploring positive messages and other novel approaches of delivering anti-smoking messages. Insights from adolescents who participated in the study could be used to develop and pre-test alternative messages and modes of delivery, including positive messages (inserts) or on-pack warnings.

8.3 Relevance of the thesis: implications for research and policy

I mentioned in the introduction the importance of focusing on adolescents and tailoring health interventions to their needs. Yet in certain cultures, health risks such as alcohol or smoking among adolescents are considered a taboo topic, and thus addressing health

interventions to adolescents only might imply acknowledging that adolescents do engage with these practices which acts as a barrier to targeting adolescents and to involving them in the development of health communication interventions. It is therefore recommended that more adolescents should be involved in the research and development of policies that are targeted at them. Furthermore, the study connects social marketing and health promotion principles to elevate a public health policy in two ways. First, it recommends adding social marketing principles such as adding links to GHWs to products and services (e.g. smoking cessation services and NRTs) and incorporating the exchange concept in the GHWs messages (e.g. highlighting possible benefits relevant to adolescents by giving up smoking). Second, by incorporating an audience-centred approach that focuses on ethical health communication messages, the study recommends adding more than one marketing mix to GHWs (e.g. promotion: tailored, relevant messages; product: use the pack in novel ways), to reach the intended meaning, reduce unintended consequences and enhance the effectiveness of GHWs.

8.3.1 The significance of an interdisciplinary approach:

The thesis embodies an interdisciplinary approach to social marketing and public health. This approach helped emphasise the importance of bridging both disciplines and combining *an audience-centred and a theory-driven approach* to enhance a public health policy. By examining the phenomenon of GHWs from a social marketing and a public health perspective, this thesis provides a new informed perspective of dimensions that are deemed important when adolescents make meaning of health messages in weighing harm. Adolescents have also identified these dimensions as essential to improving the relevance of health messages and motivating them to a voluntary change in their smoking attitude.

Reflecting on the definitions of social marketing and health communication stated in the introduction, the study has followed a comprehensive approach that is audience-centred by focusing on insights from adolescents on GHWs and on co-creation by exploring their suggestions for anti-smoking messages. The study also followed a major concept of social marketing which emphasises the importance of ethical interventions and argued and highlighted the ethical implications and unintended consequences of GHWs for future health communication to reduce inequity. All these contributions meet the FCTC Article 11 key aim which is to increase the motivation in individuals to reduce tobacco consumption and increase quitting. The study further raises awareness of the GHWs policy to move away from being a crude intervention that uses fear appeal to tailor it to the target group and social and cultural context and consider other dimensions to enhance the understanding and

engagement with the message. Within the cross-cultural dimension of the study, factors in the social and cultural context were unravelled (i.e. communication preference, social relationships, gender roles, messages of faith, to change attitude), which would not have otherwise appeared. Moreover, the cross-cultural dimension of the thesis allows for transferring lessons learned and raises awareness of the importance of adapting public health policies into the specificities of contexts.

Moreover, social marketing experts have repeatedly highlighted the need to recognise that a key tenet of social marketing is to take the 'competitive analysis' into account (Andreason, 2002; Hastings, 2012). Hastings, (2012) suggests in his analysis paper on the interference of multinational corporations in today's societies that public health advocates should consider addressing the marketing by multinational corporations, a public health threat. He adds that public health advocates should address the interference of these corporations against public health policies as a priority. When it comes to tobacco control, the tobacco industry has historically played an aggressive role against public health advocates to stop the implementation of tobacco control legislation (e.g. use corporate social responsibility, manipulative arguments on economic losses, lobby with third parties)(Gilmore et al., 2015). Explicit examples of the tobacco industry interference against public health efforts to curb smoking were not only confined in low- and middle-income countries (Gilmore et al.,2 015). The interference of the tobacco industry was also prominent in countries like Australia and New Zealand where public health advocates were faced with aggressive responses ad reactions from the tobacco industry when banning advertisements of tobacco industry and enforcing the indoor smoking ban law (Chapman and Wakefield, 2001), and in Germany where the tobacco industry lobbied political parties to weaken tobacco control policy efforts (Grüning et al., 2012). Thus, it is crucial when considering enhancing the effectiveness of a tobacco control policy (e.g. GHWs), to also keep in mind the tools that the tobacco industry could use to fight the successful implementation of the policy first and to find novel ways to attract its customers (e.g. new ways of design packaging) too.

8.3.2 Future studies and policy implications

Further research studies could investigate the suggested health messages such as positively framed messages compared with existing fear appeal. The study underlines the potential of positive messages and other novel approaches in health communication. The semiotic approach of the study proposes informed perspectives on the potential of alternative methods to fear appeal that could reduce unintended consequences. This finding opens a window of opportunity for future studies to "test" alternative ways of health messages on tobacco

packages as suggested by findings from the study on adolescents in different cultural contexts. Moreover, themes that emerged from the findings of the study could highlight potential messages on GHWs that could enhance the relevance and contextualisation of the messages to the target group and could also be further investigated in future research. The study findings could also provide the basis for future investigation of the social and cultural factors in different contexts in the development of health communication. The findings also provide ideas and insights that research on GHWs in other health communication areas could focus on, such as health warnings on e-cigarettes, other tobacco products, alcohol and sugary food and beverages.

The study offers several policy implications. It highlights concepts and dimensions to be considered in tobacco control policy that could also be transferable to other health products. The study accentuates the importance of targeting and tailoring health communication through contextualised messages that engage the target audience. This approach suggests a participatory and co-creation approach of health communication messages.

Moreover, the study highlights a gap in the online and public information on the development of GHWs but could not address them due to time restrictions. Future studies could address these gaps and develop an information sheet based on lessons learned from GHWs to transfer them to other health communication areas and to allow for benchmarking and adapting of the participatory process of developing health messages. Canada and the UK released public consultation on the new GHWs on cigarette packages, small cigars, inserts and on-cigarette warnings (Government of Canada, 2018) and standardised packaging (UK Government, 2012). While the consultations are a positive step towards including the public in the development of the warnings, yet it is an online consultation that could potentially have several flaws. Previous consultations still "test" the messages driven by experts only, instead of using a systematic participatory approach of segmented audience who can suggest health messages. These messages, then, could be verified and tested. As Austin (1995) suggest, campaigners and health communicators should view the target group as a participant in the development of the health message rather than just a recipient.

Strengthening health warnings and increasing their relevance to the target group could enhance the engagement of the target group with the message to motivate an attitudinal and a behavioural change. The study provides great potential on the factors that should be considered when developing health messages, such as proximity, authenticity and social and cultural factors. At the policy level, Public Health Scotland and Public Health England are exploring health messages on tobacco, alcohol and obesity that are positively framed and are

moving away from messages that communicate long-term consequences. The latter was also mentioned in the World Social Marketing Conference, June 2019. This road map illustrates the relevance of this thesis on contextualising health communication and on dimensions in health communication messages that are considered relevant to adolescents.

Furthermore, the following reflects on the recent health communication topic of COVID-19 pandemic and lessons learned from this thesis that could contribute to further future studies. In the absence of a known treatment or vaccine for COVID-19, the global focus is only on health communications aimed at behavioural change to reduce the number of cases such as isolation and physical distancing. It appears that there are some transferable ideas that could be worth investigating further. These ideas are (1) to explore the unintended consequences of "physical distancing" and existing health communication messages on individuals during the pandemic; (2) to explore the importance of trust in the source for compliance in behaviour; (3) the importance of tailoring messages to the social and cultural context of the target group. First, the unintended consequences of fear communication .The literature on lessons learned from previous public health emergencies have highlighted the need to avoid fear appeal communication and unintended consequences that may result from the pandemic or communication during a pandemic (Betsch, et al., 2020; Dennis and Thomas, 2020). Second, the importance of building trust with the source of health messages to enhance engagement with the behaviour. Beitsch et al (2020), in the recent publication on monitoring research and health behaviours of individuals during COVID-19, report that when the public understand the message and trust the source, it makes it easier for them to comply with the public health recommendations. Third, the importance of tailoring the messages to match the social and cultural context of each country. Another lesson learned outlined in the WHO guidelines (2017) on "communicating risk in public health emergencies" from the Ebola outbreak outlines the need to contextualise health messages, to use digital social media services to deliver communication for specific audiences.

To conclude, the study has contributed to establishing dimensions for a context specific and cross-cultural communication in the health communication of tobacco control that could be transferable to other areas of health communication. I believe there is a momentum of increasing the engagement and co-creation with the target audience to develop and evaluate health messages. Moreover, the thesis also offers a positive outlook into alternatives of fear appeal such as exploring positively framed messages and other novel ways that enhance adolescents' engagement.

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Appendix 1A: Reference in text to GHWs in Qatar

GHWs in Qatar (English and Arabic version) (Tobacco Labelling Resource Centre, 2013)	**Referred to in-text as:**
 	**Pregnant women GHW**
 	**Skull GHW**

  	**Burning hands GHW**
  	**Snake GHW**

Appendix 1B: Reference in text to GHWs in the UK

GHWs (Obtained from, UK Government, 2016, pp. 30, 31, 32)	Referred to in-text as:
 	**Teeth damage GHW**
	**Damage to lungs GHW**
	**Blindness GHW**

	**Mouth cancer GHW**
 	**Stroke GHW**
	**Throat cancer GHW**

	**Infertility GHW**
	**Impotence GHW**
	**Child smoking GHW**
	**Smoking parent and child GHW**

	**Woman coughing blood GHW**
	**Stroke and disability GHW**

Appendix 2: MPOWER comparison in the WHO EMRO region

Eastern Mediterranean

Table 1.5
Summary of MPOWER measures

... Data not reported/not available.
— Data not required/not applicable.
< Refers to a territory.

2016 INDICATOR AND COMPLIANCE

COUNTRY	ADULT DAILY SMOKING PREVALENCE (2015)	M MONITORING	P SMOKE-FREE POLICIES (LINES REPRESENT LEVEL OF COMPLIANCE)	O CESSATION	W WARNINGS: HEALTH WARNINGS	W WARNINGS: MASS MEDIA	E ADVERTISING BANS (LINES REPRESENT LEVEL OF COMPLIANCE)	R TAXATION	R CIGARETTES LESS AFFORDABLE SINCE 2008
Afghanistan	...		IIII				IIIIIIIII	2%	YES
Bahrain	22%		— ☆				IIIIIIIII	27%	YES
Djibouti	10%		...				...	29%	NO
Egypt	22%						IIIIIII	74%	YES
Iran (Islamic Republic of)	10%		IIIIIIII				IIIIIIIII	20%	↔
Iraq	...		IIIII				IIIII	52%	↔
Jordan	...		II				IIIII	81%	↔
Kuwait	19%		...				...	25%	YES
Lebanon	25%		IIII				IIIII	41%	↔
Libya	...						IIIIIII	12%	YES
Morocco	19%		IIIII				III	71%	↔
Oman	9%		—				IIIIIII	20%	YES
Pakistan	16%		II				IIIIIII	60%	YES
Qatar	16%		—				IIIIIIIII	20%	YES
Saudi Arabia	13%		I				IIIIIII	33%	YES
Somalia	...		—				—	4%	...
Sudan	...		—				...	74%	↔
Syrian Arab Republic	...		IIIII				IIIIIII	60%	...
Tunisia	28%		—				...	75%	↔
United Arab Emirates	23%		... ☆				...	18%	YES
West Bank and Gaza Strip <	...		II				IIII	82%	...
Yemen	14%		III				IIIIIII	53%	YES

Source: WHO, 2017[a]

Appendix 3: Systematic search of the literature on GHWs and adolescents

Literature search protocol

A comprehensive search of the literature was conducted systematically to identify articles that discuss the following search string ((Adolescent or adolescence or youth or "young people" or teens or teenagers) AND (smoking or "cigarette smoking" or "tobacco smoking" or "cigarette use" or "tobacco use" or "tobacco product") AND (warning or "product labelling" or "warning messages" or "warning label" or package or packaging or "product inserts" or "product package") AND (graphic or pictorial or visual)). The search protocol involved five steps. First, four computerised databases hosts, Ovid (EMBASE, MEDLINE), Web of Science, ELSEVIER/Science Direct (SCOPUS) and EBSCO host (CINAHL, MEDLINE, PSYCHINFO), were used to conduct the search of the before mentioned search string in February 2017. Second, relevant articles from the search results were selected after title screening according to the inclusion criteria identified earlier and the selected articles were exported to Endnote software. Third, duplicates were removed using the Endnote software. This led to a reduction of articles from 103 to 74. Fourth, after reading the articles, 20 articles were selected as relevant. Fifth, I went through the reference list of the 20 selected articles to identify any missing citation and as a result one report, Wardle et al., 2010, was identified as relevant and included in the summary of literature.

The 20 articles selected covered several journals in different disciplines such as Psychology, Public health and Marketing (*Journal of Tobacco Control, Journal of Public Policy and Marketing, Journal of Marketing Research, International Journal of Behavioural Medicine, Journal of Tobacco Induced Diseases, Journal of Nicotine and Tobacco Research, Journal of Consumer Research, Journal of Addiction, American Journal of Preventive Medicine, Journal of Health Communication, Journal of Addictive behaviours, Journal of Adolescent Health, Journal of health Education and Behaviour, European Journal of Public Health, BMJ and PLOS)*. The search on Science Direct was the last to be conducted and as such yielded the least results, since some of the citations were not chosen because they had already been selected in other databases.

The studies covered the period between 2008 and 2016 and were conducted in several countries such as the UK, the USA, Greece, Spain, France, Australia, Nigeria, Lebanon and

Canada, countries in the Gulf Cooperation Council (GCC). All 20 studies followed the quantitative approach with only one study reporting secondary data (Moodie et al., 2013).

Studies had to meet the inclusion criteria. Yet, there was an inconsistency in the age group selected for the inclusion criteria, as several research studies included adolescents or youth or teens but with different age ranges (15-19; 12-17; 11-17; 12-20; 13-18; 14-17; 11-16;13-17). The (13-17 years old) range was defined the most, in seven studies out of the 21 and the (13-18 years old) in five studies, the (11-17 years old) in three studies and the remaining age ranges were defined in one study each. Seven articles included the target population of adolescents with young adults and/or adults. These articles were included in the summary of the literature as the analysis of their data showed distinct results for different age groups.

Similarly, articles that assessed exposure of only plain packaging or only text warnings on adolescents were excluded. Studies that compared the effectiveness of GHWs to text only warnings were mentioned briefly in the summary for the purpose of highlighting the significance of pictorials.

Inclusion and Exclusion criteria

	Inclusion criteria	Exclusion criteria
Data type	Primary data, secondary data	Opinions
Study Design	Quantitative, qualitative, systematic reviews, meta-analysis	Clinical trials
Population	Adolescents, youth, teenagers, teens, school students	Patients, adults, young adults (18-23), pregnant women
Intervention	Exposure to graphic health warnings of cigarette packages	▪ Exposure to text warning labels ONLY ▪ Exposure to Plain packaging ONLY ▪ Exposure to warning labels of other tobacco products ▪ Exposure of warning labels on other products (e.g. alcohol)
Outcome	Emotions, attitude, behaviour Emotional processing Cognitive processing	Neural mechanisms of processing GHW
Language	English	Languages other than English
Country	All – International scope	-
Timeframe	No limit	-

Refining search

	Ovid	EBSCO	Web of Science	Science Direct
Initial search	1497	230	81	2,943 removing literature dated to before 2000= 4,243)
Screening title and abstract	33	34	33	3 (after refining search and choosing only journal articles =722)

Removing Duplicates	74 articles
Selected articles	20 articles

Appendix 4: Focus groups/individual interview guide

A. **Ice breaker questions**

B. **Exercise 1: Association**

1. Have you seen GHWs on cigarette packages?
2. Which GHW do you recall?
    a. How did this warning label make you feel?
    b. What do you think of that particular warning label?

3. **Choice ordering Exercise**

(Show an example of "local" GHWs)

1. Have you seen this picture and text before?
2. Can you describe the image? Can you tell me what the text says?
3. Does the image and text grab your attention? Why?
4. Do you understand this image? What is the message trying to tell you?
5. How does this image make you feel? Why?
6. What does this image make you want to do?
    a. Why would you avoid looking at the message?
    b. Why would you reject the message?
    c. Why would you accept the message?
    d. What will you do accordingly? (talk to peers, talk to someone about it)
    e. What made you react that way?
7. Order the GHW on the given matrix from the least persuasive to most persuasive (for smokers vs non-smokers/ boys vs girls)
8. Do you think these messages should be kept? Which ones? Why?
9. How do you think the GHWs on cigarette packages could be improved? Why?

C. **Exercise 2: Construction**

1. Creating a health message:

Imagine you are given the task to create warning labels on cigarette packages that are persuasive to make adolescents stay away from smoking.

a. As a group or individually, design GHWs that you think will be effective in stopping people your age from smoking.
b. Discuss the design(s): Why did you design the label that way?

2, Create Mood board:

On the given mood board, choose the messages that you find are most persuasive for adolescents your age to stay away from smoking. Discuss why they have chosen the messages and why they haven't.

Some general background questions (could be used for probing):

1. What activities do you do together? Alone? OR What do you enjoy doing in your free time? What do you do with friends?
2. Do you receive pocket money? How much money do you spend on yourself per week? For what?
3. Are you surrounded or close to people who smoke? Who? How do you feel about it?
4. Is it easy for adolescents your age nowadays to smoke? Why?
5. Do you smoke? Have you ever tried it? If yes, with whom?
    a. If smoker: Where do you usually smoke?
    b. If smoker: Do your parents know that you smoke? Do/would they get annoyed? How would they react if they were annoyed?
6. What do you think makes you want to smoke or not smoke? OR Why do you think adolescents might engage in smoking?

Appendix 5: Background questionnaire

Participant

code: (eg.UYF3) (Country_School/YouthOrg _FocusGroup/Interview_participant#)

Please read each question carefully and circle the answer that best describes you.

Please choose only <u>one</u> answer for each question.

<u>Demographics</u>

1. Please indicate your Gender:
    a. Female
    b. Male
2. How old are you? _____
3. Have you ever smoked?
    a. Current smoker
    b. Used to smoke
    c. Tried it once
    d. Never smoked
4. Are you enrolled in an educational institution? Yes No
5. If yes, in which school year are you?

<u>Socio Economic status</u> (adopted from Family Affluence Survey (FAS))

6. Does your family own a car, van or truck?
    a. No
    b. Yes, one
    c. Yes, two or more
7. Do you have your own bedroom?
    a. No
    b. Yes
8. During the past 12 months, how many times did you travel away on holiday with your family?
    a. Not at all
    b. Once
    c. Twice

d. More than twice

9. How many computers (PCs, Macs or laptops) does your family own?
    a. None
    b. One
    c. Two
    d. More than two

Multidimensional Scale of Perceived Social Support

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

	Very Strongly Disagree	**Strongly Disagree**	**Mildly Disagree**	**Neutral**	**Mildly Agree**	**Strongly Agree**	**Very Strongly Agree**
1)There is a special person who is around when I am in need.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2) I get the emotional help and support I need from my family.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3) I can count on my friends when things go wrong.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4) I have friends with whom I can share my joys and sorrows.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5) There is a special person in my life who cares about my feelings.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6)My family is willing to help me make decisions.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7) I can talk about my problems with my friends.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Appendix 6: University of Glasgow – ethics approval letter (copy)

25 January 2018

Dear Nadia Fanous

College of Social Sciences Research Ethics Committee

Project Title: Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar

Application No: 400170084[Field]

The College Research Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

Start date of ethical approval: 25/01/2018

- Project end date: 01/10/2020
- Any outstanding permissions needed from third parties in order to recruit research participants or to access facilities or venues for research purposes must be obtained in writing and submitted to the CoSS Research Ethics Administrator before research commences. Permissions you must provide are shown in the *College Ethics Review Feedback* document that has been sent to you.
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: (https://www.gla.ac.uk/media/media_490311_en.pdf)
- The research should be carried out only on the sites, and/or with the groups and using the methods defined in the application.
- Any proposed changes in the protocol should be submitted for reassessment as an amendment to the original application. The *Request for Amendments to an Approved Application* form should be used: https://www.gla.ac.uk/colleges/socialsciences/students/ethics/forms/staffandpostgraduateresearchstudents/

Yours sincerely,

Dr Muir Houston

College Ethics Officer

Appendix 7: Copy of approval to access schools in Qatar – Ministry of Education, Qatar

التاريخ : 30 / 9 / 2018 م

وزارة التعليم و التعليم العالي
صادر جهات خارجيه
108/2018

تسهيل مهمة القائم بالبحث الميداني في المدارس

السيد : مدير المدرسة المحترم

السلام عليكم ورحمة الله وبركاته

نود إحاطتكم علما بأن الباحث / الباحثون المذكورة أسماءهم أدناه ، بصدد إجراء دراسة ميدانية في مدرستكم وبياناتهم كالتالي :

اسم الباحث : ناديا فانوس

جهة البحث : جامعة غلاسكو| مركز مكافحة التدخين مؤسسة حمد الطبية

- **عنوان البحث :** استكشاف تصورات و آراء المراهقين حول ملصقات التحذير الصحية المصورة في قطر و المملكة المتحدة
- **هدف البحث :**اتاحة الفرصة للمراهقين للتفكير في ملصقات التحذير الصحية المصورة وكذلك العوامل التي قد تؤثر على تصوراتهم، و ذلك بهدف تحسينها. كذلك ممكن لنتائج البحث إضافة معلومات لسياسات مكافحة التدخين مثل تفصيل الرسائل الصحية بحيث تكون أكثر بروزًا وفعالية. تهدف الدراسة على المساعدة للحد من انتشار التدخين بين المراهقين
- **عينة البحث :** تلاميذ تتراوح أعمارهم بين ال 13-18 سنة
- **التاريخ : 2018-09-20**

عليه ، يرجى التكرم بتسهيل مهمة الباحث ، علما بأن البيانات ستكون سرية ولأغراض البحث العلمي . .

مع شكرنا لحسن تعاونكم معنا ،،،

د. عزيزة أحمد السعدي

مدير إدارة السياسات والأبحاث التربوية

Appendix 8: No objection letter (Qatar-Hamad Medical Corporation)

مؤسسة حمد الطبية
Hamad Medical Corporation
HEALTH · EDUCATION · RESEARCH

NO OBJECTION LETTER
MEDICAL RESEARCH CENTER
HMC, DOHA-QATAR

Ms. Nadia Fanous **Date: 25 September 2018** **University of Glasgow**	
Protocol No.	MRC-01-18-100
Study Title:	Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar
Team Member List:	Dr. Ahmed Mohd. H.A/Kareem Almulla, Ms. Nadia Fanous
Review Type:	Administrative

Please be informed that the Medical Research Center has reviewed your research proposal and has granted permission for the study to commence as well as for any resulting manuscript to be submitted for publication.

We wish you success and await the outcomes in due course.

Prof. Michael Paul Frenneaux
Chief of Scientific, Academic and Faculty Affairs
Hamad Medical Corporation

Medical Research Center
Hamad
Hamad Medical Corporation - Doha - Qatar

Date:25 September 2018

Appendix 9: Letter to youth organisations (UK)

University of Glasgow

College of Social Sciences

Letter to Youth Organisations

Title of project and researcher details

"Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar"

Researcher: Nadia Fanous

Supervisors: Dr Thomas Anker, Dr Heide Weishaar, Dr. Shona Hilton

Course: PhD in Management

This research study explores the perception and attitudes of adolescents in the UK and Qatar towards the existing graphic health warning labels on cigarette packages and their impact on the adolescents' attitudes towards smoking. The adolescents' insights will be explored via focus group discussions and individual interviews. In the UK, participants will be recruited via youth organisations. In research, adolescents are generally considered to be a vulnerable population. Following good research practice, a number of measures to minimise any potential risk to participants have been considered.

Talking about their perception of health messages is something adolescents are likely to enjoy

The area of discussion is not considered a sensitive topic and participating in the study holds no or only a very minimal risk for adolescents. The study will provide the participants with the opportunity to reflect on existing graphic health warning labels and their impact on their own attitudes towards smoking as well as factors that could impact their perceptions.

Provision of clear and comprehensive information about the study

The participants, their parents/carers and the youth organisation will be given an information sheet that explains the study aims, the study process, their rights and the contact information of the researcher, the leading supervisor and a representative from the ethics department at University of Glasgow. This means that participants can contact someone in case any issues arise during the data collection or afterwards. The information form will clearly state that participation in the study is voluntary and that even if the youth organization and the parent/carer approve, the participant has the right *not* to participate in the study.

The study abides by the ethical guidelines of the University of Glasgow

The University of Glasgow's ethical requirements for conducting research with adolescents will be strictly followed. The participants will be continuously assured during the focus group discussions and interviews of their rights to ask questions or withdraw from the study. Participants' personal data will be made anonymous (pseudonyms for participants will be used) and the data will be destroyed after the completion of the study. The researcher

conducting the study (Nadia Fanous) has received the Disclosure Scotland PVG scheme certificate.

Dissemination of Results

Results from the study will be analysed and reported in an aggregate without using identifiable data to protect the privacy and confidentiality of the participants who agreed to participate in the discussions or interviews. I will also agree with the youth organisation/School on their preferred method for dissemination of the study results; in the form of a summary report or a presentation.

Contact information if you have further questions

Nadia Fanous, PhD student, University of Glasgow:
n.fanous.1@research.gla.ac.uk

Appendix 10: Participant information sheet (adolescent)

University of Glasgow

College of Social Sciences

Title of project and researcher details

"Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar"

Researcher: Nadia Fanous

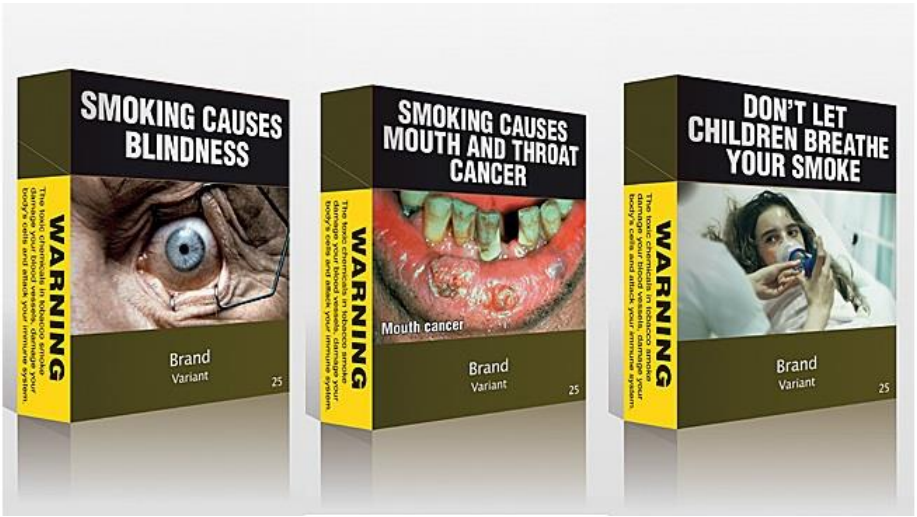
Supervisors: Dr Thomas Anker, Dr Heide Weishaar, Dr Shona Hilton

Course: PhD in Management

You are being invited to take part in **an interview/focus group discussion which is part of a research project on graphic health warning labels on cigarette packs**.

Graphic health warning labels are the images that are displayed on cigarette packages. These warning labels try to reduce the appeal of a cigarette pack and to communicate the health consequences of smoking.

For example: the images below show the health impact of smoking



I would like to meet you (and your friends) to hear what you think about the graphic warning labels on the cigarette packages. I would also like to learn how these graphic health warning labels will affect your attitude towards smoking.

Where will the discussions take place?

We can meet in your school/youth organization at a time that you and the school/youth organization suggest is suitable.

Before you decide if you want to take part, it is important for you to understand the purpose of the research what it will involve. Please take time to read the information on

this page carefully and discuss it with others, your friends and your parents/carers if you wish. Ask me if there is anything that is not clear or if you would like to ask for more information. Take time to decide whether or not you wish to take part.

What is the importance of this research project?

The study will help me explore your thoughts towards graphic health warning labels and understand from your own point of view what could make graphic health warning labels more effective.

How to get parental consent?

- Please give the forms (consent form) and participant information sheet to your parents/carers.
- If your parents/carers do not wish that you participate in the study, they should sign the (consent form) and return it back to the head of the youth organization or school or the researcher.
- Participants who return the informed consent from their parents showing the decline of participation will not be considered in the study

What do I need to know before participating?

- **It is up to you to decide if you want to take part in this study.** Even if the head teacher in your school/youth organization administrator and your parents/carers agree for you to participate, you have the right not to take part in the study if you don't wish to
- I would like to record our conversation so I can remember what we all said
- I will assign you pseudonyms (a nickname) so that the data will be unidentifiable
- You do not need to answer questions that you do not want to
- You can withdraw from the study at any point
- You can also ask me if you have any questions or if you wish to talk to someone other than the researcher you can contact either my supervisor or the ethics administration (contact information is provided at the end of this document).

What will happen if you take part?

- You may participate in a focus group, an interview or both.
- If you decide to take part I will ask you first some general questions to get a brief description about you, such as your age, gender, smoking status etc.
- I would like to meet you (and your friends) and discuss together your thoughts and feelings towards the graphic health warning labels on cigarette packages. For example, what does the image make you think? How would you react? Etc.
- All of this will take about **60–90 min**.

Will my data be shared?

- The material will be treated as confidential and kept in secure storage at all times. Confidentiality will be respected subject to legal constraints and professional guidelines.
- The material will be destroyed after 10 years from the project completion
- I will keep the personal data and information I obtain from all participants in the study in a secure server at the University of Glasgow
- When I write about what I have learned from the discussions in my thesis, your name will not be mentioned. Pseudonyms will be used instead
- I ask you to respect the privacy of the discussions and not to mention them outside this room
- I also want to assure you that no one has access to the data except me and my supervisors and/or examiners
- The material may be used in future publications, both print and online without the use of identifiable data

- Other authenticated researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form

Review of the study

This study has been reviewed and agreed by the College of Social Sciences Research Ethics Committee, University of Glasgow

Contact for further Information

If you have any questions about this study,

you can ask me, Nadia Fanous (n.fanous.1@research.gla.ac.uk),

or my supervisor, Thomas Anker (Thomas.Anker@glasgow.ac.uk),

or the Ethics officer for the College of Social Sciences (Muir.Houston@glasgow.ac.uk)

Thank you for reading this!

Appendix 11: Parent/carer information sheet

University of Glasgow

College of Social Sciences

Parent/Carer Information Sheet

Title of project and researcher details

"Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar"

Researcher: Nadia Fanous

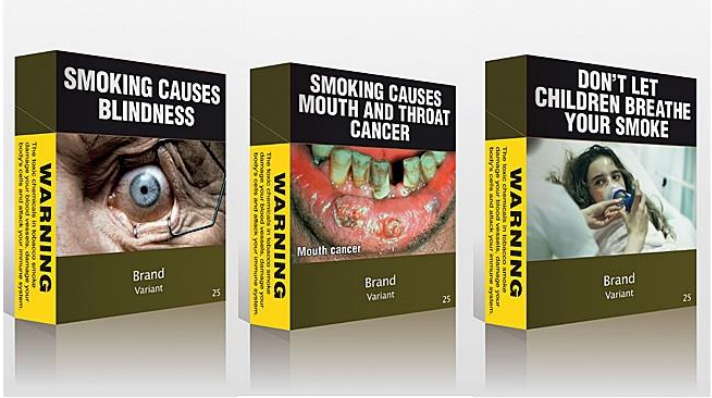
Supervisors: Dr Thomas Anker, Dr Heide Weishaar, Dr Shona Hilton

Course: PhD in Management

Your child is being invited to take part in **an interview/focus group discussion which is part of a research project on graphic health warning labels on cigarette packs**.

Graphic health warning labels are the images that are displayed on cigarette packages. These warning labels try to reduce the appeal of a cigarette pack and to communicate the health consequences of smoking.

For example: the images below show the health impact of smoking



I would like to meet with your child (and their friends) to hear what they think about the graphic warning labels on the cigarette packages. I would also like to learn how these graphic health warning labels will affect their attitude towards smoking.

Where will the discussions take place?

The meeting will take place in their school/youth organisation at a time that is suitable for them and which the school/youth organisation suggests is also suitable.

Before you decide if you want your child to take part, it is important for you to understand the purpose of the research and what it will involve. Please take time to read the information on this page carefully and discuss it with your child if you wish. Ask me if there

is anything that is not clear or if you would like to ask for more information. Take time to decide whether or not you wish your child to take part.

What is the importance of this research project?

The study will help me explore adolescents' thoughts towards graphic health warning labels and understand it from their own point of view to help in guiding what could make graphic health warning labels more effective.

How to get parental consent?

- You will receive a consent form and participant information sheet
- If you DO NOT wish for your child to participate in the study, please sign the consent form and return it back to the head of the youth organisation or school or the researcher.
- Participants who return the informed consent from their parents showing the decline of participation will not be considered in the study

What do I need to know before participating?

- **It is up to the child to decide if he/she wants to take part in this study.** Even if the head teacher in your child's school/youth organization administrator agreed for your child to participate, he/she has the right not to take part in the study if they don't wish to
- I would like to record the discussions during the focus group discussions so I can remember what has been discussed
- I will assign pseudonyms (a nickname) for all participants so that the data will be unidentifiable
- Your child does not need to answer questions that they do not want to
- Your child can withdraw from the study at any point
- You can also ask me if you have any questions or if you wish to talk to someone other than the researcher you can contact either my supervisor or the ethics committee (contact information is provided at the end of this document).

What will happen if your child takes part?

- Your child may participate in either a focus group, an interview or both
- If you agree that your child takes part in the study. I will have a focus group/interview discussion on some general questions first to get a brief description on age, gender, smoking status etc. And then, discuss their thoughts and feelings towards the graphic health warning labels on cigarette packages. For example, what does the image make them think? How would they react? Etc.
- All of this will take about **60 –90 min***.*

Will personal data of your child be shared?

- The material will be treated as confidential and kept in secure storage at all times. Confidentiality will be respected subject to legal constraints and professional guidelines
- The material will be destroyed after 10 years from the project completion
- I will keep the personal data and information I obtain from all participants in the study in a secure server at the University of Glasgow
- When I write about what I have learned from the discussions in my thesis, your child's name will not be mentioned. Pseudonyms will be used instead
- I also want to assure you and your child that no one has the access to the data except me and my supervisors and/or examiners
- The material may be used in future publications, both print and online without the use of identifiable data

- Other authenticated researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form

Review of the study

This study has been reviewed and agreed by the College of Social Sciences Research Ethics Committee, University of Glasgow

Contact for further Information

If you have any questions about this study,

you can ask me, Nadia Fanous (n.fanous.1@research.gla.ac.uk),

or my supervisor, Thomas Anker (Thomas.Anker@glasgow.ac.uk),

or the Ethics officer for the College of Social Sciences (Muir.Houston@glasgow.ac.uk)

Thank you for reading this!

Appendix 12: Parent/carer consent/opt-out form

University of Glasgow

College of Social Sciences

Parent/Carer Consent Form

Please complete this form **ONLY IF YOU DO NOT AGREE** for your child to take part in the below study at their school/youth organisation

Title of Project: "Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar"

Name of Researcher: Nadia Fanous

Contact for further Information

If you have any questions about this study,

you can ask me, Nadia Fanous (n.fanous.1@research.gla.ac.uk),

or my supervisor, Thomas Anker (Thomas.Anker@glasgow.ac.uk),

or the Ethics officer for the College of Social Sciences (Muir.Houston@glasgow.ac.uk)

I confirm that I have read and understood the Participant Information Sheet for the above study and have had the opportunity to ask questions. ☐

I **DO NOT** agree for my child to take part in this research study ☐

Please fill in the below:

Your name (parent/carer) ……

Your child's name ……

Child's school/youth organisation ……

Your Signature …… Date ……

…… End of consent form ……

Appendix 13: Participant assent form

University of Glasgow

College of Social Sciences

Adolescent

Consent Form

(Please read carefully and tick the boxes to the phrases you agree to. If you have any questions, ask the researcher)

Title of project: "Intended and unintended consequences of graphic health warning labels: Exploring adolescents' perceptions in the UK and Qatar"

Researcher: Nadia Fanous

I confirm that I have read and understood the Participant Information Sheet (adolescent) for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

I acknowledge that participants will be referred to by pseudonym.

I acknowledge that I will have a short questionnaire to fill in.

I acknowledge that there will be no effect on my grades/enrolment arising from my participation or non-participation in this research.

I AGREE to interviews being audio-recorded ☐

I DO NOT AGREE to interviews being audio-recorded ☐

I agree to take part in this research study ☐

I do not agree to take part in this research study ☐

Name of Participant ……

Name of Researcher ……Signature……..

Date ……

…… End of consent form……