



*Original Article*

## Why Do Graphic Health Warnings Fail: An Explanatory Case Study on the Persistence of Smoking Behavior among Male Adult Smokers in a Rural and Low-Income Setting in the Philippines

John Rafael Arda<sup>1</sup>, Ashley Gabrielle Jeanjaquet<sup>1</sup>, Navin John Pasia<sup>1</sup>, John Dominic Mari Rafael<sup>1</sup>, Danyz Samantha Rita<sup>1</sup>, Kaye Bernice Siao<sup>1</sup>, Jecelyn Grace Yparraguirre<sup>1</sup>, Genejane Adarlo<sup>1</sup>

<sup>1</sup>Ateneo de Manila University, Quezon City, Philippines

Correspondence should be addressed to: Genejane Adarlo<sup>1</sup>; gadarlo@ateneo.edu

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### Abstract

**Background:** The Philippines enacted in 2014 Republic Act No. 10643 that mandated the printing of Graphic Health Warnings on tobacco packages. However, smoking behavior among male smokers in the country, particularly in rural and low-income areas, persists even if the Graphic Health Warnings are according to the guidelines set by the World Health Organization. Hence, this explanatory case study aims to examine why and how most male adult smokers in a rural and low-income setting in the Philippines fail to quit smoking despite the presence of Graphic Health Warnings on tobacco packages. **Methods:** Forty-four male adult smokers from Barangay Urdaneta in Magallanes, Cavite, were recruited to participate in this study through snowball sampling. They underwent semi-structured interviews about their history of smoking, experiences as a smoker, and perspectives on Graphic Health Warnings. Thematic analysis of verbatim transcripts was then carried out to identify emerging themes. **Results:** Findings showed Graphic Health Warnings fail to persuade against smoking because fear was not aroused enough for smoking cessation. Specifically, the perception of risk from smoking was low due to lack of literacy on its harmful effects, and self-efficacy needed for smoking cessation was low because of self-doubt and denial. Other factors, such as the subjective and social benefits of smoking, were likewise contributory to the persistence of smoking behavior. **Conclusion:** All these concerns must be considered for an effective campaign against tobacco use and consumption since Graphic Health Warnings on tobacco packages is only one strategy to address the burden of tobacco smoking.

**Keywords:** tobacco smoking, graphic health warnings, smoking cessation

### INTRODUCTION

Tobacco smoking has become a global concern as its complications have been the leading cause of preventable deaths in the world. More than 7 million deaths are reported annually, with current trends showing that mortality can reach up to 8 million per year by 2030. Characteristically, the burden of tobacco smoking is heaviest in low- and middle-income countries, wherein 80% of 1.3 billion smokers live.<sup>1</sup> This globalization of the tobacco epidemic prompted the World Health Organization (WHO) in 2003 to develop an evidence-based treaty that aims to control tobacco consumption and to

reaffirm the right of all to the highest standard of health. The treaty gathered 168 signatories to the WHO Framework Convention on Tobacco Control, with the Philippines being part of them.<sup>2</sup>

Under this treaty, the Philippines, which has 23.8% of its adult population identified as tobacco users,<sup>3</sup> is not only obliged to inform the public about the health, social, and economic consequences of consumption and exposure to tobacco smoke, but it is also mandated to create measures to reduce tobacco use. To do so, the country has implemented policies that correspond to MPOWER, which are six practical,

affordable, and attainable measures outlined by the WHO against tobacco use and consumption. MPOWER stands for measures that include: monitoring tobacco use and prevention policies; protecting people from tobacco smoke; offering help to quit tobacco use; warning about the dangers of tobacco; enforcing bans on tobacco advertising, promotion, and sponsorship; and raising taxes on tobacco.<sup>4</sup> One of these recent measures in the Philippines is the implementation of Republic Act No. 10643 or the Act to Effectively Instill Health Consciousness through Graphic Health Warnings on Tobacco Products.

Graphic Health Warnings (GHWs) are warning labels on tobacco packages. They are composed of strong images that present the harmful effects of smoking and textual warnings that are related to such images. These pictorial and textual warnings are expected to elicit strong responses from smokers, such as fear, as GHWs are based on fear appeals theory, wherein arousing fear of imminent threat or danger is assumed to be more persuasive in smoking cessation compared to the use of reason.<sup>5</sup> Such argument, though, as Kok et al. express, “is simple and intuitive, but only true under specific and rare circumstances.”<sup>6</sup>

Nevertheless, GHWs have been valuable in cutting down the number of smokers in several countries. They are deemed effective to smoking cessation because, as WHO suggests, these warning labels describe the harmful effect of tobacco use; cover 50% or more and not less than 30% of the principal display of tobacco packages so that they are clear, visible, and legible; rotate periodically to continually catch the attention and interest of the public; appear in the country’s vernacular; and include graphic pictures.<sup>7</sup>

Although their effectiveness seems to differ as some studies even showed how GHWs might reinforce smoking behavior.<sup>6,8,9</sup> “Understanding factors associated with quitting [and failure to do so] in specific cultural and socioeconomic context,” as Tonstad et al. emphasize, is then “crucial to the development of public health and clinical programs.”<sup>10</sup> Hence, this study aims to examine why and how most smokers in the Philippine context fail to quit smoking despite

the presence of GHWs on tobacco packages. Specifically, it seeks to understand the reasons for the prevalence of smoking among male adults from rural and low-income areas in the Philippines so that these enabling factors can be targeted for intervention.

## METHODS

**Research Design.** Qualitative inquiry can offer insights into human behavior and what regulates it.<sup>11</sup> Thus, we did an explanatory case study as a form of qualitative inquiry since it is most suitable in explaining why and how certain conditions or phenomena came to be.<sup>12</sup> We used an explanatory case study to gather an in-depth understanding of a phenomenon, such as the persistence of smoking, within its real-world context.<sup>11</sup> In carrying out the research, we were guided by the constructivist paradigm that reality is socially constructed and may have multiple meanings, which require a balanced representation of views.<sup>13</sup>

**Setting and Participants.** Prior to recruiting study participants and collecting data, we sought ethics approval from the University Research Ethics Office of Ateneo de Manila (ADMUREC No. 17-258) and secured clearance from local government offices. We also asked for the assistance of officials from the local government unit concerned in identifying and locating eligible participants in this study.

This research study was set in Barangay Urdaneta at Magallanes, Cavite, which was chosen through simple random sampling from a list of barangays belonging to rural municipalities in the country with low annual income. Given that nationwide surveys revealed that most smokers in the Philippines are male, aged 18 and above, with no formal education or have at least basic education, living in rural areas, and from the poorest quintile,<sup>3,14</sup> individuals, who fitted this description, were considered as study participants. At the time of data gathering from August to December 2018, these eligible participants should have smoked one or more cigarettes in the past 30 days to be included in the study. However, those individuals who had not smoked one or more cigarettes in

the past 30 days, who did not give their informed consent and withdrew their participation, were excluded from the study. Participants were recruited to take part in the study by snowball sampling, which involves gathering information from another data source through referrals. Study participants were continuously recruited until data saturation was reached or whereby no new or relevant information emerged from data gathering.<sup>15</sup>

**Data Gathering and Analysis.** Each study participant underwent a semi-structured interview consisting of pre-tested, open-ended questions about their smoking history, experiences as a smoker, and perspectives on GHWs on tobacco packages. These audio-recorded interviews lasted for 20 to 30 minutes, depending on the responses of the interviewee. All interviews were thereafter transcribed word-for-word. Each verbatim transcript was subsequently subjected to thematic analysis, which involved free line-by-line coding, organization into descriptive themes, and development of analytical themes emerging from the data.<sup>12</sup> Thematic analysis was done in this study because, as Nowell et al. describe, it is “a useful method for examining the perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights.”<sup>16</sup> In presenting the findings, excerpts were de-identified, and pseudonyms were used to guarantee anonymity and data confidentiality. To foster transparency, the Standards for Reporting Qualitative Research (SRQR) served as our guide in writing this manuscript.<sup>17</sup>

Several steps were taken to ensure the trustworthiness of our findings. First, we carried out member-checking. Second, we documented the research process through an audit trail and, when necessary, supported the emerging themes that were identified with quoted responses from the study participants. Third, we made certain that we reached an intercoder agreement during thematic analysis, and there were no new meanings that can be extracted from the gathered data.<sup>18</sup> Lastly, we observed reflexivity throughout the research process by being mindful of how our social background and

preconceived notions can affect our research practice.<sup>12,16</sup>

## RESULTS

Forty-four participants were included in this study. More than half of them were 18 to 44 years of age, and many of these study participants reached at least primary education. Fifteen (34.1%) of them were married, while the rest were single or widowers. Their occupations differed, with the largest proportion of them being construction workers, farmers or agricultural workers, and unemployed. They have been smoking for an average of 19 years. Forty-three (97.7%) of them used cigarettes for smoking tobacco, while only one study participant (2.3%) alternated between cigarettes and vapes. Eighteen (40.9%) of the study participants would usually buy their cigarettes by the pack, while 17 (38.6%) would habitually purchase by cigarette stick from nearby convenience stores. Nine (20.5%) would mainly procure their cigarettes by the pack when the budget allows or otherwise spend per stick. These study participants smoked an average of 14 sticks per day, with 29 (65.9%) of them consuming ten or more sticks daily. Table 1 shows the characteristics of our study participants.

Most participants in this study started smoking when they were between 10 to 20 years of age due to the influences of their family and peers. Demio recalled how he began to smoke “because of [his] father,” while Ross considered smoking as nothing new to him as “people in [his] family usually smoke.” Ben, among others, “was swayed by [his] peers” since he, out of camaraderie, could not turn down their offer to smoke.

Study participants involved in farming emphasized how smoking “is important every time [they] go to the fields” because, as Juan and others learned from elders in their families, tobacco smoke can repel mosquitoes. Mirio further explained that “there are a lot of mosquitoes whenever the carabaos are fed so [they] would light a cigarette and smoke to ward off the mosquitoes.”

**Table 1.** Description of the participants

<b>Characteristics</b>	<b>n</b>	<b>%</b>
<b>Age Distribution</b>		
18 to 24 years old	15	34.1
25 to 44 years old	15	34.1
45 to 64 years old	9	20.5
65+ years old	2	4.5
Unspecified	3	6.8
<b>Educational Attainment</b>		
No Formal Education	1	2.3
Primary Education	29	65.9
Secondary Education	14	31.8
<b>Civil Status</b>		
Married	15	34.1
Single or Widower	29	65.9
<b>Occupation</b>		
Unemployed	9	20.5
Construction Worker	9	20.5
Farmer or Agricultural Worker	9	20.5
Carpenter and Mason	4	9.1
Blacksmith	3	6.8
Retired	2	4.5
Others	8	18.2

Many study participants developed the habit of smoking after trying it out. They would now smoke for leisure like DJ, while some, such as Mac, would turn to smoking to cope with stress.

GHWs were apparent on the tobacco packages for 15 (34.1%) of the study participants, whereas these warning labels were not noticeable for 14 (31.8%) of them despite conforming to WHO guidelines. The remaining 15 (34.1%) were ambivalent about it. When they were shown samples of GHWs on tobacco packages and were asked about their perceptions of these warning labels, most of the responses were utter disbelief of the pictorial and textual warnings as they had no personal experience of these harmful effects of smoking. For example, Mic “did not believe [these GHWs] because [he has] not seen any [of these health consequences],” while Dennis was unconvinced that smoking is related to having asthma and underweight babies. Mac considered them “not really plausible as they’re just for scaring people.” Rick also found these warning labels not helpful for him to stop smoking “because [he assumes] they’re not true.” Some even alleged these GHWs on tobacco packages are “hoaxes,” which the government uses to persuade individuals from smoking.

Their disbelief of GHWs on tobacco packages can be due to a lack of literacy about the adverse health outcomes that can arise from smoking. When the study participants were shown samples of the pictorial and textual warnings, many were not familiar with what gangrene and emphysema meant in contrast to cancer and stroke. Mac, for instance, shrugged off the GHWs illustrating gangrene by explaining that “[the foot] may have just gotten burned or severed.” He thought of the warning labels about gangrene as “unrealistic” since he could not imagine how this health condition can be caused by smoking. Alvin, among others, was notably not worried about getting emphysema as he brushed off the frail figure depicted on GHWs as a “natural progression of the body as it ages.”

Another reason for their disbelief of GHWs on tobacco packages can be attributed to how the study participants perceived themselves in good physical shape and were thereby less likely to get ill. Ross, for example, claimed “[he] has actually become stronger from smoking.” In fact, they rarely viewed themselves as unhealthy, even if some of them would experience chest pains and would lose their breath every now and then. They would simply regard these as minor inconveniences to them. Dennis, among others, believed that the adverse health outcomes displayed on GHWs have “a low chance of happening to [them].” If they do get sick, several of these study participants, such as Nilo, argued that their illness is merely part of “growing older.” DJ, on the other hand, “does not feel like anything bad will happen so far so [he] will not stop smoking yet.”

When asked if they have tried to quit smoking, the majority of the study participants answered they did so at one point because smoking, as Demio admitted, “is known to be bad for them” and “has [harmful] effects on their health.” They, however, struggled in their resolution to stop smoking as they “cannot seem to avoid [tobacco use and consumption].” Some of them viewed smoking as a “vice,” which they kept on relapsing because “it feels good,” “it can relieve stress,” and “it is relaxing.” A handful of study participants, including Julian, considered smoking as “something [they] have become used to” as “part of [their] daily life.” Furthermore, many found

smoking cessation as difficult to do as they have already developed an addiction. As a result, they, according to DJ, “could no longer stop [their smoking habit].” Others also continued their smoking behavior since they could not handle the withdrawal symptoms of smoking. Jun, for example, remarked how “it feels different whenever [he attempts] to stop [smoking].”

Interestingly, the thought of raising a family seems salient to smoking cessation. Some of these study participants were heads of family, and they would highly consider quitting their smoking behavior for the sake of their children. Rick, for instance, contemplated stopping tobacco use and consumption because “[he has] children and [he does] not want [the harmful effects of smoking] to ever happen to them.” Mike, Jules, and Caro, among others, thought of quitting smoking too since they are expectant fathers, and they feared their newborns would be underweight and premature, as shown on GHWs.

Figure 1 summarizes the possible reasons for the persistence of smoking behavior among male adult smokers from a rural and low-income setting in the Philippines.

## Discussion

GHWs on tobacco packages are designed as persuasive messages for smoking cessation.<sup>19</sup> They are built upon fear appeals wherein individuals are said to change their behavior when they are emotionally confronted with the harmful effects of such behavior.<sup>6</sup> Fear, as an evolutionary mechanism that protects humans from life-threatening situations, is used here as a stimulus for individuals to adopt behavioral changes, which are necessary to avoid an undesirable outcome.<sup>19</sup> The evoked fear depends not only on perceived risk or threat but also on one’s sense of efficacy.<sup>6,19</sup> Perception of risk for adverse health outcomes relies on communicating well the severity of negative consequences and the susceptibility or likelihood of individuals for unfavorable results.<sup>6</sup> To be effective, the perceived threat should be personally relevant and significant.<sup>19</sup> Self-efficacy, on the other hand, considers the individuals’ ability and confidence to respond to the risk or threat.<sup>6,19</sup> They not only recognize that the threat can be addressed, but they can also carry out the necessary action against it.<sup>19</sup> To change a behavior towards a desired direction, self-efficacy of individuals should be high<sup>6</sup> as “fear,” according to Williams, “resides in the individual rather than in the message content.”<sup>19</sup>

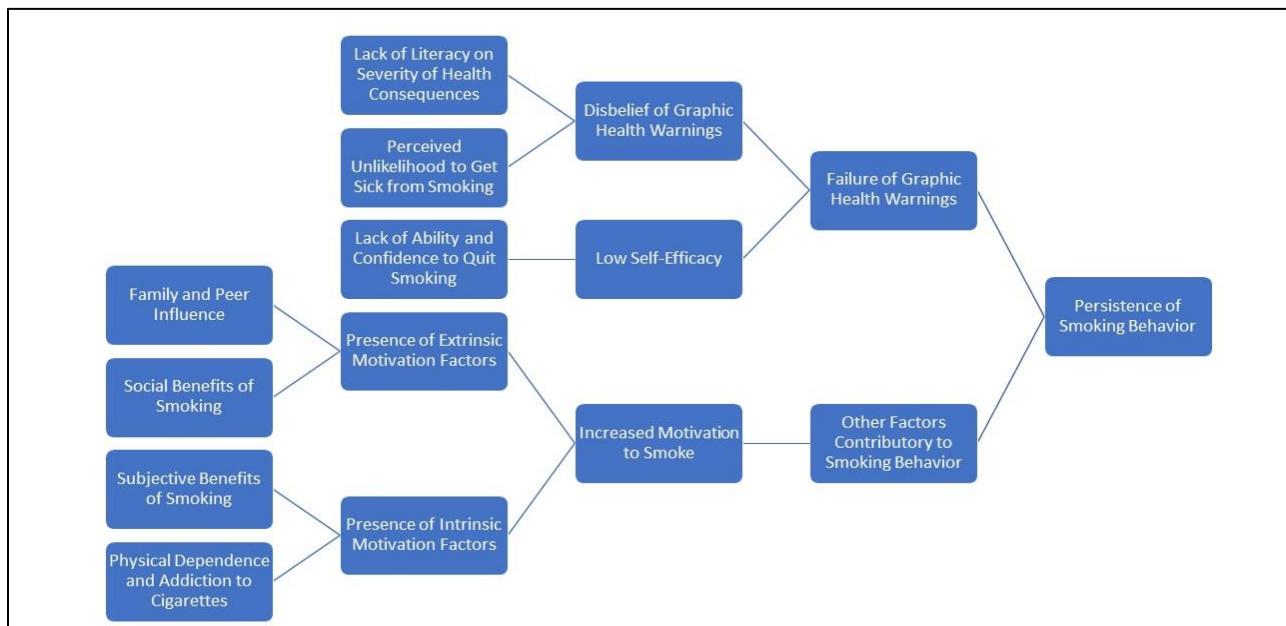


Figure 1. Emerging themes on why smoking behavior persists despite the presence of graphic health warnings (GHWs).

In this study, the general response of participants to GHWs was disbelief because of two reasons. First, the perception of risk from smoking was low. Study participants did not perceive any threat from smoking as the adverse health outcomes portrayed on GHWs were not personally relevant and significant to them. Due to a lack of literacy about health conditions related to smoking, they did not fully understand the severity of these negative consequences to their well-being. Additionally, they did not see themselves as susceptible to the harmful effects of smoking as they mostly believed that they are healthy and well. As a result, the health consequences of smoking were dismissed due to their perceived unlikelihood. Second, the self-efficacy needed for smoking cessation was low. Instead of behavioral change, study participants became defensive by denying, rejecting, or ignoring the adverse health outcomes associated with smoking. They, in effect, were not compelled to respond to a threat that they could not perceive. Although the majority of them signified their intention to quit smoking, they did not have the confidence to do so since they always found themselves relapsing. They likewise underestimated the addictive properties of tobacco, and so they continued to smoke with the belief they could stop before adverse health outcomes arise.

Our findings also showed how family and peers could influence one's personal choice to smoke at an early age. "[Having] a smoker in the family," as Leventhal et al. explained in their study, "not only provides the model to influence the likelihood of a young person's smoking but also initiates a more complex process of motivating a young person to downplay smoking risks."<sup>20</sup> However, the study of Castrucci et al. demonstrates how negative opinions of parents about smoking, even if they are smokers, can discourage their children from smoking.<sup>21</sup> Having peers, who smoke, is another well-known factor that can contribute to the onset and persistence of smoking behavior as smokers and those predisposed to smoke can perceive social benefits from smoking.<sup>20,21</sup> That is why peer smoking is more prevalent among smokers as opposed to non-smokers.<sup>20</sup> Smoking, as Baumeister suggests in these circumstances, is viewed as a form of socializing.<sup>22</sup> It has become

integral to social acceptance and a sense of belongingness.<sup>23</sup>

Moreover, this study revealed other factors related to the persistence of smoking behavior and relapse after smoking cessation. As seen in this study and related literature, many individuals continue to use tobacco because they get enjoyment, relaxation, relief from stress, and other subjective benefits while smoking.<sup>24</sup> For them, the pleasure and satisfaction of smoking are worth the risks to their health, disapproval from significant others, social stigma, expenses, and other disadvantages.<sup>22,24</sup> They not only find "a sense of safety, reassurance, and predictability"<sup>24</sup> from smoking, but they are also able to construct their identity as smokers.<sup>22</sup> Furthermore, the meanings attached to the act of smoking alongside physical dependence and addiction to nicotine can bring about failure to quit smoking.<sup>22,24</sup> The unpleasantness of withdrawal symptoms from smoking can likewise discourage them from smoking cessation.<sup>24</sup>

Our findings, nevertheless, suggest that having a family is crucial for smoking cessation as it can provide the social integration and ties necessary to quit smoking.<sup>22</sup> When cues from the social environment favor smoking cessation, smokers become motivated to stay off cigarettes and resist the urge to smoke.<sup>24,25</sup> They are likewise encouraged to discontinue smoking to set a good example for their children.<sup>26</sup> These findings on the role of the family in smoking cessation seem promising in crafting interventions, but they require further research.<sup>27</sup>

## CONCLUSIONS

GHWs on tobacco packages are premised on fear appeals and are meant to persuade against smoking. However, fear may not be elicited enough to stop individuals from smoking if risk perception and self-efficacy are low. Therefore, the harmful effects of smoking should be communicated well on warning labels by using images and texts that are personally relevant and significant. This will require thorough social marketing of these GHWs prior to implementation. Cigarette-stick warnings may have to be explored, too, as there are smokers,

who buy cigarettes per stick rather than by pack due to budget constraints. Aside from developing literacy on the harmful effects of smoking, strengthening social support is also necessary for successful smoking cessation as social networks and ties can reinforce smokers to break off the habit. Additional factors related to the persistence of smoking behavior and relapse following smoking cessation should be considered since GHWs on tobacco packages is only one strategy to address the burden of tobacco smoking. Other measures of MPOWER are necessary, such as monitoring the tobacco epidemic and the effectiveness of state interventions against tobacco use, protecting people from the harms of second-hand tobacco smoke, offering help for tobacco dependence, enforcing total bans on direct and indirect advertising, promotion, and sponsorship of tobacco products, and raising taxes imposed on tobacco products. Multiple efforts and innovative solutions should therefore be taken for a successful campaign against tobacco use and consumption.

Our reported findings are not generalizable though as this study can only speak of smokers with certain socio-demographic characteristics: male adults belonging to the poorest quintile, residing in a rural, low-income area, and with no formal education or having at least a basic education. These established criteria in recruiting study participants can result in selection bias, which tends to limit the applicability of our findings in other settings. The diversity in the ages of the study participants may have also led to varied responses from them as perceptions, views, and behaviors can differ among the age groups despite the use of standardized questionnaires during the interviews. Employing snowball sampling in choosing study participants is another limitation of this study as the representativeness of the study participants cannot be guaranteed even if we made sure an ample sample size was reached through data saturation. Furthermore, other interventions for smoking prevention and cessation instituted by the Philippine government, such as raising taxes on tobacco products, are not examined and therefore beyond the scope of this study. Nonetheless, findings from this study are insightful enough to

contribute to efforts against tobacco use and consumption.

### Individual author's contributions

J.A., A.J., N.P., J.R., D.R., K.S., J.Y.; Conception and design of the work, acquisition, analysis, or interpretation of the data, drafting of the manuscript, and final approval of the manuscript.

G.A.; Conception and design of the work, acquisition, analysis, or interpretation of the data, revising of the manuscript, and final approval of the manuscript.

### Disclosure statement

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### Conflicts of interest

The authors have no conflict of interest to declare.

### Supplementary Material

[Appendix A. Standards for Reporting Qualitative Research \(SRQR\)](#)

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