

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Smoking is recognized as a global health issue with an estimation of more than 8 million people dying prematurely within each year (World Health Organization, 2023). Medical evidence proclaiming the serious health risks of smoking cigarettes have raised concerns regarding public health, as the IHME Global Burden of Disease Study in 2021 surveyed that smoking was ranked as the third highest risk factor accounting for major diseases associated with cancer, heart, and respiratory function (see Figure 1), emphasizing the damaging health consequences it poses.

In Indonesia, the smoking prevalence remains moderately high with 28.62% of the population amongst active smokers found between the ages 15 and above (Statista, 2023), residing throughout rural (31.09%) and urban regions (26.87%) within the country. However, it is particularly interesting that current smoking rates have fluctuated, but never dropped below 25% within the chart, suggesting an inconsistent smoking pattern (Badan Pusat Statistik, 2023).

Smoking-attributable diseases significantly impact Indonesia by contributing to a dangerously high morbidity and mortality rate affecting public citizens' health. Research from the Asia Pacific Journal of Public Health revealed that a study discovered an abundant proportion amounting 925,611 males (93.27%) and 66,719 females (6.93%) suffering from smoking-related diseases involving Hypertension,

Chronic Obstructive Pulmonary Disease (COPD), and Stroke (Kristina et al., 2015, as cited by Holipah et al., 2020). Immediate preventive measures are needed to reduce smoking victims and raise public awareness regarding the hazardous risks of smoking, including its impact towards non-smokers and their surrounding environment.

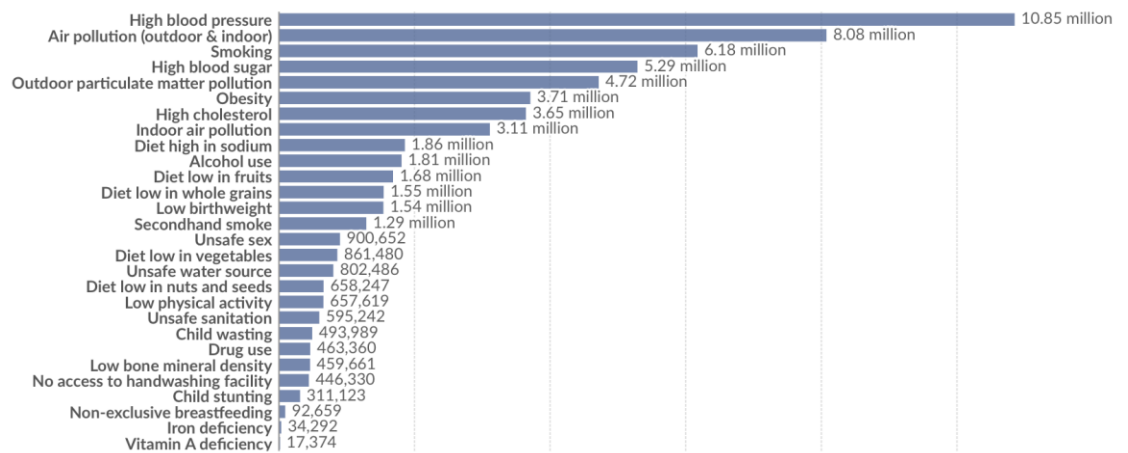
The government initiated preventions in accordance with *Undang-Undang Nomor 36 tahun 2009 tentang Kesehatan* to combat smoking. Efforts to promote smoking cessation included providing hotline services, clinical consultations in public health centers, enforcing regional regulations on Non-Smoking Areas (*Kawasan Tanpa Rokok*), and commemorating the World No Tobacco Day (*Hari Tanpa Tembakau Sedunia*). Despite these initiatives in helping to alleviate the number of smokers, the statistics on smoking continue to persist.

Cigarette smoking will continue to inflict damage upon the lives of smokers and their surroundings if it is not stopped. Prevention and cessation remain as the only effective public health measure in reducing the potential risks associated with smoking (Domingo et al., 2022), further helping smokers' intentions on quitting. According to the *Badan Pusat Statistik* (2022), it surveyed that over 17 out of 100 Indonesians who smoked within the past year have tried to quit (see Figure 2), proving evident intentions on smoking cessation among the people.

Smoking cessation, or quitting smoking, is a health-promoting behavior in contributing to reducing serious health risks (Josling, 2016). Cessation can be challenging for people struggling to quit due to nicotine addiction and withdrawal symptoms (Qadeer, 2012), as well as facing personal barriers during the cessation

process. Smokers will make 8 to 11 quit attempts before succeeding cessation permanently (Centers for Disease Control and Prevention, 2001, as cited in Chaiton et al., 2016). Another suggests that smokers are capable of attempting to 12 to 14 (Australian Cancer Council, 2008, as cited in Chaiton et al., 2016).

Dependence on cigarette smoking is rooted to the addictive chemical known as Nicotine. Every man, woman, and adolescent can become susceptible to nicotine dependence in their lives. According to the Mayo Clinic (2022), nicotine stimulates brain receptors to release dopamine in triggering a pleasure response, which increases the number of nicotine receptors that reside within our anatomy. When the smoking routine stops, the brain is disconnected from receiving the familiar response, and leads the individual to experience withdrawals and physical cravings.



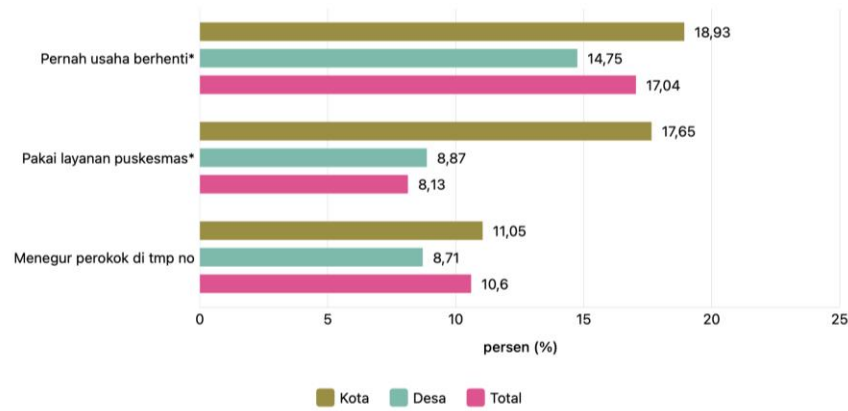
**Figure 1. Annual Death Rate by Health Risk Factors**  
(source: IHME, Global Burden of Disease, 2021)

The timeline for quitting smoking possesses significant health milestones. Within days, internal organs start recovering from prolonged exposure to nicotine:

blood pressure normalizes, carbon monoxide levels decrease, and nerve endings regenerate. Breathing improves within the next two weeks, regaining normal physical sensations and bodily function. Heightened physical energy and mobility occurs within 3-months, with simple tasks no longer causing shortness of breath or chest pains as a smoker would if they were still smoking. After 6-months, they will manage in stress-induced environments without craving the need to smoke (Nall, 2018).

Maintaining cessation throughout 3-5 years reduces the risks of contracting heart disease and stroke that is equivalent to a non-smoker, whereas 10-years reduces the risk of developing cancerous diseases. Finally, within 15-years, the risk of contracting heart-attack is similar to the chances among non-smokers, marking as a major milestone for the smokers' cessation process as they have made immense progress and steered clear from the hazardous risks (Nall, 2018).

Furthermore, there are benefits from quitting smoking, involving an improved health and quality of life, longer life expectancy, maintained health for pregnant women and their unborn children, and reduce financial costs among smoking individuals, healthcare systems, and the public society (National Center for Chronic Disease Prevention and Health Promotion, 2020). Smoking cessation is possible for all smokers, regardless of their associated history, barriers, and dependence with cigarettes. As the pursuit for a healthier life can only begin through cultivating the meaningful intention from oneself within the smoking cessation journey.



**Figure 2. Survey on smoking cessation in Indonesia (source: Katadata, 2023)**

People should not suffer the health consequences first, only for them to finally understand the damaging risks that smoking presents. The problem lies within the beliefs regarding cigarette smoking, which influences the perceptive reality and decision-making one must make that is detrimental to their health and well-being within the long-term. Which is in accordance with Glanz et al. (2015) and Poss (2001) perspectives of healthy behavior being determined through personal health beliefs or perceptions towards certain diseases, as well as the necessary strategies to reduce the health risks from contracting them. Health beliefs are the construction of individual perceptions concerning health based on ones' own susceptibility towards risks, considerations on root causes, and decisions to overcome them (Misra and Kaster, 2012). Within the context of smoking cessation, health beliefs can heavily influence how an individual perceives smoking as a health-risk behavior.

The public perception towards cigarette smoking in Indonesia is circulated with misconceptions and opposes individual health. Rusma et al (2020) discovered that

Indonesian smokers believed that they were invulnerable towards smoking-related risk factors (55,6%). Smokers believed that their susceptibility to smoking behavior would not increase gradually or immediately attract hypertension, cancer, heart disease, tuberculosis, or other medical conditions (Rusma et al., 2020, as cited by Widyowati et al., 2023). However, over (51,9%) did not believe cigarette smoking provided benefits, yet continues the smoking behavior. Other studies have supported these findings, also suggesting that Indonesian smokers disacknowledge the severity of smoking-related risks by dismissing symptoms, such as coughing and chest pains (Widyowati et al., 2023) considering it insignificant towards their health.

Furthermore, smokers had experienced the barriers or challenges within quitting and claimed it hindered their process in separating themselves from cigarette smoking, ranging from psychological issues (habit, temptation, lack of motivation, and low self-confidence) and physical issues (appetite loss, sleep issues, breathlessness, low focus, and coughing) leading to failed cessation attempts (Kaparang et al., 2021). All of which suggests that Indonesian smokers underestimate the perceived susceptibility and severity of health risks associated with their smoking behavior, as well as facing great difficulties towards achieving smoking cessation.

Previous research has stated that health considerations served as a primary motivator for people endeavoring to quit smoking (Rattigan, 2001), as individual health beliefs performed a critical role on an individuals' awareness of perceived susceptible risks and decision-making process on taking accountable health-promoting action, such as smoking cessation. Unfortunately, people still accept smoking as a way to improve

concentration (Nichter et al., 2009, as cited by Ayuningtyas et al., 2021) and stress-coping method within demanding working environments (Chen et al., 2019) despite warnings in the norm society. Reports have medically justified the misleading belief as a fallacy, since it is based on temporary relief obtained from withdrawal symptoms (Taylor et al., 2014) and influences health perceptions on encouraging the smoking behavior further (Wu et al., 2023).

Firm intentions for smoking cessation are formulated through processing acquired knowledge, perception, and more importantly, health motivation leading towards a decision. Pribadi and Devy (2020) suggested that people with low self-efficacy on quitting smoking can lead to low intentions in engaging health-promoting actions to quit on smoking behavior. Although the logical decision is to choose smoking cessation after taking into account health beliefs on smoking (perceived risk factors) towards the intention of quitting, the reality on cigarette smoking and the path towards cessation suggests otherwise.

The decision for smoking cessation requires much more than rational thinking. Aside from influencing health beliefs and perceived smoking-related risks, there exists barriers ranging from physical, emotional, and mental areas that associate dependence with nicotine, in which smokers must undergo in order for them to achieve smoking cessation. Oftentimes, people can underestimate the health risks and overestimate their ability to quit, diminishing their motivation (Vallone et al., 2016; Borland et al., 2009).

Moreover, acknowledgement and considerations from health belief factors alone cannot determine behavioral change in smoking cessation sufficiently. A

stimulus or trigger action can also influence decision-making over an individuals' own health by bridging the gap between individual awareness regarding health risks and executing the health behavior (Nortje, 2024). Through the exposure of information regarding the smoking-related risks, consequences, and negative impact towards society, it is capable of further stimulating the smokers' desire to adopt smoking cessation as a health-promoting behavior.

However, a study found that Indonesian smokers often ignored health warnings from broadcasted media channels (4.4%), magazines or newspapers (40%), and cigarette packaging (28.9%) that encouraged quitting intentions (Kaparang et al., 2021). Other different mediums used for promoting smoking cessation can include, but are not limited to, social media content, healthcare campaigns or programs, medical professional advice, intervention among family or friends on smoking behavior, newspaper articles, and advertisements narrating the dangers from smoking (Urich, 2017; LaMorte, 2022; National Center for Chronic Disease Prevention and Health Promotion, 2023; Centers for Disease Control and Prevention, 2022).

The proposed argument within this study affirms that individuals—specifically active smokers—with their own perception regarding the health risks and smoking-related illnesses permits them to have in-depth understanding towards negative health consequences associated with continuous smoking behavior. As a result, strengthening the smokers' intentions in quitting.

Analyzing the issue through the application of the health communication theory, particularly the Health Belief Model (HBM), can offer profound insights into



the intention to quit smoking. This model considers health determinants such as perceived threat, evaluation of preventive behaviors, and self-efficacy to predict public health risks and understand the motivation behind quitting cigarette smoking. By assessing the perceived risks associated with cigarette smoking, it takes into account different areas related with health-behavior that can influence (whether direct or indirect) the intention in preventing oneself from contracting smoking-related health risks and developing serious illness that would negatively impact one's own health and well-being.

This study can greatly contribute to health communication studies on investigating the correlations between perceived health beliefs towards the intention for smoking cessation. Health communication, as an important domain within public health communication, provides the bridge in contributing knowledge on the context of our own health. Furthermore, the researcher believes that it is a profoundly important topic for health communication research on examining how communicating the perceived smoking-related health risks and the benefits of quitting within public health-contexts regarding cigarette smoking can encourage health-promoting behavioral change to increase smokers' quitting intentions, as well as their pursuit for cessation within a pro-smoking environment in Indonesia.

## **1.2 Problem Statement**

According to the *Undang-Undang Nomor 36 tahun 2009 tentang Kesehatan* in Indonesia, Article 3 states that health development seeks to enhance the awareness,

intention, and capability for healthy living among individuals, aiming for the highest public health standards. One of the approaches in manifesting this can be through safeguarding addictive substances within the form of tobacco products in preventing interference or endangerment for the health of individuals, families, communities as well as the surrounding environment, as according to Article 113. Thus, positioning the people to uphold the standardization in maintaining public health within society. However, the reality regarding the situation suggests otherwise.

Smoking poses a significant threat that impacts everyone who are both active- and non-smokers within the surrounding environment. Due to the increased health risks in contracting cancer, heart disease, respiratory issues and other illnesses, smokers face potential life-threatening conditions. Indonesia has a moderately high prevalence of smokers with 28.62% among the population (Statista, 2023), and accounting for over 225.700 civilian deaths from smoking-related diseases annually (World Health Organization, 2020). Despite the preventive measures and environmental regulations from the government in communicating public awareness regarding the impact from smoking behavior, these efforts are still ineffective to encourage smokers' intentions for quitting smoking.

Several factors can potentially influence the intentions for quitting smoking, one of which is the perceived individual health beliefs. The beliefs regarding cigarette smoking as a health-risk behavior influences the perceptive reality and decision-making from an individual, which can have long-lasting effects to their health and well-being. In Indonesia, the public perception and beliefs towards cigarette smoking has

fostered a nicotine-dependent culture in leading smokers to disregard their susceptibility towards contracting smoking-related risks or diseases, inaccurately estimate the degree of severity, neglect the benefits and barriers in adopting health-promoting behavior, poorly perceive their self-efficacy in achieving cessation, and not reflect on sources of information regarding the negative outcomes associated with cigarette smoking (Rusma et al., 2020; Widyowati et al., 2023; Kaparang et al., 2021; Nortje, 2024; Pribadi and Devy, 2020; Rattigan, 2001; Vallone et al., 2016; Borland et al., 2009).

Cigarette smoking cessation is a beneficial health-promoting behavior that can reduce the susceptible impact of the negative health risks and consequences from nicotine-dependence that is still prevalent within society. This research aims to investigate the correlation between health belief factors towards the intention for smoking cessation from the health communication theory, the Health Belief Model (HBM). By investigating the perceptions of health-risk behavior (susceptibility and severity), evaluating preventive action (benefits and barriers), self-efficacy, and cues to action in achieving smoking cessation, it provides a greater understanding on how these influencing health factors contribute to positive health-related behavioral change.

Quitting smoking is a complex and gradual process, as determining the success or failure from smokers' intention for quitting is influenced by different internal and external factors within the health belief domain. Despite the medical evidence and health warnings regarding smoking, accounting it as one of the highest health-risk factors worldwide and with associated susceptible risks in developing critical illnesses

including Hypertension, Heart Disease, Stroke, Asthma, Tuberculosis, Type-2 Diabetes, Cancer, Chronic Obstructive Pulmonary Disease (COPD), and Fertility and Reproductive issues (IHME Global Burden of Disease Study, 2021; Centers for Disease Control and Prevention, 2024). Individuals cannot solely achieve smoking cessation if they do not implement their own intentions to quit smoking within themselves first.

Therefore, the study will not only provide valuable insights on smoking cessation, but also explore how communicating information within health-contexts regarding cigarette smoking can encourage health-promoting behavioral change to increase smokers' quitting intentions within a pro-smoking environment. Based on the problematization stated from above, it raises a significant research question: **“Is there a correlation between the perceived susceptibility, perceived severity, self-efficacy, perceived benefits, perceived barriers, and cues to action from the Health Belief Model (HBM) towards the intention for smoking cessation?”**.

### **1.3 Research Objective**

This study aims to examine the correlation between perceived susceptibility, perceived severity, self-efficacy, perceived benefits, perceived barriers, and cues to action from the Health Belief Model (HBM) towards the intention for smoking cessation.

## **1.4 Research Significance**

There are certain significant benefits which includes in the following:

### **1.4.1 Theoretical Significance**

Through theoretical terms, it is expected to contribute knowledge and insights for future communication science research, especially related to health-promoting behavior within the health communication domain in associations with cigarette smoking cessation research.

### **1.4.2 Practical Significance**

Through practical terms, it is expected to become a reference topic in discussing health belief factors on intention for smoking cessation through the Health Belief Model (HBM).

### **1.4.3 Social Significance**

Through social terms, it is expected to provide new insights or perspective to the public in understanding health belief factors on intention for smoking cessation through the Health Belief Model (HBM).

## **1.5 Research Paradigm**

According to Kuhn (1970), paradigms comprise models that represent comprehensive scientific research traditions and provide problem-solving approaches involving theory, application, and instrumentation. The research paradigm that will be used in the study is the Positivist paradigm. The Positivism paradigm is based on the premise that there is only a single objective reality that can be measured and

understood, aiming to find correlations between the causal and explanatory factors (independent variable) as well as the outcomes (dependent variable) in predicting certain phenomena within quantitative terms (Ulz, 2023; Park et al., 2020). The research method will be a quantitative research method, which is an appropriate criteria to utilize the paradigm.

## **1.6 Theoretical Framework**

### **1.6.1 State of the Art**

Previous research studies were considered relevant as a literature review for the study. The first study titled “Application of The Health Belief Model on The Intention To Stop Smoking Behavior Among Smokers In Kuala Terengganu, Malaysia” by Zahari et al (2022) examined the relationship between health factors derived from the Health Belief Model in associations with intentions to quit smoking among active smokers. The study revealed that every perceived health indicator had positive correlations with the intention of quitting smoking, excluding perceived barriers in the study (Zahari et al., 2022), suggesting that individuals’ perceived difficulties towards quitting smoking decreases their quitting intentions. Furthermore, the study affirms the need to acknowledge personal motivations behind a smokers’ desire to quit. With the absence of the fifth indicator (self-efficacy) in accordance with the HBM framework, it could not further describe nor analyze respondents' own motivation for their quitting intentions.

The second study titled “Application of the Health Belief Model on The Intention to Stop Smoking Behavior Among Young Adult Women” by Pribadi and Devy (2020) investigated the correlation between perceived components from Health Belief Model (HBM) towards the intention to quit smoking among female smokers in Surabaya, Indonesia. Findings suggested that female smokers were more likely to quit smoking due to their self-efficacy, which included awareness of health-related risks with smoking and gender status, as well as from the social pressure within the environment. Results showed significant correlation between perceived health belief factors and quitting intentions on smoking, proving that respondents had low intentions for quitting due to their low self-efficacy to engage with health-promoting action.

The third study titled “Relationship Between Health Belief Model constructs and Smoking Behavior among School-Age Adolescents in Indonesia: A Cross-Sectional Study” by Vionalita et al (2023) aimed to determine the association between the Health Belief Model (HBM) components to predict smoking as a health-risk behavior and smoking behavior amongst adolescents attending junior and senior high school within Java, Indonesia. Research findings showed significant correlation between the variables and emphasized development on effective health education regarding the health-risks associated with smoking behavior among adolescents (Vionalita et al., 2023), as they are susceptible to smoking initiation from their peers and parents' smoking habits. Limitations within the study emphasized that it only accounted for a small-sized sample, which may not represent the population as a whole.

The fourth study titled “Quit Smoking Clinic Attendees And Their Intentions To Quit Smoking: A Health Belief Perspective” by Swee Yaw (2019) investigated the application of the Health Belief Model in identifying significant variables that influence the intention of quitting smoking through smoking cessation clinics in Kuala Lumpur City, Malaysia. Focusing on three cessation clinics on predicting attendees cessation efforts to change their smoking behavior. This research study discovered significant correlations between HBM components towards quitting intentions. Findings suggested that quitting intentions could increase through anti-smoking fear campaigns and emphasized the importance of implementing self-efficacy within attendees to build their confidence. Evidently, the study demonstrated tangible proof in using additional health predictors (“general health orientation”) concerning quitting intentions for the HBM framework as to adapt to the health-risk at hand, despite no correlative association as a result.

The fifth study titled “Self-Efficacy in the Smoking Cessation: A Health Belief Model Perspective in A Judicial Correction Institute, Taiwan” by Chen et al (2019) searched for association between health beliefs, self-efficacy, and the likelihood for quitting smoking amongst judicial correction professionals located in Taiwan, China. The research focused on how health beliefs and self-efficacy affected the intention for smoking cessation among people within a stressful and demanding work environment. Results found that the professional workers would ignore health-risk warnings and threats regarding smoking, but still have strong intentions to quit. This is rooted to their perception and behavior in smoking as a stress-coping strategy in managing their work



environment, which demanded them to remain extremely on-guard and in close monitoring throughout the correction facility. Moreover, self-efficacy had an important significance on increasing a smokers' intention to quit, as the researchers within the study considered it to be a core factor towards successful cessation.

In summary, the previous studies collectively demonstrate how the Health Belief Model (HBM) is applied within cessation studies in providing a solid framework to contribute knowledge and predicting quitting intentions within the context of smoking as a health-risk behavior. Further underscoring the significant determinants and correlative association between perceived health beliefs towards influencing smokers' decisions to quit. With other additional factors having significant influence towards achieving quitting intentions, such as self-efficacy, social support, and peer influence.

There is a common limitation between the previous studies despite producing conclusive results, which points out the small-sized samples and incomplete health indicators in examining smoking cessation intentions. Sampling from small numbers of individuals or community members can undermine the valid representation of the sampled population, whereas, incomplete health predictors derived from the Health Belief Model can result in weak associations towards quitting intentions and disregard significant areas that influence the process in health behavioral change, such as the absence of self-efficacy and cues to action.

Therefore, the researcher intends to conduct this research study on examining perceived health belief predictors towards the intention for smoking cessation through

the Health Belief Model (HBM) by focusing towards a larger sample size, as well examine the phenomena with complete variables to accumulate the research data within the context of smoking cessation intentions located in Indonesia. This will not only address the limitations from previous studies, but also improve the effectiveness of the health-promoting intervention model.

### **1.6.2 Health Beliefs**

Health beliefs on smoking refers to an individuals' health perception and understanding regarding the potential risks and health consequences associated with cigarette smoking. The beliefs are derived from the components of the Health Belief Model (HBM), predicting the likelihood for an individual adopting a recommended health-promoting behavior to manage a specific health issue or perceived risk, which in this context is quitting cigarette smoking.

According to Rosenstock (1966), the Health Belief Model was originally composed of four primary perceived health factors, such as susceptibility, severity, benefits, and barriers. Then, categorized into representations on perceived threats and behavioral evaluation (Abraham and Sheeran, 2005). Within time, the model had progressed and researchers extended it by strengthening the determinants of health behavior accounting trigger action for executing health behavior as according to the health beliefs (Rosenstock et al., 1966), and describe individuals' own belief in performing the health-promoting behavior (Rosenstock et al., 1988) to improve the models' effectiveness on predicting health-risk behavior.

Furthermore, the Health Belief Model is a framework that simplifies health-related components to implement a specific phenomena and adapt towards different health-behaviors, especially within matters of prevention, risk prediction, and medical diagnosis (Orji et al., 2012). Therefore, this research study will incorporate HBM by extending from the traditional variables, to incorporate self-efficacy and cues to action in measuring individuals' perceived health factors towards the intention for smoking cessation more comprehensively as a result.

### **1.6.3 Intention for Smoking Cessation**

Intention for smoking cessation is the conscious decision to quit smoking based on reasonable intent and health considerations to shift towards a healthier behavior. It is a crucial determinant for succeeding in the reduction of smoking behavior and promoting public health. Research has demonstrated that fostering strong intentions to quit smoking can significantly predict actual quit attempts and long-term abstinence.

Previous studies have demonstrated the associations between perceived health beliefs, as conceptualized by the Health Belief Model (HBM) framework, and proved its influence within forming the intentions for smoking cessation from an individual based on their perceptions of susceptibility towards smoking-related diseases, severe potential health consequences, benefits in quitting, and confidence within themselves on the capability to quit.

Champion and Skinner (2008) suggested that individuals are more inclined to execute preventive measures to decrease their health risks if they perceive themselves

to be susceptible towards a certain condition, believe that they could have serious health consequences from the condition, recognize that a course of action available to them would help reduce their chances, and believe that the expected benefits outweighs the challenges for taking necessary action. Within this consideration, it can strengthen their quitting intentions (Glanz et al., 2008).

However, intentions for smoking cessation are not only formed through cognitive assessments as derived from health perception and beliefs, but also from emotional and social factors. Previous studies had discovered that emotional responses towards health warnings can influence an individuals' perception on cigarette smoking (Li et al., 2021), and that cultivating supportive social environments beneficially contributed to the smoking cessation process, all of which reinforces the desire in quitting and prevent them from relapsing (Creswell et al., 2015).

#### **1.6.4 Health Beliefs and Intention for Smoking Cessation**

Health Communication is the communication domain that focuses on communicating health-promoting information and strategies towards the public society. Health Communication examines how people and mediated communication perform within the delivery of healthcare and promotion of individual and public health: providing health-related knowledge, increase public awareness on certain health risks, discovering how healthcare providers or medical staff communicate with patients, influence health perception and beliefs, and demonstrate health outcomes for behavioral change (Littlejohn & Foss, 2009).

Understanding the correlation between health beliefs and intention for smoking cessation is examined through the Health Belief Model (HBM) as the appropriate theoretical framework. The Health Belief Model (HBM) process describes the relationships between health components behind the rationality on how individuals will adopt the health-promoting behavior. The model suggests that healthy behavior is influenced from personal health beliefs and perception towards a specific health concern, risk, or diagnosis. By perceiving the effectiveness of the recommended health behavior or action, it predicts the likelihood that the individual will adopt it for improving their overall health and well-being.

The Health Belief Model (HBM) was originally developed in the 1950s to investigate the failure behind individuals to participate in health programs in preventing or detecting diseases. Researchers further extended the health model to make it more applicable and broader to include the public health behavior, including responses towards health-related symptoms and behavior towards medical diagnosis (Hochbaum, 1958; Rosenstock, 1960, 1974; Kirscht, 1974; Becker, 1974, as cited in Glanz et al., 2008, p.46). This contribution expanded the relevance of HBM beyond preventive measures for health, which helped established HBM as an effective tool for understanding how personal beliefs regarding health risks influence behavioral change.

Based on the classifications, the perceived health beliefs (susceptibility, severity, benefits, barriers, self-efficacy, and cues to action) cultivates the perception that would lead the individual to decide on engaging with the health-promoting behavior (action). Perceptions toward the possible threats that a health-risk poses for

an individual refers to the perceived susceptibility in regards to vulnerability, and perceived severity on the degree of seriousness. Evaluating the individual behavior towards engaging with the recommended health-promoting behavior refers to the perceived benefits and perceived barriers that will be encountered. Self-Efficacy simply refers to the confidence within an individuals' capability in accomplishing the behavior. Cues to Action are signals encouraging the individual to assert their "readiness" in taking action, ranging from internal (pain, symptoms, disruptive emotions) or external (social media, health campaigns, medical advice, health-product warning labels). Finally, the aforementioned components within the framework focus towards the action as the health-promoting behavior (see Figure 3).

Additionally, the measurements of individual health beliefs within the conceptual model vary in accommodating the health-risk in question. For example, examining the associations between perceived health belief factors towards mammography for breast cancer screenings would develop specific perceived barriers and severity that differs from other potential diseases (Champion and Skinner, 2008 as cited in Glanz et al., 2008). Therefore, this research study will associate perceived health beliefs with smoking-related information, in acknowledging cigarette smoking as a health-risk behavior to focus on the intention for smoking cessation as the outcome. Which will also utilize specific measurements to increase reliability and validity in the research.

Researchers utilizing the Health Belief Model (HBM) have traditionally assumed that health belief determinants are only directly related with healthy behavior

and without indirect or mediating effects existing between the studied variables (Orji et al., 2012). HBM structure is designed to be a straightforward framework that concentrates on how individual beliefs directly influences a behavior, without accounting for indirect or complex interactions between variables. Simplifying the explanation of engaging with health-promoting behaviors, which becomes more feasible on implementing within various health contexts without complicating the analysis with mediating or moderating effects.

Furthermore, HBM emphasizes the cognitive processes in health decision-making, where each belief is considered to be an independent and separate determinant for health behavior. Researchers generally studied how each determinant directly leads to a behavioral-change based on the assumption that these cognitive perceptions are sufficient to predict health-promoting actions. Previous studies with HBM-based frameworks have demonstrated and confirmed the correlations between health determinants and behavior across different health contexts. Research from Khamai et al (2024) predicted Tuberculosis (TB) preventive behavior among patients during the COVID-19 Pandemic through household contacts in Northern Thailand, which found significant correlations that were measured independently in perceiving how health determinants directly influenced the likelihood of adopting a preventive measure.

Other researches have investigated Breast-Self Examination (BSE) behavior in detecting signs for breast cancer (Fantio et al., 2023) and predicting Osteoporosis preventive behavior through nutrition and mobility (Jeihooni et al, 2017), analyzing the health determinants from HBM independently to isolate the effects of each factor

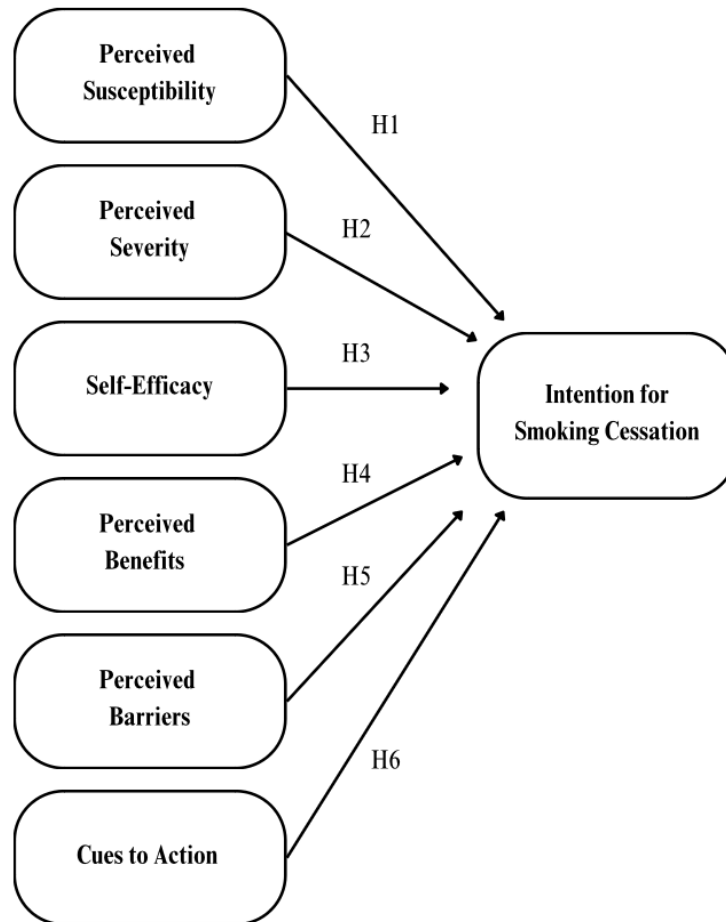
towards the health-promoting behavior. Through this method, it also permits researchers to accurately identify which HBM components had the strongest or weakest influence. Therefore, it reinforces the idea that these perceived health beliefs function independently in driving individual behavior, and that the direct effects were the primary pathways to influencing health outcomes.

The Health Belief Model (HBM) has been incorporated into broad public health settings, particularly on prevention, maintenance, and risk assessment. Smoking cessation is among the numerous health-promoting behavioral outcomes that has been used within HBM (Li et al., 2003, as cited in Orji et al., 2012). Communicating the health risks and consequences associated with cigarette smoking is beneficial to increase knowledge of smoking as a health-risk behavior towards the public. Greater knowledge and concern on future health effects from smoking is proven to increase quit intentions and cessation efforts. However, considering the decision for quitting smoking is not one-dimensional, those decisions must be constructed from the perceived health beliefs that can either diminish or uplift the awareness on the likelihood or severity of cigarette smoking harms.

Although the application of the model is commonly used to predict an individuals' health behavior from a medical diagnosis or health condition in quantitative research, this study aims to implement HBM to focus on predicting the perceived health risks and analyze the correlations between the health components of perceived individual beliefs (susceptibility, severity, benefits, barriers, self-efficacy,



and cues to action) acting as variables towards influencing the intention for cigarette smoking cessation as a the action of health-promoting behavior.



**Figure 3. The Health Belief Model (HBM) diagram**

### **1.7 Hypothesis**

**H1:** There is a correlation between Perceived Susceptibility from the Health Belief Model (HBM) towards the Intention for Smoking Cessation.

**H2:** There is a correlation between Perceived Severity from the Health Belief Model (HBM) towards the Intention for Smoking Cessation.

**H3:** There is a correlation between Self-Efficacy from the Health Belief Model (HBM) towards the Intention for Smoking Cessation.

**H4:** There is a correlation between Perceived Benefits from the Health Belief Model (HBM) towards the Intention for Smoking Cessation.

**H5:** There is a correlation between Perceived Barriers from the Health Belief Model (HBM) towards the Intention for Smoking Cessation.

**H6:** There is a correlation between Cues to Action from the Health Belief Model (HBM) towards the Intention for Smoking Cessation.

## **1.8 Conceptual Definition**

### **1.8.1 Health Beliefs**

Health beliefs on smoking is referred to as an individual's perception and attitude regarding the potential health risks associated with smoking. It is composed of several factors based on the Health Belief Model (HBM) components within the context of cigarette smoking cessation as the health-promoting behavior. Which, as according to Glanz, Rimer, and Viswanath (2015), the health components are as described below:

- (1) Perceived Susceptibility: Beliefs regarding the possibility of an individual contracting a particular illness or condition from the health-risk behavior.
- (2) Perceived Severity: Beliefs regarding the seriousness of an individual contracting a particular illness, condition, and health consequences.

- (3) Self-Efficacy: Beliefs regarding an individuals' own capability to perform the recommended health behavior.
- (4) Perceived Benefits: Beliefs regarding the positive aspects of adopting the recommended health behavior in reducing the risk or consequences.
- (5) Perceived Barriers: Beliefs regarding the challenges and the negative aspects (both tangible and psychological costs) to performing the health behavior once it is adopted.
- (6) Cue to Action: The internal or external factors in triggering the action to adopt the recommended health behavior.

## **1.8.2 Intention for Smoking Cessation**

The intention for smoking cessation is defined as the conscious intent to quit smoking. This study positions the context and limitations of smoking cessation towards the tobacco-product form, preferably cigarettes, which is then focused on cigarette smoking cessation. Considerations are made due to the various forms of tobacco and their prevalent use within public society.

## **1.9 Operational Definition**

### **1.9.1 Health Beliefs**

Determined by outlining perceived health factors from the Health Belief Model (HBM) components with the extended version. Perceived health belief factors are measured through the following indicators:

**1.9.1.1.** According to Kaigang Li and Kay (2009), Perceived Susceptibility towards smoking-related health issues that is categorized into high-risk and low-risk illness is measured through the following indicator: “I am worried about getting some health problems in the future”. Which will be answered using the 4-point Likert scale (4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree). Within the following question items:

1. Lung Cancer (Cancerous disease that is developed in the lungs)
2. Coronary Heart Disease (CHD) (Heart disease in which a blockage occurs inside the coronary arteries in delivering oxygen)
3. Asthma (Chronic inflammation within the bronchial airways, therefore constricting breathing)
4. Emphysema (The alveoli, known as air sacs, inside the lungs are damaged and causes breathlessness)
5. Bronchitis (Inflammation within the bronchial tubes, the airways in the lungs, resulting in excessive mucus and shortness of breath)
6. Stroke (Brain damage, causing an individual to struggle in walking, speaking, understanding, as well as experience paralysis within the face, arm, or leg)
7. Circulation Problems (Inadequate blood flow towards a certain area within the body)
8. Wheezing (Breathing that results with a high-pitched whistling and coarse sound produced from the respiratory airways)

9. Coughing (Irritation from the throat, producing expelled air with sharp rough sounds)
10. Angina (Feelings of pressure, heaviness, or tightness of chest)
11. Being Unable to Enjoy Exercise

**1.9.1.2.** According to Kaigang Li and Kay (2009), Perceived Severity towards smoking-related health issues is measured through the following indicator: “Smoking could increase the risk of smoking-related health problems”. Which will be answered using the 4-point Likert scale (4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree). Within the following:

1. Lung Cancer (Cancerous disease that is developed in the lungs)
2. Asthma (Chronic inflammation within the bronchial airways, therefore constricting breathing)
3. Emphysema (The alveoli, known as air sacs, inside the lungs are damaged and causes breathlessness)
4. Coronary Heart Disease (CHD) (Heart disease in which a blockage occurs inside the coronary arteries in delivering oxygen)
5. Bronchitis (Inflammation within the bronchial tubes, the airways in the lungs, resulting in excessive mucus and shortness of breath)
6. Stroke (Brain damage, causing an individual to struggle in walking, speaking, understanding, as well as experience paralysis within the face, arm, or leg)

7. Circulation Problems (Inadequate blood flow towards a certain area within the body)
8. Breathlessness (The sensation of having difficulties in breathing)
9. Coughing (Irritation from the throat, producing expelled air with sharp rough sounds)
10. Angina (Feelings of pressure, heaviness, or tightness of chest)

**1.9.1.3.** According to Kaigang Li and Kay (2009), Perceived Barriers in preventive action is measured through the following statements that will be answered using the 4-point Likert scale (4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree). Within the following:

1. “Buying cigarettes is not a high cost for me”
2. “Students who don’t smoke could be estranged from friends who smoke around”
3. “Non-smoking could make it difficult to start and hold a conversation with a smoker”
4. “Non-smoking could limit my social activities”
5. “Non-smoking could lead to loss of a current smokers’ or lack of ones’ own identity”
6. “Smoking is a critical way to handle stress from work or studies”
7. “Smoking is an effective way to manage one's own emotional moods when getting upset”

**1.9.1.4.** According to Kaigang Li and Kay (2009), Perceived Benefits in preventive action is measured through the following statements that will be answered using the 4-point Likert scale (4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree). Within the following:

1. “Non-smoking can save me a lot of money for purchasing basic necessities (e.g. food, clothes, books, transportation)”
2. “Non-smoking can help me prevent from contracting some serious diseases, such as Lung Cancer, Asthma, CHD, etc.”
3. “Non-smoking can help me discard some physical discomfort (cough, throat, bronchitis, and so forth)”
4. “Non-smoking can help me maintain physical stamina for enjoying exercises that I like”
5. “Non-smoking can make me attractive to those who dislike the smell of smoking”
6. “My significant other dislikes the smell of smoking”

**1.9.1.5.** According to Swee Yaw (2019), Self-Efficacy referring to ones’ own confidence within their capability towards an achievement is measured through the following statements that will be answered using the 4-point Likert scale (4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree). Within the following:

1. “I am able to quit cigarette smoking”
2. “It is easy for me to quit smoking”

**3. “I am confident in attempting quitting cigarette smoking”**

**1.9.1.6.** According to Hagimoto et al (2009), Cues to Action referring to the external source of information regarding the associated health risks or consequences of cigarette smoking to encourage an individual to further execute the health-promoting behavior is measured through the following indicator: “Sources of Information in quitting smoking”. Which will be answered using the 4-point Likert scale (4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree). Within the following:

1. Television and Radio
2. Newspapers
3. Magazines
4. Health Journals
5. Doctors
6. Health check-ups
7. Seminars and School lessons
8. Internet
9. Family
10. Friends

**1.9.2 Intention for Smoking Cessation**

Determined to confirm the intention on selecting cigarette smoking cessation



as the health-promoting action. According to Rasiman et al (2022), confirming the intention for smoking cessation is measured through the following indicator: “I have firm intentions for Smoking Cessation”. Which will be answered using the 5-point Likert scale (5= strongly agree, 4= agree, 3= neutral, 2= disagree, 1= strongly disagree).

## **1.10 Research Methodology**

### **1.10.1 Type of Research**

By using the quantitative research method, it relies on analyzing accumulated numerical data in describing, predicting, or controlling the variables and phenomena within the study (Gay et al., 2009). The type of research that will be used is explanatory research, by gaining a deeper understanding of the underlying reasons for, causes of, and relationships on particular phenomena (Damyanov, 2023). The researcher focuses on several independent variables within the study, such as Perceived Susceptibility (X1), Perceived Severity (X2), Self-Efficacy (X3), Perceived Benefits (X4), Perceived Barriers (X5), Cues to Action (X6), and one dependent variable, which is the Intention for Smoking Cessation (Y), in search for the significant correlation.

### **1.10.2 Population**

The population within the research study will focus on men and women between the ages 18-60 years old, who are active-smokers, knows about the health risks and consequences associated with cigarette smoking, and has not intended for initiating smoking cessation. Respondents are selected through a purposive sampling method and

based on the specific criterias required within the scope of the research. Considerations on age classification (young adults) are made due to them becoming susceptible to nicotine dependence and having access to cigarette smoking.

### **1.10.3 Sampling**

#### **1.10.3.1 Sampling Technique**

Non-probability sampling is used as the sampling method. According to Shukla (2023), the non-probability sampling method refers that all units from a certain population do not have a certain or fixed probability to be selected as a sample. The researcher will use purposive sampling by selecting research participants based on the judgment, convenience, or specific criterias in accordance to the objective within the study.

#### **1.10.3.2 Sample Size**

The number of samples that will be accumulated for the study is 300 individuals. According to Roscoe (1975), sample sizes greater than 30 and less than 500 are appropriate for research, therefore becoming an ideal standardization.

### **1.10.4 Type and Source of Data**

The research data used within the study is primary data, which will be accumulated from a self-administered questionnaire for respondents within the form of Google Form link. Respondents data will be collected from the population sample

among respondents that have completed the questionnaire. Furthermore, secondary data will be accumulated from available books, internet, scientific journal articles, and other sources that are relevant in supporting the research study.

#### **1.10.5 Research Instrument and Data Collection Technique**

The research instrument used to accumulate the research data within this study is through a self-administered questionnaire. According to Creswell (2012), questionnaires are a form of survey administered for research participants to describe their specific attitudes, beliefs, or characteristics within the sampled population. The researcher will distribute the questionnaire via social media in collecting quantitative data from respondents in answering the structured questions or statements provided.

#### **1.10.6 Data Processing Technique**

##### **1.10.6.1 Editing**

Editing process is implemented in order to verify computational errors during the instrument process and completion. Ensuring that the accumulated quantitative data is valid, reliable, and accountable for the processing.

##### **1.10.6.2 Coding**

Processed data will then be classified into specific categories and will be assigned to a corresponding sign, code, or symbol.

### **1.10.6.3 Tabulating**

Processed data will be arranged into tables according to specific criteria, which will then transition to adjust within the requirements of the analysis for further discussion.

## **1.10.7 Data Analysis Technique**

### **1.10.7.1 Research Data Analysis**

The research study will incorporate Kendall's Tau-B Rank Correlation method as the data analysis technique. The Kendall's Tau-B Correlation Coefficient, or more known as Kendall's Tau ( $\tau_b$ ), was developed to determine if a monotonic function in the ordinal relationship exists between the independent variable (X) and the dependent variable (Y). Monotonic function between variables in quantitative research refers to the consistent increase or decrease in values altogether, or both variables contrast. Resulting with the correlation coefficient and value Sig. (2-tailed) in determining the significant correlation through ranking method.

The correlation coefficient method functions to measure the strength and direction of the association between different variables (Laerd statistics, 2018). The degree of correlation strength indicates the proximity between variables. As the variables close the gap between each other, the more perfect their monotone function. Sarwono (2015) suggested that the correlative analysis is categorized into the following: very weak association (0.00-0.25), sufficient association (0.26-

0.50), strong association (0.51-0.75), and very strong association (0.76-0.99). However, if both variables become perfectly monotonically-related with each other, it will result in the value of 1.00 (Raharjo, 2021). Meanwhile, the direction of correlation corresponds with the correlation coefficient value between variables that can result in either positive (linear) or negative (non-linear) values: between -1 and less than 0 indicates a negative correlation, between 0 and greater than 1 indicates a positive correlation, and if the result is 0, there is no correlation (Kuckartz et al., 2013, as cited in DATAtab Team, 2024).

The Kendall's Tau-B Correlation Coefficient must have a variable with ordinal data (e.g. likert-scale), and the other consisting with either ordinal, nominal, or ratio data in order to work. This data analysis method is appropriate for examining quantitative data. In addition, the study will analyze the association in using the Statistical Package for Social Sciences (SPSS) tool.