

RISK COMMUNICATION IN CIGARETTE HEALTH WARNING LABELS AND BEHAVIOR CHANGE IN KENYA: A QUALITATIVE STUDY

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ABSTRACT

Background: The introduction of three-picture health warnings on cigarette packs, approved in 2014 and implemented in 2018, aimed to raise awareness and educate the public about the dangers of smoking. Therefore, the effectiveness of health warning labels on tobacco products is being questioned due to consumer reluctance to pay attention to the visuals or textual content. **Purpose:** This paper examines risk communication messages on cigarette warning labels that promote behavior change among adult smokers. **Methods:** The study focused on adults aged between 30 and 40 years who were smokers. Participants were selected from smoking zones in Kitui and Machakos Counties, Kenya. Data were collected through focus group discussions (FGDs). **Results:** According to FGDs, cigarette warning labels were found to influence how Kenyan adult smokers perceive health risks. The labels were observed to enhance understanding of tobacco-related risks among smokers and evidence of optimism bias among the smokers, indicating that they may be overly optimistic about their own health risks compared to others. While the labels were associated with a reduction in smoking habits, it was noted that this effect had limitations. The warning labels were deemed crucial but insufficient to induce a significant change in behavior. **Conclusion:** It was concluded that current cigarette warning labels in Kenya have a limited influence on risk perception among adult smokers. Importance of targeted communication strategies addressing optimism bias, to effectively combat risk perception among adult smokers is needed. Also, relatable and clear imagery could help smokers better understand and internalize potential health consequences.

Keywords: risk communication, cigarettes, smoking warning labels, behavior change, kenya

INTRODUCTION

The primary factors contributing to the rise in tobacco consumption in Kenya are identified as weak legislative policies, insufficient funds for public awareness campaigns on smoking health risks, and uninformed advertisements and mass media campaigns (Kurgat *et al.*, 2019). But there is also careless smoking habit which leads to bad impact on those around the active smoker (Asyfiradayati, 2021). Although the Kenya Government has made efforts to reduce smoking through warning labels on cigarette packs, there is a notable gap in data and understanding effects of the same measures in Kenya. The prevalence of smoking among Kenyan adults stands at approximately 11.6%, according to the Kenya Global Adult Tobacco Survey (GATS, 2022). This figure, some image, does not offer a comprehensive understanding of the effectiveness of current warning labels, especially when compared to regions with lower prevalence rates due to tough labeling laws. Other countries out of Africa, like Australia and Canada and Korea (Joo *et al.*, 2022) have smoking rates which have reduced to below 10% because of implementation of graphic warning labels covering at least 75% of the pack surface. Contrastingly, Kenya's current regulations, which require graphic warnings covering only 50% of the pack, may not exert sufficient deterrent effect. This means that there is a gap in both regulatory stringency and public health outcomes which needs investigation. Furthermore, there is lack of data on the specific behavioral responses to these warning labels in Kenya. While studies from high-income countries indicate that graphic warnings significantly increase quit attempts and reduce smoking prevalence, similar research in the Kenyan context is sparse. To make the situation worse, the enforcement of existing tobacco control laws in Kenya is not consistent. Reports of non-compliance by tobacco companies show that even the modest regulatory measures in place are not fully realized

The fact that 10% of Kenyan youths start smoking at the age of 13 is alarming. Early initiation increases the risk of long-term addiction and health issues. The introduction of three-picture health warnings on cigarette packs, approved in 2014 and implemented in

2018, aimed to raise awareness and educate the public about the dangers of smoking. Kenya conducted a survey to assess the effectiveness of this strategy. According to the findings, the adoption of picture-based warnings contributed to an increased knowledge perception about smoking among tobacco users (Kenya Medical & Research Institute, 2021). The visual impact of the three-picture health warnings played a role in enhancing people's understanding of the risks associated with smoking. The introduction of health warning labels on tobacco products in Kenya, following strict guidelines set by the Ministry of Health, represents a significant effort to raise awareness about the risks associated with smoking. The guidelines, as described, include full-color warning labels on both the front and rear sides of cigarette packs, with the word 'Warning' highlighted in red and positioned below a white font against a black background (Campaign for Tobacco-Free Kids, 2021). According to feedback from cigarette vendors, smokers have reportedly grown to dislike the packaging rather than the product itself (Nation Africa, 2022).

Kenya is now focusing on integrating scientific evidence with culturally contextual strategies to mitigate smoking rates. A study by Kaai *et al.* (2023) shows the effectiveness of graphic warning labels compared to text-only warnings, with a significant positive change in smokers' intention to stop smoking after seeing graphic images. This finding is supported by the WHO's global report (2021), which indicates that comprehensive graphic warnings can reduce smoking prevalence by up to 30%. However, implementing this in Kenya faces hurdles like resistance from the tobacco players and regulatory issues. Therefore, there is need for tough regulatory mechanisms and enforcement channels to ensure to maximize the impact of cigarette warning labels. Additionally, culturally tailored messages have proven to be more effective. Leinberger-Jabari *et al.* (2024) in their study shows the importance of using culturally tailoring smoking cessation interventions for reducing or quitting combustible tobacco improve the powerful lasting effect of health warnings. The use and accompaniment of warning labels in public health campaigns is and can shove up effectiveness through giving critical support of

messaging through many channels and community outreach programs. This kind of approach which uses many approaches is important especially among young and rural people who may have limited access to legacy media. Therefore, while Kenya is fighting to enhance effective risk communication through smoking labels, a lot still has to be done in ensuring impact across which shall see dramatic reduction and ultimately, reduce smoking rates. This is why understanding how young individuals interpret and respond to different types of warning messages and imagery can inform the development of targeted interventions aimed at reducing smoking initiation and prevalence among this demographic.

The effectiveness of health warning labels on tobacco products is being questioned due to consumer reluctance to pay attention to the visuals or textual content. Globally, contemporary research on smoking warning labels, including eye-tracking studies and neuroimaging, advances understanding (WHO, 2021). In Africa, studies emphasize cultural relevance, notably those published in *BMC Public Health*. In Kenya, recent research by the Kenya Medical Research Institute (KEMRI) explores the impact of warning labels, utilizing mixed methods (Tobacco Control, 2022). Authored by scholars at the forefront of tobacco control, these studies reflect the evolving state of the art in global, African, and Kenyan research, aiming to enhance the effectiveness of smoking warning labels in diverse sociocultural contexts. Therefore, this study on risk communication and smoking labels in Kenya is urgent because with 11.6% of adult's smokers in the country, smoking-related illnesses cause about 6,000 deaths yearly. Effective warning labels have potential of discouraging initiation, reduce smoking rates by 30%, reduce the healthcare challenge, improving public health and save lives

The aim of this study was to find out whether pictorial warning labels (PWLs) on tobacco products enabled adult smokers to instantly report health risks, assess if the current pictorial warning labels are likely to enhance understanding of tobacco-related risks and reduce smoking among adult smokers and find out if the text and wordings used on the warning labels allow adult smokers to understand health risks.

METHOD

Research Design

This paper used a descriptive research design on the smoking warning labels study, qualitative methodology was pivotal. Through in-depth interviews and Focus Group Discussion (FGD), which aimed to intricately depict smokers' attitudes, perceptions, and behaviors toward warning labels by capturing rich, detailed accounts, the study sought to illuminate how individuals interpret and respond to these labels in real-world contexts.

Data Source

The research in this article used the following secondary data published by such as the Kenya Medical & Research Institute. (2021). A new report shows that picture-based cigarette pack warnings benefit Kenyan smokers and calls for larger warnings on all tobacco products to encourage quitting. Other sources are KEMRI, The Kenya National Bureau of Statistics. The 2014 Kenya Demographic and Health Survey, Nairobi, Nation Media Groups Reports for 2022, how effective are Warning Labels on Cigarette Packets? and the WHO report of 2021 global report on trends in prevalence of tobacco use 2000-2025.

Data Sourcing Procedures and Analysis

Pretesting for this study was done with smokers in a cigarette smoking zone at Nairobi's Jevanjee Gardens found at the heart of Nairobi County, capital city of Kenya. Participants were conveniently selected to ensure representiveness of the diversity of perspectives and experiences related to smoking in Kenya considering key demographic variables like smoking behavior, age, gender, socioeconomic status, ethnicity, occupation and education level to capture a comprehensive understanding of smoking-related issues. A letter for data collection was given for this purpose by The University of Nairobi Department of Journalism and Mass Communication on 19th October 2022. This then meant the lead author had secured authority to collect data from the field, from where pretesting had already occurred. Prior to participation, informed consent was obtained from all participants, explaining the purpose of the study, what participation entailed, confidentiality measures, and all potential risks

or benefits. In the study, each participant provided verbal informed consent by affirmatively agreeing to take part after receiving detailed information about the research purpose, procedures, potential risks, and their rights. Their consent was obtained verbally to ensure understanding and voluntary participation while adhering to ethical guidelines and respecting their autonomy.

All those who participated in this study agreed to do so and confidentiality was ensured. Focus Group Discussions (FGDS) were led by a skilled moderator with experience in qualitative research and facilitation ensuring effective engagement and insightful data collection. Four focus groups were held, a maximum of two in each study setting, with a total of 54 adults that had different smoking profiles. The FGDs had 8-10 participants drawn from identified smoking zones in Machakos and Kitui counties from Eastern Kenya. According to data from the 2014 Kenya Demographic and Health Survey, this area has the highest concentration of smokers (Kenya National Bureau of Statistics, 2015). To be eligible for the study, participants had to have been active smokers for at least six months prior. Males and females between the ages of 30 and 40 were chosen for the study.

Analysis

It was very convenient to select the samples. The FGDs were recorded and transcribed to the last detail. Analysis was carried out of collected data and coded thematically in order to identify patterns allowing for further investigations. Thematic analysis was employed to uncover patterns and variations within the data, facilitating a comprehensive understanding of the role of warning labels in influencing smoking behavior. This approach enabled nuanced insights essential for informing effective public health interventions and policies.

Ethical Clearance

The participants gave verbal informed consent and were given explanations that the data were for research purposes only, and that appropriate measures were in place to protect the rights and welfare of all participants. The research avoided any negative or positive implications associated with specific locations by holding the FGDs (which lasted 30

minutes) in neutral places such as isolated smoking areas. The purpose, nature, potential risks, and their right to withdraw at any point and avoiding deception and honesty by explaining the true nature of the study, were all communicated before the study. They were all assured of privacy by anonymizing data and ensuring confidentiality and an assurance that the data were to be used for research purposes only.

RESULT

In this study, the selected population was males and females aged between 30 to 40 years old and were residents of either Kitui or Machakos counties, Kenya. To be eligible to participate in the study, participants had to be smokers for at least six months of either gender. Most respondents stated that they did not believe what the warning message indicated because impotence could be caused by other factors other than smoking; this was their argument. The word "impotence" or its Kiswahili translation "Hanithi" could not be identified by all smokers. "*Hizo maneno ziko hapo ni ngumu sana kuelewa*" (The wordings on the packaging are hard to understand), said a respondent. When asked if the warning messages were relevant to them, most respondents answered in the affirmative. Because the image depicted a man and a woman, it was clear that the message was intended for married couples, "*Hii ni kama sio ya watu single*" (This is not for singles, but married people). When asked if the warning message on the label had any effect on them, they all disagreed, explaining that they had been smoking for a long time and that such a warning was not going to discourage them from the behavior.

"I have been smoking for a very long time. If the warning was anything, it would have affected me long time ago but am very healthy." (R3).

Asked how this specific warning message could be improved to be more effective, they argued that the messages should depict health risks rather than "enjoyment" sessions. They also indicated that the language used should be simple to understand. When asked if cigarette warning labels on tobacco products enabled smokers to instantly

understand health risks, they stated that the warning label piqued their interest.

One part of the picture looks like uncooked meat and the other part looks like that of burnt liver (R2).

When asked if they could identify the message being communicated, the majority stated that smoking causes 'unhealthy lungs'. After carefully examining the warning label, all respondents confirmed that the message was clear. Respondents replied that they, however, did not believe the health message on the cigarette packet because fumes are smoked in and out of the lungs while smoking. *"Haiwezi kuwa hivyo sababu nikismoke moshi hutoka nje, haibaki ndani"* (It is not possible for it to be so (health danger), because when I smoke, the inhaled fumes are exhaled). When asked what they thought about the image on the warning label, all the respondents agreed that it was scary and graphic.

Respondents stated that the text on the cigarette packet was well-used in describing the two images, allowing them to understand the message: that smoking causes lung disease and that the warning labels were relevant to them because lungs are critical body parts. The warning labels showed the lungs of young people, and the unhealthy lung was used to illustrate the lungs of elderly people, with respondents indicating that they were too young to have their lungs affected by smoking, and that they would only be at risk if they reached the age of sixty or seventy. Respondents stated that continuing to smoke would cause lung problems and that this warning would influence them to quit smoking in their old age.

"Kusema ukweli Hatuezi acha kusmoke saa hii, labda in future." (We cannot quit smoking now, maybe in future) (R1)

To improve the warning label messaging, respondents suggested that text should specify lung diseases as other factors like cold and dust could also lead to lung diseases. After being shown various warning labels, respondents were unaware that smoking causes mouth cancer and that they could not believe the warning message on the warning label because they had trouble understanding the image, adding that the text in Kiswahili on the back of the cigarette pack used terms that

they did not understand. Most did not know that *"Saratani"* was the Kiswahili word for cancer. As a result, this warning could not elicit any negative emotions that would cause them to quit smoking or alter their behavior. Furthermore, there was also confusion about the Swahili word *"Hanithi,"* with respondents wondering if the message's originator intended to write *"Hadithi."* The respondents agreed that the message was targeted to men and women who smoke but it was not relevant to them because it did not carry any health risk weight.

Additionally, respondents cited image clarity issues and added that cancer could be caused by other factors such as drinking alcohol or poor diet. They all agreed that, because they couldn't understand the pictorial illustration used, they couldn't believe or tell the health risk communicated. One of the warning labels on the cigarette packet was a depiction of a couple in bed, initially engaged in a sexual activity, with the warning label message being that continued smoking leads to impotence. Many did not know this, showing that this message was yet to sink in among smokers in Kenya regarding the effects of smoking on sexual health. Respondents did not believe this "because smoking fumes enter the lungs rather than private body parts."

"Mimi sikujua smoking ina cause impotence, nilijua in affect lungs pekee yake". (I did not know smoking causes impotence; I knew it affects the lungs only) (R5)

On effect, most of the respondents said that the message on the warning labels did not have any effect on their smoking behavior, one said his father was a chronic smoker and had three wives with sixteen children. The respondents suggested that the warning labels could help them identify the health risk if the originator of the warning labels used images that could explain the impotence aspect rather than an image that gave different impressions and use easily understandable term. The respondents indicated that the message was irrelevant, they believed that the message was targeting both men and women who smoke but did not feel personally affected; the absence of perceived health risk weight made the message irrelevant. One respondent shared a personal anecdote about their father, a chronic smoker with multiple wives and children, who did not experience impotence issues. The respondents

recommended using images that specifically depict the health risks related to impotence.

The respondents were exposed to the second warning label and said they noticed the text which was easy to understand. The group unanimously reported that the warning label caught their attention due to its portrayal of lungs, with one looking alive and the other dried up, finding it easy to understand. The respondents communicated that the warning label effectively conveyed the message that smoking causes "*Ugonjwa wa mapafu*" (lung disease). Additionally, they mentioned that they were already aware that smoking could lead to lung diseases.

This feedback suggests that the warning labels, particularly its visual elements and clear text, successfully grabbed the respondents' attention and effectively communicated the health risks associated with smoking. It also indicates that the participants already had prior knowledge about the link between smoking and lung diseases. The study found that respondents understood the warning label effectively and found it relevant to their smoking habits. The picture on the label elicited negative emotions, contributing to its effectiveness. The text was clear and easy to understand, and respondents felt concerned about their smoking habits, particularly lung diseases. The label made them consider quitting smoking due to its impact on lung health. To improve the label, respondents recommended including information about smoking duration, such as using terms like "prolonged smoking" to convey the idea of smoking over an extended period.

Respondents were exposed to a third and different warning label with different. The label caught the attention of all respondents and it elicited fear emotions. Respondents agreed that the label caught their attention because the picture showed a toothless man laughing and portrayed a person with black (colored) teeth. Many respondents believed that the warning label was communicating that smoking can make teeth black and cause them to fall out. However, respondents did not understand how smoking could be linked to cancer affecting the teeth just like they didn't understand the link between smoking and mouth cancer. All respondents reported that they did not believe the message because they

were only knowledgeable about lung cancer and had not encountered information on mouth cancer before.

Respondents had difficulty understanding how exactly smoking affected the mouth based on the picture on the warning label. There were mixed impressions, indicating confusion or ambiguity about the visual representation. When asked about the text, all respondents reported that the Swahili word 'Saratani' (cancer) was not familiar to them; most didn't even know about cancer of the mouth. This suggests a gap in knowledge about oral health risks associated with smoking.

The participants were asked if the warning label left them with any feelings that made them feel concerned about their smoking habit. They all agreed that mouth cancer is a huge health risk just like any other cancer and it is something that would provoke them to reduce smoking, but they were not convinced by the warning label. They suggested that the originator of the warning should consider using clear pictures to communicate.

Respondents expressed dissatisfaction with the cigarette packaging warning labels, suggesting future revisions could include relevant images and specific cancer types. This aligns with research showing that graphic and specific warnings have a more significant impact on behavior change, highlighting the need for improved tobacco packaging regulations. Additionally, the observation from the shop attendant and smoker provided a unique perspective on how many smokers might not have direct contact with the cigarette packs due to purchasing habits, such as buying single sticks or those wrapped in clear outer cigarette pack wrappers.

The respondents expressed a sense of invulnerability to tobacco-related health risks, citing their own experience as chronic smokers without apparent side effects. Their perception of invincibility seemed to contribute to a lack of belief in the credibility of information presented on warning labels. This suggested that, while they acknowledged their addiction, they were skeptical about the influence of warning labels on their risk perceptions and behavior. What this means is that addressing these barriers requires tailored interventions that empathize with addiction struggles,

provide accurate risk information, and leverage personalized strategies to foster positive behavior change in the face of skepticism and entrenched habits.

DISCUSSION

Data from this study shows that peer pressure, social norms, and the availability of cigarettes play a significant role in sustaining smoking habits, sometimes overpowering health warnings. What this means is that effective smoking cessation efforts often require a multi-faceted approach. Combining warning labels with comprehensive tobacco control policies, educational programs, and support for quitting can have a more substantial impact. Therefore, even if cigarette packages were ineffective in encouraging positive behavior change, the result from this study suggests that smokers are at least aware of the health effects of their conduct. The respondents concurred to the "smoking causes all illnesses" assumption to suggest that there may have been a failure to process information rationally. From a theoretical perspective, this suggests that individuals may not always consider the health consequences of smoking when making decisions about their smoking behavior, despite rational health decision-making models recommending otherwise. This implies that there may be factors influencing smoking behavior beyond purely rational considerations, such as social influences, addiction, psychological factors, or even a lack of awareness or understanding of the health risks associated with smoking. It highlights the complexity of human decision-making and the limitations of purely rational models in explaining health behaviors like smoking. Additionally, package design is an issue because most people purchase cigarette sticks independently, meaning they never even get to view, read, or internalize the warning health messages on the packs.

Determining whether the cigarette warning label would permit adult smokers to disclose health problems was the second crucial component of this study. According to data for this paper, smokers were able to think through the warning labels and pay attention to what the messages were communicating. Adult smokers' awareness of the negative effects smoking has on their health did not appear to have much of an impact on their decision to

start or quit smoking overall. From a scientific standpoint, the findings of this paper suggest that people who are aware of the negative effects of smoking are not more likely to start or quit. This was attributed, in part, by the fact that most smokers bought their cigarettes in single sticks and left the packs with the vendors, as a result, most smokers hardly ever came into contact with the cigarette packs. Some of the respondents expressed surprise that such packaging even existed, which was noteworthy.

Three out of four warning labels were not effective in communicating health risks adequately. This could be due to choice of images, text, or overall design. Visual elements, like images on cigarette packs, may not always be effective if they are abstract or unfamiliar to the target audience. This aligns with the general principle of communication design, emphasizing clarity and relevance. Poorly portrayed graphic images can lead to ambiguity in interpretation. Clarity and precision are crucial in visual communication to ensure that the message is understood correctly and elicits the desired response. According to Evans *et al.* (2017), graphic warning labels that feature pictures that don't elicit strong feelings can backfire by lessening people's perceptions of danger and their intentions. With these data, it is possible to argue that adult smokers' awareness of health concerns is not increased by Kenyan cigarette warning labels.

The way risk messages are framed can significantly impact how well the target audience understands and responds to the information. According to China (2018), risk communication message framed poorly has the potential to mislead the intended audience. In this paper, the use of technical jargon and potential linguistic misunderstandings led to confusion among the respondents. Perceived susceptibility is one of the dynamics in the HBM model that prompts people to take action. The respondents were able to report on the potential health risks listed on the warning labels, which in turn increased the likelihood that they would experience the negative effects of smoking. In contrast, the respondents did not perceive the health risks as grave or feel that they would suffer the negative impacts of smoking; they claimed that prolonged smoking turned them into addicts, the model was

limited by the conclusion that, in the long run, warning labels had no long-term impact on respondents' smoking habits. A study by Pribadi and Devy (2020) discovered a strong link between respondents' reported conviction that they could embrace positive behavior change and their intention to quit.

Participants lacked the high efficacy levels needed to support behavior change. It was also observed that the respondents' lack of sufficient self-efficacy, which is necessary to inform quit intentions (Pribadi & Devy, 2020) caused them to underestimate the health risks involved, even if they acknowledged the severity of those potential dangers. These results are consistent with the findings of Poggiolini and Wu (2019) who concluded that, although people may believe they are at risk and even believe they are susceptible, they would not alter their behavior if they do not believe they can adopt healthy habits. Reduced self-efficacy diminished the respondents' intention to change their behavior. This means that self-efficacy was directly associated with the intention to quit, but self-efficacy was negatively linked to risk perception, resulting in a weakened intention to quit.

According to the Health Belief Model, messages will only be effective if the recipients simultaneously perceive themselves as being at least susceptible, seriously threatened, and as having barriers (Jones *et al.*, 2015). According to data for this paper, the participants displayed signs of being susceptible to health concerns, yet they were not persuaded to cut back on their smoking. The findings from this study concur with that of Tajeri Moghadam *et al.* (2022) that HBM may not be effective in predicting habitual behaviors, and, in understanding the addictive nature of respondents, it's crucial for stakeholders to take accurate measures that might involve a deeper understanding of the target audience and the designing of effective risk communication messages.

Data for this study shows that the majority of adult smokers began before the age of 20, which makes it difficult for them to think about cutting back or giving up the habit. The respondents also stated that, because smoking was such a deeply ingrained habit, giving it up made them feel uncomfortable. This means that we must recognize the

psychological challenge among smokers. This will mean that we need tailored interventions, support structures, and coping mechanisms as essential components for behavior change, emphasizing the importance of addressing addiction's emotional and habitual dimensions for successful behavior change.

Limitations of the Study

The study involved Kenyan citizens who are in the Eastern Kenya region; Machakos and Kitui counties. The Kenya Demographic and Health Survey report indicated this region had the highest number of smokers, who were adults between the ages of 30 to 40 years (Kenya National Bureau of Statistics, 2015). The study targeted adults of the same age bracket of 30 to 40. The data may have self-report bias, as participants may have provided socially desirable responses.

CONCLUSION

The study's practical implication regarding adult smoking and cigarette warning labels is that adult smokers' perceptions of risk are not significantly influenced. Although the labels are a valuable tool for educating smokers about the risks associated with smoking, they are not always successful in making them feel vulnerable enough to change or quit. Furthermore, warning labels on cigarettes affect people's perceptions of danger but do not alter their behavior. Using relatable and clear imagery could help smokers better understand and internalize the potential consequences of smoking.

SUGGESTION

Most research carried out has focused on cigarette warning labels for general audiences, but this study was unique because it targeted a specific audience group in a developing country. The results of this study demonstrated that risk perceptions are, to a limited degree, influenced by cigarettes warning labels. There is a need for more research to cover a wider scope and cultural dimensions. There is also a need for more literature on cigarette warning labels, risk communication and behavior change in developing countries. Future research should determine whether paying attention to disgust imagery helps to elicit unpleasant emotions or not, especially in adult smokers who are more susceptible to optimism bias.

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CONFLICT OF INTEREST

The authors do not have any conflict of interest.

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AUTHOR CONTRIBUTION

This is a co-authored article, the collaboration was between a master's student and her supervisor, a professor. The first author, Maureen Khaoya who was a master's student, immersed in a learning journey, actively engaged in the topic and concept, conceptualization and design of the research, data collection, analysis, and the initial drafting of sections to the research. The second author Hezron Mogambi and professor, in the capacity as a supervisor, provided crucial mentorship and oversight throughout the research process—guiding the formulation of concept, research questions, methodology, insights, critical review and revision stages, ensuring scholarly rigor and alignment with academic standards, ethical standards, providing guidance on ethical considerations, ensuring the welfare of participants and integrity of the study, refining final draft. Both authors jointly participated in discussions on the implications of the findings, contributing to the robustness of the article.

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