

The Effects of Perceived Efficacy Beliefs in Covid-19 Television Messages on Vaccine Adoption Behavior Among Youths in Kiambu County, Kenya

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ABSTRACT

The media play a key role when in sharing information during a pandemic. Knowledge on pandemics is shaped by the content aired via different channels of communication. The television messages on pandemic's efficacy beliefs are designed to influence action. Borrowing from extended parallel model, perceived efficacy beliefs contain perceived response efficacy and perceived self-efficacy thus people's reactions during stressful instances varies. This is because when individuals receive threat messages, they outweigh messages which increases their perceived efficacy. The effects of threatening messages depend on the magnitude of emotional response and efficacy beliefs. As such, the study aimed at determining the effects of perceived efficacy beliefs Covid-19 television messages on vaccine adoption behavior among youths in Kiambu County, Kenya. The study adopted cross-sectional research design and was a mixed research. The research design accounted for rejection and acceptance behavior after the vaccines were made available in August 2021. By use of simple random and convenience sampling techniques 384 youths were obtained for questionnaires. However, out 384 respondents only 346 respondents participated in the questionnaires. From the frequency analysis on perceived response efficacy 97.3% youths had perceived response efficacy beliefs while 2.7% lacked perceived response efficacy. The Chi-square test returned statistically significant results ($X^2=0.001$, $df=1$, $p=0.003$). Additionally, 96.8% youths had perceived self-efficacy while 3.2% lacked perceived self-efficacy with Chi-square test results of ($X^2=0.025$, $df=1$, $p=0.014$). These findings demonstrated that people acquire beliefs on threat control after receiving risk information. The perceived efficacy beliefs in Covid-19 television messages led to low vaccine uptake among youths in Kiambu County. The perceived efficacy beliefs are important, thus a starting point for more research on what informs the media reports when covering health issues such as pandemics.

Key words: Adoption Behavior, COVID-19, Perceived Efficacy Beliefs, Pandemic, Vaccine

I. INTRODUCTION

Television, as a mass medium, plays a crucial role in disseminating information about health and healthcare services, significantly shaping public knowledge and attitudes. As Gollustet al. (2019) suggest, the nature of broadcasted messages about health crises like Covid-19 has a profound impact on how the public perceives the severity, susceptibility, and efficacy of responses to such crises. Globally, studies have shown that television messages designed to communicate these factors often possess uncertain veracity, leading to misunderstandings and, in some cases, panic, which can influence the public's adoption of recommended control measures (Rusho et al., 2021; Muchiri et al., 2022).

The Extended Parallel Process Model (EPPM), introduced by Witte (1992), highlights two key variables related to beliefs about efficacy: self-efficacy and response efficacy. The media, recognized as the primary provider of health information, plays a critical role in shaping these beliefs and, consequently, public attitudes and behaviors towards health innovations (Khasawneh et al., 2020). When individuals are exposed to media messages about a pandemic, they weigh these messages against their perceived efficacy, which influences their reactions and coping strategies during stressful situations (Floyd et al., 2000; Norman et al., 2015). Efficacy beliefs, including perceived response efficacy (beliefs about

the effectiveness of recommended behaviors) and self-efficacy (confidence in one's ability to control risks), are pivotal in shaping adaptive or maladaptive responses to health threats (Witte, 1992).

The relationship between threatening messages, emotional responses, and efficacy beliefs is complex. As Thrasher et al. (2016) note, the effects of such messages depend on the magnitude of the emotional response they evoke and the strength of efficacy beliefs. Strong self-efficacy is associated with a greater likelihood of attitude and behavior change, particularly in health contexts (Moriarty, 2009). For instance, in the context of smoking cessation, strong efficacy beliefs can lead to later behavioral changes, such as quitting smoking (Maynard et al., 2018).

In Kenya, as in many other parts of the world, the media has been a crucial player in shaping public responses to the Covid-19 pandemic. The framing of pandemic messages in the media has often promoted fear and anxiety, which can either motivate the adoption of preventive behaviors or lead to maladaptive responses due to misinformation (Avery, 2010). Media messages that emphasize the severity and susceptibility of Covid-19 have been found to elicit fear and anxiety, leading to a heightened motivation to seek preventive information (Liu et al., 2021). However, when this information is misleading or incomplete, it can undermine efficacy beliefs, resulting in reduced confidence in the effectiveness of control measures (Ranjit et al., 2021).

In Kenya, the role of the media in influencing public health behaviors has been particularly significant during the Covid-19 pandemic. The widespread dissemination of information through television has shaped public perceptions of the disease and the effectiveness of preventive measures. The media's emphasis on the risks associated with Covid-19 has helped build public confidence in control measures, although it has also, at times, contributed to fear and panic (Liu et al., 2021). This dual role of the media highlights the importance of carefully crafting public health messages to ensure they promote adaptive behaviors and support public health efforts.

The implications of media messaging on health behaviors extend beyond the immediate context of the Covid-19 pandemic. Changes in health behavior, driven by media influence, are crucial for improving overall public health, reducing medical costs, and preventing mortality and suffering. In Kenya, as in other countries, there is an increasing shift towards promoting health through media, with news organizations playing a key role in meeting the growing demand for health information (Liu et al., 2021). As such, understanding the impact of media on public health behaviours is essential for developing effective communication strategies that support positive health outcomes.

1.1 Statement of the Problem

The novelty, severity and spread of Covid-19 pandemic since 2019 December has been a global concern. The pandemic was a major cause of death where in a span of less than two years; by May 2022 approximately 6.3 million people were reported dead globally by World Health Organization (WHO, 2022). In Kenya, there were over three hundred thousand infections and over five thousand deaths (WHO, 2022b). However, with increased awareness on preventive measures and vaccination the deaths were controlled, and new infections prevented.

In March 2021 Kenya received the first consignments of 1.02 million AstraZeneca vaccines, which saw the Ministry of Health launch plans and campaigns in conjunction with the media to vaccinate frontline workers and essential personnel (WHO, 2021). Several other consignments were delivered ever since. The Covid-19 vaccines were free and available in most of health facilities across the globe (Ministry of Health, Kenya; MoHK, 2021b).

However, the uptake of the vaccines was very low. Out of 50 million eligible Kenyans only 31.0% were fully vaccinated (WHO, 2022). A number of reasons were attributed to low adoption including side effects of the vaccines, poor knowledge, misconceptions associated with vaccines and the nature of messages distributed by the media on the pandemic (Muchiri et al., 2022).

According to Perse and Lambe (2016), public knowledge of pandemic events is intrinsically shaped by the nature of the broadcasted messages published by the television. Studies has shown that, television messages on disease efficacy are designed with unknown veracity (Rusho et al. 2021; Muchiri et al., 2022). As a result, this may cause misunderstanding and create panic which would in turn influence adoption behavior of control measures put in place (Song et al., 2021).

Further, Khan et al. (2020), television messages on pandemics blow the pandemics out of proportion, creating unnecessary panic in them, which is capable of leading to adaptive or maladaptive behavior in the society. Engaging in constructive designing of pandemics messages would help in coping with negative behavior in society. Going by these, how messaging elements influenced adoption of Covid-19 vaccines has not been explored. Therefore, the researcher sought to find out the effects of perceived efficacy beliefs in Covid-19 television messages on vaccine adoption behavior among youths in Kiambu County.

1.2 Research Objective

- i. To examine the effects of perceived response efficacy in Covid-19 television messages on the vaccine adoption behavior among youths in Kiambu County.

- ii. To find out the effects of perceived self-efficacy in Covid-19 television messages on the vaccine adoption behavior among youths in Kiambu County.

1.3 Research Hypotheses

H₀₁: Perceived response efficacy in Covid-19 television messages have no significant effects on vaccine adoption behavior among youths in Kiambu County.

H₀₂: Perceived self-efficacy in Covid-19 television messages have no significant effects on vaccine adoption behavior among youths in Kiambu County.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Extended Parallel Processing Model (EPPM)

The EPPM was proposed by Kim Witte in 1992. This model was developed as a response to inconsistencies in fear appeals literature and frameworks on fear control. The model has been used empirically in health-related studies and in public health campaigns as well as political adverts, where is used to fit in messages (*fear inducing messages*), behavior (*recommended behavior by the messages*) and the audience credentials (*of the recipients of the designed fear messages*).

The theory tries to predict how individuals react when confronted with threats stimuli (Witte, 1992). The theory asserts that *depending on the threats people take actions, danger control or fear control thus rejection or adoption of mechanisms for control*. The degree to which a person feels threatened by a health issue determines his or her motivation to act, while one's confidence to effectively reduce or prevent the threat determines the action itself. There are four key variables in the EPPM model, two related to beliefs about the threat (*Perceived severity and perceived susceptibility*) and two related to beliefs about efficacy (*self-efficacy and response efficacy*) (Witte, 1992).

People are exposed to pandemic information by the media. The media is acknowledged as the prevalent provider of health information and effective means to creating awareness about the disease and precautionary measures (Khasawneh et al., 2020). The information received shape's opinion and attitude which may lead to adoption or rejection of a health innovation.

Pieri (2019), public knowledge of pandemic events is intrinsically shaped by the style of broadcasted messages published by the media. Therefore, the study adopts the extended parallel processing model as a theoretical basis. According to Witte (1992), threat variables in television messages about Covid-19 influence efficacy which in turn influences the behavior. As such threat messages are provided first to stimulate perception of Covid-19, especially the perceived severity (seriousness of the threat as Covid-19) and perceived susceptibility (likelihood of contracting Covid-19).

Once the individuals have received messages with Covid-19 threat variables, they outweigh the messages which increases their perceived efficacy. The theory proposes two aspects of efficacy variable; perceived self-efficacy (how confident one is with regard to control of the threat) and perceived response efficacy (personal beliefs regarding effectiveness of recommended behavior to avoid threats) (Witte, 1992). Noticeably, when audiences have higher level of perceived efficacy than threat, they will enter into danger control in order to avert the threat.

2.2 Empirical Review

The nature in which the pandemics are outlined is vital. According to Seale (2003), the media usually has a habit underpinning explanation pertaining medical matters upsurge and reduce the willingness to seek care and increase prospects or heighten an alarm of control measures people perception arise from the media content; shaping constructions of reality for audiences. Going by this, it is evident the effects of receiving information about pandemic largely from the mass media not only increases overall fear of infection but influences attitudes towards preventive measures (Karijo et al., 2021).

In research documented *Alternative media framing of Covid-19 risks* by Rooke (2021) media sources are often blamed for risk amplification. During Covid-19 the media is facing challenges of airing uncertain facts of the new pandemic to an information seeking society. The media landscapes have presented opportunities of content creators to design messages and scientific information so as to influence to take precautions and prevent risks.

People's reactions during stressful instances varies. As such, people protect themselves based on coping *appraisal* (Floyd et al., 2000; Norman et al., 2015). According to Floyd et al. (2000), coping appraisal consists of efficacy beliefs. Efficacy beliefs are *perceived response efficacy and self-efficacy*. Perceived response efficacy entails beliefs pertaining effectiveness of the recommended behavior to avoid risks while perceived self-efficacy pertains confidence of an individual in relationship to risk control (Witte, 1992).

One's ability to prevent undesired outcomes requires one to understand what to do and strong belief in what they are doing before the actual action. As such, provision of information and changing belief strengthen perceived self-efficacy of people. Self-efficacy is crucial, with regard to health contexts. When self-efficacy is high, there is greater probability for attitude and behavior change (Moriarty, 2009).

Witte (1992), threatening messages are probable to desired reactions and produce adaptive when threat and efficacy are high. In a study measuring *severity and susceptibility; measuring the perceived effectiveness and believability of tobacco health warnings* Maynard et al. (2018), indicate that strong threatening messages have effects on risks perception and cessation behaviors and found that stronger self-efficacy on leaving behavior like smoking can lead to later smoking cessation actions.

According to Moriarty (2009), the extent to which the recommended action is believed to avert a health threat answers the question of whether the recommended works? A lot of people have died (6.3 million) of covid-19 and lack of knowledge on vaccination persists. Furthermore, high efficacy beliefs are a consistent participation in vaccination and engaging in preventive measures.

In a study measuring effects of perceived threats and response efficacy on adoption to smog by Mehriiz & Gosselin (2021), individual behavior is motivated by the urge of surviving and reducing effects of threat and response to the threats is dependent on the reality. Distorted perceptions of threats lead to suboptimal actions. Response-efficacy is crucial in prevention or protection motivation of any threat.

In a study measuring the *frequency of news media messages in the coverage of Zika virus in 2016* by Sell et al. (2016), noted that health risk information helps people in understanding threats and preventive measures, thus provide policy support for mitigating the health risk. The public perceptions and judgement made by people during health crisis stems from the messages disseminated via the media. Further, information from the media is seen to affect people's emotions and confidence towards protective and preventive behavior.

III. METHODOLOGY

3.1 Research Philosophy

The study was grounded on pragmatism philosophy, which emphasizes practical solutions and the integration of different research methods to gain a comprehensive understanding of phenomenon (Bryant, 2017). To achieve this, mixed method approach was adopted, combining both qualitative and quantitative analysis. This methodological choice enabled the study to explore the effects of perceived efficacy belief in Covid-19 television messages on vaccine adoption behavior among youths in Kiambu County. By using both qualitative and statistical data, the research provided a well-rounded perspective on how youths in Kiambu County responded to televised health messages regarding Covid-19 vaccines.

3.2 Research Approach and Design

The study was mixed, and as such, the data was analyzed qualitatively and quantitatively for validity of the study. The qualitative and quantitative data employed cross-sectional research design while qualitative data used content analysis. The cross-sectional research design was applied to measure the outcome of television messages on Covid-19 versus the adoption of Covid-19 vaccine among Kiambu County youth.

The cross-sectional research design accounted for acceptance and rejection adoption behavior and the accompanying exposures of Kiambu county youths especially when the vaccines were made available to every Kenyan (Kothari, 2004); 23rd August to December 2021, the period in which national Covid-19 vaccination in the country was rolled out (MoHK, 2021c). Further, to describe the messages, the researcher employed content analysis. This is because the research topic was established on content analysis of television news content on Covid-19 pandemic for message elements to be derived from video clip. Additionally, more data was collected through questionnaires on effects of Covid-19 pandemic television messages.

3.3 Study Population

The Population of this study was the three television stations (Citizen TV, KTN and NTV) for content analysis and youths in Kiambu, Kenya. Based on Media Council of Kenya state of the media report 2021, Citizen TV is the most watched TV station with 27% followed by KTN 11% then NTV 9% (MCK, 2021). Further, the MCK (2021) notes that 58% of Kenyan consume TV content in a typical day where the most watched content is news, followed by entertainment, religious content, and sports content.

The youths in Kenya, are defined by the constitution as individuals under the age bracket of 18-35years. Based on a study by Joachim et al. (2022), on youths' hesitancy on Covid-19 vaccine, 52.0% out of 91.0 % of youths in Kenya had theories not to go for vaccines. They had a belief that the virus was not severe on youths, their immune was intact

and waited to see how others reacted to vaccines. As such, this finding is an indicator that the number of youths going for vaccines was very low (Joachim, et al., 2022).

Going by the report from Ministry of Health Kenya dated 30th May 2022, approximately 8.45 million people had been fully vaccinated against Covid-19 country wide with only 579458 people from Kiambu county. This statistics of the fully vaccinated people in the county was very low against the MoHK 1.7 million people target by December 2021.

The study was narrowed down to Thika Town Constituency, Ruiru constituency and Kiambaa constituency in Kiambu County. They had five and above Covid-19 vaccine centers (MoHK, 2021b). Thika Town constituency is highly populated; most developed and has the highest number of hospitals among other constituencies in the county while Ruiru and Kiambaa Constituencies comes as 2nd and 3rd in the list of the constituencies that had the highest number of vaccine centers. In addition, out of the 53 Covid-19 vaccine centers, 13 of them were in Thika Town Constituency, Ruiru constituency had 8 and Kiambaa town constituency had 6 centers (MoHK, 2021b).

3.4 Sample Size and Sampling

A sample is regarded as the items that represent the entire population to be studied (Kothari, 2004). Further, Kothari (2004) portrays it as an accumulation of units selected from the population to stand for the entire units to be analyzed. For this study, the researcher got a sample size of the first 30 videos on higher counts viewership for analysis for the three TV stations.

Table 1

TV Stations Sampling Frame

TV station	Percentage of viewership	No. of videos
Citizen TV	27%	17
KTV	11%	7
NTV	9%	6
Total	7%	30

Source: (MCK 2021; Researcher, 2022)

Further, out of the entire population of youths in Kiambu County a sample of 384 youths in Kiambu County, Kenya was used. In this study the researcher used criterion sampling to select television messages on Covid-19 aired between August and December 2021. The researcher made extensive search on YouTube for news videos on Covid-19 by Citizen TV, NTV and KTN that were aired between 23rd August and December 2021.

Further, for inclusion and exclusion of news videos, the researcher used filters such as the titles of the videos, durations, and views. Further, key words and phrases touching on perceived severity, perceived susceptibility, and perceived efficacy beliefs were employed. Only the first 30 news videos on higher counts viewership were taken for analysis for the three TV stations.

Additionally, the researcher used simple random sampling and convenience sampling technique for respondents of the questionnaires. The simple random sampling enabled the researcher in selecting contributors who were clearly defined by obtaining list of constituencies in Kiambu County, then list of Covid-19 vaccine centers in each constituency, then selection was done on any constituency with five and above vaccine centers. Kiambu County has 12 constituencies, all the constituencies had Covid-19 vaccine centers and out of the 12, 3 constituencies had five and above Covid-19 vaccine centers (MoHK, 2021b).

Further, the convenience sampling allowed selection of contributors in a deliberate way and relevant practical criteria such as accessibility, proximity, availability, and willingness of participation respectively (Crossman, 2018; Kombo & Tromp 2006; Farrokhi & Mahmoudi, 2012). According to Farrokhi and Mahmoudi (2012), convenience sampling allows non-random sampling of samples close to the location of study, accessible, available, and willing to partake in the study. As such, for youth in each constituency convenience sampling of households was done.

Table 2

Youths Sampling Frame

Location	Vaccine Centers	Youths
Thika town Constituency	13	185
Ruiru Constituency	8	114
Kiambaa Constituency	6	85
Total	27	384

Source: (MoHK, 2021)

3.5 Data Collection and Analysis

The researcher conducted a content analysis of news video clips from Citizen TV, KTN, and NTV to examine the messages related to COVID-19 vaccination. To facilitate the collection of primary data, permission was sought from the respective youths through constituency administrators, allowing them to participate in the study by filling out questionnaires. Once permission was granted, the researcher, with the assistance of trained research assistants, administered the questionnaires to youths from the sampled constituencies over a period of two weeks.

For the qualitative data collected from the news video clips, the content was categorized into themes, which were then analyzed using thematic analysis, focusing on perceived response efficacy and perceived self-efficacy beliefs. Meanwhile, the quantitative data derived from the questionnaires was examined using content analysis. A code sheet was utilized to assess youth adoption of COVID-19 vaccines in Kiambu County, ensuring that all participants were captured and key information was systematically recorded. The data was subsequently coded into common themes, merged, summarized, and presented.

To further interpret the quantitative data, the questionnaires were organized according to their assigned codes and analyzed using the Statistical Package for Social Sciences (SPSS) software. Both inferential and descriptive statistics were employed to interpret the data in relation to the study's objectives, providing a comprehensive understanding of the variables under investigation.

3.6 Validity and Reliability of Research Instruments

The pilot study was done to identify potential gaps and measure internal consistency of the research questionnaires. To ensure the research instruments gave reliable and valid results, a pilot test was conducted among youths in Nairobi County. The questionnaires were administered to 30 respondents: 10.6% of the samples size without missing value. The reliability of the research instruments was done using Cronbach's Alpha. The minimally acceptable measure of reliability has been 0.70. For reliability test, there were six items that were under scrutiny. From the findings, the research tool was reliable and had an alpha coefficient above 0.7 and no item was removed from the series. Validity tested using Correlation Pearson's, the p value for validity was 0.001 (If Sig. < 0.05 instruments are valid).

3.7 Ethical Considerations

Before conducting the research, authorization was obtained from Jomo Kenyatta University of Agriculture and Technology (JKUAT), the National Council for Science, Technology, and Innovation (NACOSTI), and the constituency administrators. In addition, the researcher ensured that all respondents and participants provided informed consent, emphasizing that their participation was entirely voluntary.

Confidentiality was strictly maintained throughout the study, with participants' identities concealed and the collected information used exclusively for research purposes. Furthermore, the researcher upheld ethical standards by maintaining honesty in data collection and taking full responsibility for the conduct and consequences of the research.

IV. FINDINGS & DISCUSSION

4.1 Response Rate

The study targeted 384 respondents. Out of these 357 questionnaires were completed and returned hence a response rate of 90.1%. Additionally, 30 news items for Citizen TV, KTN and NTV from YouTube were identified and analyzed. The YouTube videos had 100% return rate.

Table 3
Youths' Response Rate

Sampled	Responded/ analyzed	Response Rate
384 youths	357	90.1%
30 YouTube videos	30	100%

4.2 Perceived efficacy beliefs in Covid-19 TV messages

From Table 4, Covid-19 television messages had different elements. From a sample size of 30 YouTube videos. Out of 17 videos from Citizen TV only 1 had perceived self-efficacy elements and 16 had perceived response efficacy elements. Further, out of 7 from Kenya Television Network, 6 had response efficacy elements. Also, out of 6 from Nation TV only 1 had perceived self-efficacy elements and 5 had perceived response efficacy elements.

Table 4*Perceived Efficacy Belief in Television Messages*

Message Elements	CITIZEN	KTN	NTV
Perceived self-efficacy	1	0	1
Perceived response efficacy	16	6	5

4.2 Efficacy Beliefs Categories

Perceived response efficacy: The study sought to examine the effects of perceived response efficacy in Covid-19 television messages on vaccine adoption behavior among youths in Kiambu County. The results were as tabulated.

Table 5*Perceived Response Efficacy*

Perceived Response Efficacy Category	Frequency	Percent
No response efficacy	9	2.7
Response efficacy	330	97.3
Total	339	100.0

Out of 339 youths who had watched Covid-19 content via different TV stations 330 had beliefs of Covid-19 control while 9 had no beliefs. 97.3% youths had beliefs while 2.7% lacked perceived response efficacy. These findings demonstrate that people acquire beliefs after receiving risk information.

Further, Chi-square test done to determine whether there was any statistical relationship between perceived response efficacy and vaccine adoption, returned statistically significant results ($X^2=0.001$, $df=1$, $p=0.003$).

Additional, based on the odds ratio's computation, the study revealed that the odds of vaccine adoption among youths in Kiambu County who perceived had perceived response efficacy was 1.113 times compared to those who did not have perceived response efficacy [AOR: 1.113, 95% CI]. This implies the youths who had perceived response efficacy were more likely to adopt the Covid-19 vaccines compared to the youths who did have perceived efficacy beliefs.

Further, to answer the question on whether there was any statistical relationship between perceived response efficacy Covid-19 messages and vaccine adoption behavior among youths a regression test was carried out. The following multiple regression was adopted by this study; $Y=\beta_0 + \beta_1X_3 + e$ and the findings are as demonstrated the Table 6.

Table 6*Perceived Response Efficacy Statistical Findings*

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.022	.173		11.715	.000
	Perceived response efficacy	-.011	.004	-.139	-2.584	.010

As demonstrated in Table 6, the P value is less than 5% which implies of statistical relationship between perceived response efficacy Covid-19 television messages and vaccine adoption behavior among youths in Kiambu County. The P for Coefficient was 0.010^b a unit increase of elements of perceived response efficacy raised vaccine adoption behavior among youths in Kiambu County with 0.011 units. Based on these findings the perceived response efficacy messages had statistical influence on Covid-19 vaccine adoption among youths in Kiambu County thus refuting the null hypothesis:

H₀₁: *Perceived response efficacy Covid-19 television messages have no significant effects on vaccine adoption behavior among youths in Kiambu County.*

According to Sell et al., (2016), health messages help the public in understanding threats and preventive measures available, thus support the mitigation policies. The messages are seen to influence people's beliefs on protective measures. Paying attention to risks messages reduce panic due to solution narrative and successful instances of control. Liu et al. (2021), note that the media messages elicit fear and high levels of fear encourage preventive behavior.

Further, these findings agrees that high efficacy beliefs are leads to participation in vaccine adoption and engage in preventive measures, while also the opposite is true. Noticeably, the extent to which the suggested action is believed to avert a health issue answers the question of whether the solutions given work? (Moriarty, 2009). Public's behavior

is motivated by the urge to live and reduce health effects; response to health threats is dependent on reality (Mehiriz & Gosselin, 2021).

4.1.2 Perceived Self-Efficacy

The study sought to find out the effects of self-efficacy Covid-19 television messages on vaccine adoption behavior among youths in Kiambu County. The findings were as presented in table.

Table 7

Perceived Self-Efficacy Category

Perceived Self Efficacy Category	Frequency	Percent
No perceived self-efficacy	11	3.2
Perceived self-efficacy	328	96.8
Total	339	100.0

Based on Table 7, out of 339 youths who had watched Covid-19 content via different TV stations 328 had perceived self-efficacy while 11 had no perceived self-efficacy 96.8% youths had perceived self-efficacy while 3.2% lacked perceived self-efficacy. From the score and categorization of the nine perceived self-efficacy elements, a scale of 0-22.5 was categorized as no perceived self-efficacy and a scale of 22.6-45 was categorized as perceived self-efficacy. These findings demonstrate that people may acquire or lose confidence on risk control after receiving risk information.

From Table 7, 328 youths had high levels of perceived efficacy while 11 youths had very low levels of perceived efficacy. According to Pellerone (2021), individuals differ in belief of being able to control situations. The perceived belief to cope with threatening situation contributes to anxiety arousal levels and those who show capability to control threats tend to display decreased anxiety levels. As such low levels of perceived self-efficacy has been associated with higher levels of anxiety stemming from severity messages (Ozer, 2024; Firth et al., 2019).

Further, Chi-square test done to determine whether there was any statistical relationship between self-efficacy and vaccine adoption, returned statistically significant results ($X^2=0.025$, $df=1$, $p=0.014$).

Additionally, based on the odds ratio's computation, the study revealed that the odds of vaccine adoption among youths in Kiambu County who had perceive self- efficacy was 0.991 times compared to those who did not have perceived self-efficacy [AOR: 0.991, 95% CI]. This implies the youths who had perceived self-efficacy beliefs one more chance of adopting the Covid-19 vaccines compared to the youths who did not have perceived self-efficacy beliefs.

Further, to answer the question on whether there was any statistical relationship between perceived self-efficacy Covid-19 messages and vaccine adoption behavior among youths a regression test was carried out. The following multiple regression was adopted by this study; $Y=\beta_0 + \beta_1X_4 + e$ and the results are as presented below.

Table 8

Perceived Self- Efficacy Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.964	.127		15.500	.000
	Self-efficacy	-.018	.006	-.166	-3.093	.002

As demonstrated in table, the Coefficient results, the P value is less than 5% which implies of statistical relationship between perceived self- efficacy Covid-19 television messages and vaccine adoption behavior among youths in Kiambu County. The coefficients' P was 0.002 and a unit increase of elements of perceived self-efficacy influenced vaccine adoption among youths in Kiambu County with 0.018 units. Based on the findings perceived self-efficacy Covid-19 television messages had influence on Covid-19 vaccine uptake among youths in Kiambu County. Therefore, the results refuted the null hypothesis:

Ho₂: *Perceived self-efficacy Covid-19 television messages have no significant effects on vaccine adoption behavior among youths in Kiambu County.*

These findings demonstrates that perceived self-efficacy Covid-19 television messages led to low vaccine uptake among youths in Kiambu County. The response efficacy is important in health. The responses towards health risk are motivated by self-efficacy. When self-efficacy is high there is greater probability for attitude change (Moriarty, 2009).

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study found that there was low vaccine uptake amongst youths was low where only 42% youths had been vaccinated and 58% youths had not received Covid-19 vaccines. This implied that the severity Covid-19 messages did not lead to vaccine adoption. Based on the findings perceived efficacy beliefs Covid-19 television messages had influence on Covid-19 vaccine uptake among youths in Kiambu County. These findings demonstrate that people acquire beliefs after receiving risk information. They may acquire or lose confidence on risk control after receiving risk information.

5.2 Recommendations

Based on the findings of this study, television messages on Covid-19 pandemic influenced vaccine uptake rate among youth in Kiambu County. Therefore, this offers a starting foundation for scholars to find out: what informs the television when covering health pandemics and other health matters.

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