

Impact of Media Campaign on Road Safety Amongst *Boda-Boda* Motorcyclists in Kenyan Cities

^{1*}Barbara Nthoki, ²Dr. Caroline Biwott (PhD), ³Dr. Alice Kamau (PhD)

¹Post Graduate Student - (PHD in communication Studies) Karatina University, Kenya

²(PhD in Communication Studies) Lecturer, School of business, Department of Human Resource Development: Karatina University, Kenya

³(PhD in Human Resource Development) Senior Lecturer, School of Business, Department of Human Resource Development: karatina University, Kenya

ABSTRACT: Road safety has become a major concern worldwide with over 1.35 million people losing their lives every year. In Kenya, over 4,000 road users lose their lives annually. Human behaviour on the road causes 90% of death and injury amongst road users while the remaining 10% is caused by vehicle condition and road structure. The boda-boda motorcyclists contribute 58% of all road accidents in Kenya in spite of the road safety interventions put in place. It is under this backdrop that this study seeks to establish the influence of media campaign on road safety amongst Boda-boda motorcyclists in Kenyan cities. The specific objectives of the study were to establish the impact of media campaign on road safety amongst boda-boda motorcyclists in Kenyan cities and to establish the moderating influence of attitude on the relationship between media campaign and road safety amongst boda-boda motorcyclists in Kenyan cities. This study was anchored on the uses and gratification theory and the safety culture theory. The study used the pragmatic philosophical paradigm with a mixed method research design. Stratified sampling, simple random sampling and purposive sampling techniques were used to draw the 411 respondents from the four cities in Kenya, namely Nairobi, Mombasa, Kisumu and Nakuru. Quantitative data was collected from the 399 motorcyclists by use of a semi structured questionnaire while key informant interviews were used to collect the qualitative data from police officers, government officers and boda-boda motorcycle association officials. Descriptive and inferential statistics were used to analyze quantitative data while qualitative data was analyzed using thematic data analysis. The findings of the study showed that media campaign had a positive impact on road safety amongst boda-boda motorcyclists in Kenyan cities. The study concluded that media campaigns play a crucial role in shaping the attitude and behaviour of Boda-boda motorcyclists towards road safety. The study recommends that there is need for a comprehensive audience research on boda-boda motorcyclists in order to understand their behavioural patterns and their preferred communication channel. The study concludes that in order to maximize the effectiveness of road safety messages, media content and channels should resonate with the needs of boda-boda motorcyclists.

Keywords: Media Campaign, Road Safety, Boda-Boda Motorcyclists, Attitude, Kenyan cities

I. BACKGROUND OF THE STUDY

According to Melkote (2018), communication is a key driver of social change, this involves sending and receiving messages amongst people through different channels or mediums. Communication takes place in every setting of our daily lives and there is need to adapt the right skills, attitude and traits for effective communication (Kapur

2018). There are five barriers to effective communication and they include attitudinal, environmental, behavioural, cultural and language (Rani 2016), these prevent the reception and understanding of messages. Different media channels and are used to communicate for change, entertainment, information and also education, hence communication is key for societal interactions. Communication can be verbal, written, visual, nonverbal or technology based.

Media campaigns are used to influence behavior change and encourage individuals to adopt positive attitudes, norms, and social expectations related to road safety (Kalu 2023). Media campaigns can be launched on single channels or multiple channels depending on the objective of the intervention. These channels include Radio, TV, Newspapers and magazines, social media platform amongst others.

Boda-boda motorcycle riding in Kenya has become an attractive nationwide engagement especially among the youth (Nyachio 2020). According to the National Transport and Safety Authority (NTSA) of Kenya, by 2018, there were an estimated 1.4 million *boda-bodas* operating in Kenya. Currently there are 3.962 million registered riders (BAK 2023), A tremendous increase over the years. This mode of transport has proved to be an important player in the transport business and cannot be ignored. There are several roles that *boda-boda* motorcyclists play: for instance, Rugut (2015) states that they act as an alternative public transport in Kenya carrying people and goods across the country as well as complementing the convectional buses and *matatus*. According to NTSA, the *boda-boda* motorcyclists are the last mile transport providers.

Luinga & Kilasara (2020) highlight that *boda-boda* motorcycle businesses are financially beneficial to the government hence there is need to support and regulate the sector. The four cities in Kenya have the highest number of motorcycles and also the highest population areas in the country. Due to these factors the greatest number of accidents, fatalities and injury occur herein. In another study, Muluya *et al.* (2021) amplified the important role of trained *boda-boda* motorcycle ambulances that are used to ferry pregnant mothers to health facilities for delivery. This has a great impact on the community based maternal referrals by making transporting of mothers better and available.

The advantages of the *boda-boda* sector notwithstanding, the number of deaths attributed to *boda-boda* motorcycle accidents in Kenya has steadily been on the increase. The Kenya National Bureau of Statistics (KNBS) report on Economic status 2021 posits that the number of motor cycle accidents increased by 58.4%. These statistics call for an interrogation, especially because several intervention strategies have been ongoing. Media campaigns together with other interventions have been rolled out on a variety of platforms, however the road accidents continue to escalate annually. Several partners in the public and private space have joined hands to develop and disseminate campaigns on different themes which include, the importance of using helmets, the proper use of road signs and symbols, the respect for police presence amongst others. The importance of training before riding and acquisition of riding licenses has been a key feature in the road safety campaigns amongst *boda-boda* motorcyclists in Kenya.

II. STATEMENT OF THE PROBLEM

Media is a key tool used worldwide to create awareness, to inform, educate, persuade and call for action, it has been applied successfully around the world (Singh *et al* 2020), to elicit positive change that empowers targeted individuals and communities in order for them to live quality lives (Nwangu *et al* 2020). The National Transport and Safety Authority in Kenya together with local and international partners, have rolled out behavioral interventions on road safety towards all road users (NTSA 2022). Media campaigns are a key driver of these interventions in order to increase road safety knowledge, change in attitude and improve skill acquisition. Other interventions rolled out on road safety together with media campaigns include information education and communication, traffic visual communication and participatory communication. A cocktail of these interventions have been used around the world to address the challenges of road carnage.

In spite of the great social and economic contribution of *boda-boda* motorcyclists, Kenya faces a burdensome road safety phenomenon whereby fatalities associated with road accidents keep soaring annually with 4,323 losing their lives in 2023 (NTSA, 2024), and an additional 10,769 people getting seriously injured. The Kenya National bureau of Statistics (2021) established that motorcyclists have increased road accidents in Kenya by 58.4 per cent. *Boda-boda* motorcyclists cause death and injury on Kenyan roads through their behavior which contributes to 90% of accidents by flouting traffic rules, carrying excess pillion, over-speeding and majority do not wear helmets (Nyachio, 2020). To deal with the effects of road accidents, several strategic, regulatory, and behavioural responses towards road usage have been implemented, among them is the Road Safety Action Plan in Kenya (RSAP), which aims at reducing fatalities and injury by 50% by the year 2030 as per the WHO guidelines (WHO 2024).

Kithae (2022), amplified this concern by suggesting that there is need for further research in Kenya on the effects of behavior change initiatives on road user practice. Similarly, Bonnet (2018) stipulates that those interventions that change behavior must be adopted. However previous studies have not addressed specifically media campaigns and road safety. Therefore, this study sought to fill this gap by establishing the influence of media campaign on road safety amongst *boda-boda* motorcyclists in Kenyan cities.

III. SPECIFIC OBJECTIVES

- i). To establish the influence of media campaign on road safety amongst *boda-boda* motorcyclists in Kenyan cities.
- ii). To determine the moderating influence of attitude on the relationship between media campaign and road safety amongst *Boda-boda* motorcyclists in Kenyan cities.

Hypothesis

- i). H_{01} : Media campaign have no impact on road safety amongst *boda-boda* motorcyclists in Kenyan cities.
- ii). H_{02} : Attitude has no moderating influence on the relationship between media campaign and road safety amongst *Boda-boda* motorcyclists in Kenyan cities.

IV. LITERATURE REVIEW

Theoretical Framework

This study is anchored on the uses and gratification theory and the safety culture theory. Wimmer and Dominic (1994) posits that the Uses and Gratification Theory provides a valuable framework for understanding how audiences use media and the gratification they derive from it. This theory was coined by Katz and Blומר in 1974 and it places the audiences in an active role. This theory amplifies the important role played by audiences when they select, use and interpret messages (Hossain 2019). In this study, this refers to the *boda-boda* motorcyclists use and choice of media platforms. Kasirye (2022) postulates that the Uses and gratification theory highlights that media influences behavior and is goal oriented hence gratifying to the user. Similarly, the individual influences the social space which comprises of friends, family, colleagues and others. This entire interaction affects the attitude and behaviour of the individual. People are deemed as products of their environment and behaviour is seen as a result of a continuous interaction between the individual, environment and social factors which exert influence and change upon each other (Stajkovic & Stajkovic 2019). This theory can be effectively applied to address road user behavior and road safety. This is through finding out how individuals look for gratification in their riding behavior according to the media channels they prefer.

Safety culture theory addresses the area of road safety which is not adequately addressed by the uses and gratification theory. The safety culture theory construct purposes to emphasize safety in organizations and also to reduce the personal injury to stakeholders (Coopers 2016a). The need for a flexible and learning culture is desirable and so is having a sound information system. Safety culture is not only found in the health sector but it has been used extensively in the oil, gas and energy sector, transport sector, aviation and military amongst others.

The theory highlights the importance of attitude, norms and behaviour of stakeholders in matters of safety. Likewise, the aspect of communication is greatly amplified. Therefore, this theory will aid in explaining the phenomena of road safety practices through understanding the psycho-social safety patterns of the boda-boda motor cycle riders in Kenya.

The uses and gratification theory is highly relevant in this study in order to understand the motorcyclist's interaction and impact of media campaigns. Similarly, the Safety Culture Theory is also valid in highlighting the shared values, beliefs, attitudes, and behaviours related to safety amongst the *boda-boda* motorcyclists. By integrating the principles of both theories, researchers and practitioners can focus on shaping values, promoting sound media campaigns, emphasizing on individual and collective responsibility. This holistic approach can contribute to creating a safer road culture and reducing accidents and injuries on the road in Kenyan cities.

V. Empirical Review on media campaigns

A mass media campaign in road safety uses various media channels like television, radio, print media, social media. Similarly online platforms like websites, WhatsApp, Facebook, Twitter, TikTok and even videos are used to reach a wide audience concerning road safety issues. Studies have been done to address the issue of road safety, which has been flagged as a major concern worldwide due to the high rate of injury and fatality (WHO 2017). One study in Ecuador was done by Raminez (2020) on promoting road safety education in young adults using Facebook. The findings showed that Facebook increased road safety knowledge by 22% through the posters shared on Facebook, which was noted as a good platform for sharing road safety knowledge widely. However, the age bracket of this study group using the Facebook platform may not suffice for all age groups. The choice of channel is also affected by the age factor and competence in technology use (Ndungu 2022).

In another study, Putranto et al (2016) studied four motorcycle rider campaigns in Indonesia, the focus was on the awareness campaigns which were done using posters, audio and testimonial video. The aim was to observe the effect of the aforementioned traffic safety on attitude changes amongst motorcycle undergraduate students in Indonesia. The study population consisted of 107 students from four different universities. The study concluded that video was an effective tool which could be used to change behaviours and improve attitudes amongst motorcycle riders. The study also highlighted that there was need to address the changing behaviours of the motorcyclists and an example was given of the tendency of motorcyclists to ride on pedestrian walkways.

The Federal Road Safety Corps (FRSC) in collaboration with the Beer Sectoral Group (BSG) in Nigeria had rolled out several safety campaigns for motorists. Ngene (2021) conducted a study on one such campaign dubbed "Don't drink and drive". The aim of this study was to examine motorists' exposure to FRSC don't drink and drive media campaign in south east Nigeria and its effect on compliance levels. The population of this study comprised of 360 registered commercial and private drivers in three selected states. The conclusion of the study was that the "Don't drink and drive campaign" might be more effective when policy designers focus on motorists varied demographics characteristics. This resounds well with Boda-boda motorcyclist who equally have been noted to drink and ride their motorcycles.

Vingilis et al (2018) studied young male drivers' perception and experience with YouTube videos of risky driving behaviour. The study findings were that YouTube videos had replaced TV watching and it provided entertainment and information hence edutainment. The young men indicated that they would avoid the risky driving behaviour. The conclusion of the study was that social media and not mass media was now a common information and entertainment source for young people. It was also noted that videos could influence behaviours of some viewers especially young male.

In Kenya, Kabue (2018) conducted a study to establish the influence of road user awareness of road safety projects. In this descriptive research done in Nakuru, the groups targeted in the study included motorcyclists, drivers, pedestrians, motor vehicle passengers, NTSA officials and police officers, a total sample of 353. Kabue recommended that the Government of Kenya needed to undertake safety awareness efforts amongst the road users.

The aspects of safety under study included safety belt usage, responsible drinking, speeding campaign, road signage adherence, and black spot awareness.

Lee (2022), conducted a study dubbed “Using social media in Kenya to quantify road safety by analyzing novel data”. The aim of this study was to evaluate social media posts on road safety incidences in Kenya. The study concluded that Twitter and other social media platforms could be used as a source of road safety data in low- and middle-income countries. In addition to this, Twitter and other social media platforms would be monitored and advocacy campaigns rolled out, this could be used to improve public health outcomes. The impact of media campaigns on road safety is determined by the choice of media channel amongst the boda-boda motorcyclists.

VI. RESEARCH METHODOLOGY

Philosophical Paradigm: Pragmatism

This study was anchored on the pragmatic philosophical paradigm, which is flexible and focuses on the importance of understanding and addressing real-world problems through multiple lenses (Dawadi 2019). According to this philosophy, researchers recognize that there are several ways of understanding, interpreting and conducting research in our world (Creswell et al 2018). Pragmatists postulate that a single point of view cannot give the entire picture of a problem therefore they look at the world with multiple realities through the use of multiple research methods in order to answer the research question. Pragmatists look at ‘what works’. Takashorri *et al* (2021), in order to bring about positive consequences within a value system.

Research design – Mixed Method approach

The study adopted the mixed method research design, whereby both qualitatively and quantitative data was collected for purposes of answering the research questions (Cresswell et al 2018). This design allowed a more comprehensive examination of the research question, gaining a deeper understanding of the lived experiences and contextual factors involved, hence giving the study a wide scope. This design was in line with the pragmatic philosophy which embraces multiple view of realities.

Population and sampling: the four Kenyan cities

Stratified sampling and simple random sampling were used to draw the 399 *boda-boda* motorcycle respondents from the four cities in Kenya, namely Nairobi, Mombasa, Kisumu and Nakuru. In addition, interviews were conducted with twelve key informants, three from each city drawn from the NTSA office, the *boda-boda* association officials and senior traffic officers, the total number of respondents for the study was were 411. These respondents aided in collection of data.

Data collection and analysis: Comprehensive techniques

Quantitative data was collected by use of semi structured questionnaires administered at the boda-boda motorcyclists while key informant interviews were used to collect the qualitative data. A pilot study was conducted to ensure that the research instruments measured all relevant aspects of the constructs (Mak Opiyo 2019). Quantitative data was analysed using descriptive and inferential statistical techniques. In descriptive statistics frequencies, percentages and standard deviations were used. The inferential statistics used was a regression model to explore relationships or differences between variables. Thematic analysis was used for the open-ended questions in the interviews with the key informants. Data was transcribed before coding; irrelevant data was discarded and then the remaining data was organized into themes. Integrity and confidentiality of the research process is important; hence it was put into consideration through addressing the ethical concerns whereby permission to conduct the study was sought from the relevant authorities.

VII. DATA ANALYSIS, FINDINGS AND DISCUSSION

Response rate.

Across the four cities there was a targeted sample size of 399 however a total of 387 responses were received back. This is an aggregated response rate of 97.0%. In Nairobi, out of the 173 sampled boda-boda motorcyclists,

171 provided responses, resulting in a response rate of 98.8%. Similarly, in Nakuru, 86 out of 92 sampled motorcyclists participated in the study, yielding a response rate of 93.5%. In Kisumu, 64 out of 66 sampled individuals responded, accounting for a response rate of 97.0%. Lastly, in Mombasa, 66 out of 69 sampled motorcyclists provided responses, resulting in a response rate of 95.7%. This is tabulated below.

Table 1: Response Rate

City (Stratum)	Sample Size	Responses	Response Rate
Nairobi	173	171	98.8%
Nakuru	92	86	93.5%
Kisumu	66	64	97.0%
Mombasa	69	66	95.7%
Total	399	387	97.0%

Source: Field data 2024.

Demographic Information

Gender of the respondents

Figure 4.1 presents the demographic distribution of respondents by gender, showing that the vast majority were male, comprising 96.4% of the sample (N = 373), while only a small proportion were female, accounting for 3.6% (N = 14) of the total respondents. This gender imbalance is consistent with the predominance of male boda-boda motorcyclists in the transportation industry, which is a common trend observed in many countries, including Kenya (Smith et al., 2017).

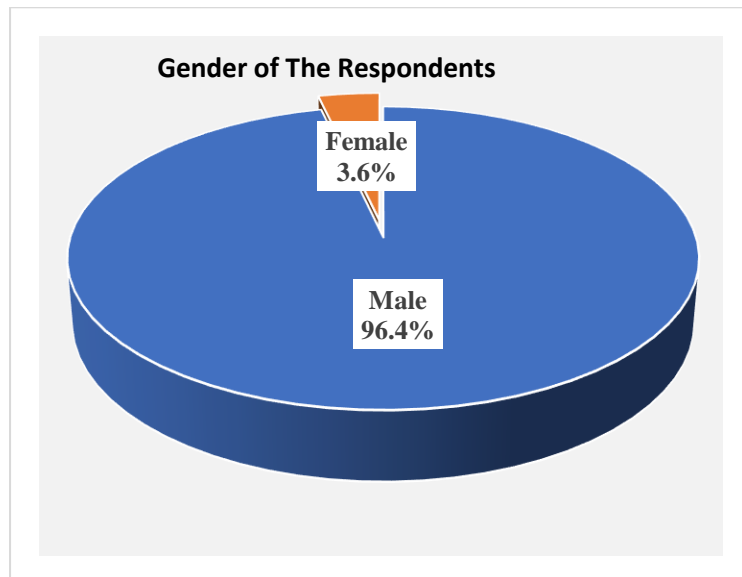


Figure 1 Gender of the respondents

These demographic details offer a context for understanding the profile of boda-boda motorcyclists involved in the study and provide a foundation for analyzing their attitudes and behavior towards road safety initiatives.

Respondents level of education

The distribution of respondents' highest level of education, indicating that the majority of participants had completed secondary education, accounting for 51.9% (N = 201) of the sample. This is followed by respondents with primary education, comprising 23.9% (N = 92) of the total. A smaller proportion of respondents reported having attained college or graduate-level education, representing 23.2% (N = 90) of the sample. Additionally, a minimal percentage of respondents reported post-graduate education, constituting only 1% (N = 4) of the total sample. This is captured in the figure below.

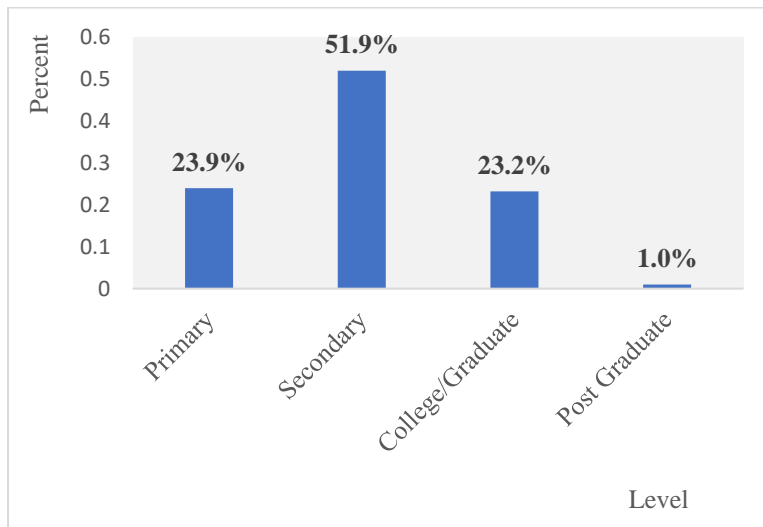


Figure 1: Respondent's Level of Education

The significant proportion of respondents with primary education underscores the diverse educational backgrounds within the boda-boda rider community, reflecting the accessibility of informal employment opportunities in the transportation sector for individuals with varying levels of educational attainment.

Descriptive findings

Influence of media Campaign on road safety

In the table below, the researcher used the questions to find out the influence of media campaigns on road safety. The responses were as follows.

Table 2: Level of Agreement on Aspects Describing Media Campaign

Statement	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
Print Media:				
a) Newspapers serve as important promoters of road safety.	3.889	1.046	-1.019	0.708
b) Road safety magazines offer valuable insights into road safety practices.	3.972	1.036	-1.066	0.755
c) Engagement with newspapers and magazines enhances awareness of road safety issues.	4.062	0.993	-1.258	1.521
Aggregate	3.974	1.025	-1.114	0.995
Electronic Media:				
d) Radio and television effectively deliver road safety messages to the public.	3.837	1.097	-0.939	0.430
e) Informative radio programs and television shows engage audiences in road safety topics.	4.003	1.017	-1.195	1.222
f) Road safety advertisements on electronic media positively influence road safety behaviour.	4.153	0.944	-1.274	1.521
Aggregate	3.997	1.019	-1.136	1.058
Social media:				
g) Eye-catching designs on social media platforms attract interest in riding safety information.	3.783	1.098	-0.787	0.062
h) Interactive social media platforms facilitate two-way communication on road safety.	3.669	1.065	-0.590	-0.162
i) Mainstream and social media campaigns significantly impact road safety awareness and behaviour.	3.974	1.028	-1.028	0.802
Aggregate	3.809	1.064	-0.802	0.234

The analysis evaluates the levels of agreement and interest in different media forms, including print, electronic, and social media, as perceived by the respondents. The data provides insights into which media channels are most effective in delivering road safety messages and engaging the target audience, thereby informing future strategies for enhancing road safety awareness and behavior among boda-boda riders. The responses are quantified using percentages, mean scores, standard deviations, skewness, and kurtosis to provide a comprehensive understanding of the impact and reach of these media campaigns.

The respondents generally agreed that print media, such as newspapers and magazines, are significant in promoting road safety. A considerable majority (73.1%) agreed or strongly agreed that newspapers play an important role in promoting road safety, with a mean response of 3.889 and a standard deviation of 1.046. Similarly, 75.4% of the respondents felt that road safety magazines offer valuable insights, reflected in a mean of 3.972 and a standard deviation of 1.036. Furthermore, a higher percentage (79.6%) agreed or strongly agreed that engagement with newspapers and magazines enhances awareness of road safety issues, leading to a mean response of 4.062 and a standard deviation of 0.993.

Overall, the aggregate mean for print media was 3.974 with a standard deviation of 1.025, indicating a positive skew towards agreement on the effectiveness of print media in promoting road safety, despite the noted skewness of -1.114 and kurtosis of 0.995. Responses indicated strong support for the effectiveness of electronic media in delivering road safety messages. A combined 68.8% of participants agreed or strongly agreed that radio and television are effective in this regard, resulting in a mean of 3.837 and a standard deviation of 1.097. Informative programs on these platforms were also highly regarded, with 78.3% agreement and a mean response of 4.003 (standard deviation of 1.017). Road safety advertisements on electronic media were perceived very positively, with 82.7% agreeing or strongly agreeing that they positively influence road safety behavior, leading to a mean of 4.153 and a standard deviation of 0.944. The aggregate mean for electronic media stood at 3.997 with a standard deviation of 1.019, reflecting a strong consensus on its impact, as indicated by the skewness of -1.136 and kurtosis of 1.058.

The impact of social media on road safety awareness and behavior received mixed reactions. While 65.6% of respondents agreed or strongly agreed that eye-catching designs on social media platforms attract interest in riding safety information (mean of 3.783, standard deviation of 1.098), the effectiveness of interactive social media platforms in facilitating two-way communication on road safety received lower agreement (60.2%), resulting in a mean of 3.669 and a standard deviation of 1.065. Overall, mainstream and social media campaigns were seen to significantly impact road safety awareness and behavior, with 73.1% agreement, a mean response of 3.974, and a standard deviation of 1.028. The aggregate mean for social media was 3.809 with a standard deviation of 1.064, showing a more neutral stance compared to print and electronic media, reflected by a skewness of -0.802 and kurtosis of 0.234.

Road safety

The following table shows the responses on the extent to which road safety campaign media were interesting to the target population.

Table 3: Extent to which road safety campaign media are interesting to respondents

Campaign Media	Not Interesting	Less Interesting	Neutral	Interesting	Very Interesting	Mean	Std. Dev
TikTok	26.0	14.5	15.1	16.0	28.4	3.063	1.574
WhatsApp	19.2	12.3	11.1	23.1	34.3	3.410	1.525
Facebook	13.3	6.6	13.8	31.1	35.2	3.683	1.360
Twitter	50.3	15.8	12.3	14.8	6.8	2.120	1.347
Instagram	48.3	20.9	13.4	9.2	8.2	2.081	1.310

YouTube	23.3	8.7	8.9	27.5	31.6	3.35	4	1.560
Others	50.0	0.0	20.0	20.0	10.0	2.40	0	1.497

Table 3 above provides insights into the extent to which various road safety campaign media platforms are perceived as interesting by respondents. The results are segmented across different platforms, including TikTok, WhatsApp, Facebook, Twitter, Instagram, YouTube, and others. Among the platforms assessed, Facebook emerged as the most engaging platform, with a mean score of 3.683. This suggests that a significant proportion of respondents found road safety campaigns on Facebook to be interesting or very interesting. Similarly, WhatsApp also garnered substantial interest, with a mean score of 3.410, indicating that it serves as an effective medium for disseminating road safety information and engaging Boda-boda riders. YouTube followed closely behind, with a mean score of 3.354, indicating a notable level of interest in road safety campaigns presented through video content on this platform.

Twitter and Instagram received lower mean scores of 2.120 and 2.081, respectively, indicating that these platforms were perceived as less interesting by respondents. This suggests that road safety campaigns on Twitter and Instagram may not be as effective in capturing the attention and engagement of Boda-boda riders compared to other platforms. Results also highlight the presence of other platforms not specifically listed, with a mean score of 2.400. While these platforms garnered some interest, they received mixed responses overall, indicating a need for further exploration and understanding of their effectiveness in delivering road safety messages to Boda-boda riders.

Generally, the findings underscore the importance of selecting appropriate media platforms for road safety campaigns targeted at Boda-boda riders. Platforms like Facebook, WhatsApp, and YouTube appear to be effective channels for engaging this demographic, while platforms like Twitter and Instagram may require more targeted strategies to enhance their effectiveness in delivering road safety messages. Additionally, the mixed response to TikTok and other platforms suggests the need for ongoing evaluation and adaptation of road safety campaign strategies to effectively reach and resonate with Boda-boda riders.

To conduct effective social media campaigns on road safety targeted at Boda-boda motorcyclists, several recommendations emerge from the responses provided. Firstly, consistency is key, as reiterated by multiple respondents. Campaigns should be regular and frequent to maintain engagement and avoid forgetfulness among riders. Moreover, these campaigns should not only be limited to social media but should also incorporate face-to-face trainings, radio, and television broadcasts to ensure broader reach, especially to those who may not have access to smartphones or social media platforms. Secondly, the content of these campaigns should be tailored to the preferences and interests of the target audience. Short, scripted videos and relatable content are favored, with an emphasis on using platforms like TikTok, WhatsApp, Facebook, and YouTube. Additionally, the use of local languages, such as Kiswahili, is recommended to ensure better understanding among all riders, including those who may be less proficient in English. Thirdly, the involvement of various stakeholders and influencers can enhance the effectiveness of these campaigns. Collaborating with celebrities, peer educators, and community leaders can help amplify the messages and increase their impact.

Moreover, campaigns should avoid painting Boda-boda riders negatively and instead focus on highlighting positive aspects, such as their contributions to the economy and their commitment to road safety. Fourthly, efforts should be made to make the campaigns accessible to all Boda-boda riders, regardless of their socioeconomic status

or access to technology. This could involve providing free platforms for internet access, sending information via SMS, or organizing face-to-face workshops and roadshows in local communities.

Lastly, there should be a concerted effort to encourage active participation from all stakeholders, including Boda-boda riders themselves, motorists, and the general public. Creating active groups and forums for discussion, as well as seeking feedback and suggestions from the target audience, can foster a sense of ownership and collaboration in promoting road safety. By implementing these recommendations, social media campaigns on road safety can become more effective tools in promoting safer practices among Boda-boda motorcycle riders.

Inferential Results

The null hypothesis was stated as:

H_{01} : Media campaign have no impact on road safety amongst boda-boda motorcycle riders in Kenyan cities.

This analysis aims to uncover significant insights into how media campaigns influence the road safety practices of Boda-Boda riders.

Table 4: R² for Media Campaign and Road Safety amongst Boda-Boda Motorcycle Riders

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.710a	0.504	0.503	0.548	1.568

a Predictors: (Constant), Media Campaigns on Road Safety

b Dependent Variable: Road Safety

Source: Field data 2024

Table 4 presents the R-squared value for the relationship between media campaigns and road safety among Boda-Boda motorcycle riders. The R-squared value, also known as the coefficient of determination, indicates the proportion of the variance in the dependent variable (road safety) that is explained by the independent variable (media campaigns). In this case, the R-squared value is 0.504, meaning that approximately 50.4% of the variability in road safety among Boda-Boda motorcycle riders can be accounted for by media campaigns focused on promoting road safety awareness. This suggests a moderate-to-strong relationship between media campaigns and road safety behaviour among Boda-Boda riders. The Durbin-Watson statistic tests for autocorrelation in the residuals, with a value of 1.568 suggesting minimal autocorrelation, which is desirable for the validity of the regression model.

Table 5: ANOVA for Media Campaign and Road Safety amongst Boda-Boda Motorcycle Riders

	Sum of Squares	df	Mean Square	F	Sig.
Regression	117.643	1	117.643	391.953	.000b
Residual	115.557	385	0.300		
Total	233.2	386			

a Dependent Variable: Road Safety

b Predictors: (Constant), Media Campaigns

Source: Field data 2024

Table 5 provides the ANOVA results of the model from the findings in table 4 the sum of squares regression (117.643) represents the variance in road safety scores attributable to the media campaign variable. The highly significant F-statistic (391.953) with a p-value of less than 0.001 indicates that the model is a robust fit for the data, suggesting that the media campaign variable significantly influences road safety outcomes. The ANOVA results underscore the substantive impact of media campaigns on road safety behaviours among Boda-Boda motorcyclists. The exceedingly low p-value associated with the F-statistic indicates that the observed relationship is highly unlikely to occur by chance alone, bolstering the assertion that media campaigns play a pivotal role in shaping road safety practices within this demographic.

Table 6: Model Coefficients for Media Campaign and Road Safety amongst Boda-Boda Motorcyclists

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.598	0.116		13.737	0.000
Media Campaigns	0.654	0.033	0.710	19.798	0.000

a Dependent Variable: Road Safety

Source: Field data 2024

Table 6 presents the model coefficients derived from the regression analysis, providing detailed information on the relationship between media campaigns and road safety among Boda-Boda motorcyclists. These coefficients offer insights into the magnitude and direction of the impact that media campaigns have on road safety outcomes within this specific demographic.

The table includes two main sets of coefficients: the unstandardized coefficients and the standardized coefficients. The unstandardized coefficients, represented by the "B" column, indicate the change in the dependent variable (road safety) for every one-unit change in the independent variable (media campaigns). In this context, the unstandardized coefficient for media campaigns is 0.654, indicating that for every additional unit increase in exposure to media campaigns, road safety scores are expected to increase by 0.654 units. This suggests a positive relationship between media campaign intensity and road safety outcomes among Boda-Boda motorcyclists.

The standardized coefficients, denoted by the "Beta" column, offer a standardized measure of the strength and direction of the relationship between the independent and dependent variables. The standardized coefficient for media campaigns is 0.710, indicating a strong positive relationship between media campaign exposure and road safety outcomes. This standardized coefficient allows for a comparison of the relative importance of different predictors in the model, suggesting that media campaigns have a substantial impact on road safety practices among Boda-Boda motorcyclists compared to other factors included in the analysis.

Additionally, the table provides information on the statistical significance of the coefficients, as indicated by the "t" and "Sig." columns. The "t" statistic assesses the significance of each coefficient, with higher absolute t-values suggesting greater significance. In this case, both the unstandardized coefficient (t = 19.798) and the standardized coefficient (t = 13.737) for media campaigns are associated with extremely low p-values (p < 0.001), indicating a highly significant relationship between media campaign exposure and road safety outcomes among Boda-Boda motorcyclists.

Qualitative Findings for Media Campaign and Road Safety

Qualitative findings on media campaigns and road safety shed light on the perceptions and experiences of stakeholders regarding the effectiveness of various communication strategies aimed at promoting road safety among Boda-boda motorcyclists in Kenyan cities. Interviews with representatives from organizations such as the National Transport and Safety Authority (NTSA), traffic police, and Boda-boda associations provided valuable insights into the role of media campaigns in raising awareness and fostering safer road behaviours.

Stakeholders generally acknowledged the importance of media campaigns as effective tools for disseminating road safety messages to Boda-boda riders. They highlighted the reach and accessibility of media platforms, including radio talk shows, TV programs, and social media channels, in engaging with a wide audience of riders. Successful examples of media campaigns, such as "Dere smart" for PSV drivers and "Boda ni life" for Boda-boda motorcyclists, were cited as impactful initiatives that contributed to raising awareness and promoting safer road behaviours.

However, stakeholders also pointed out challenges associated with media campaigns, including limited resources and sporadic implementation. Despite recognizing the effectiveness of media campaigns, stakeholders highlighted the need for more comprehensive and sustained efforts to address road safety issues among Boda-boda riders. The lack of evaluation mechanisms to assess the impact of media campaigns on reducing accidents and injuries was also highlighted as a significant challenge.

Overall, while media campaigns are considered valuable in promoting road safety awareness among Boda-boda motorcyclists, addressing challenges such as resource constraints and the lack of evaluation mechanisms is essential to maximize their effectiveness and impact. Collaborative efforts involving multiple stakeholders, including government agencies, media organizations, and Boda-boda associations, are needed to develop and implement comprehensive media campaigns that address the specific needs and challenges faced by Boda-boda riders in Kenyan cities.

The study found a convergence of findings across various research methodologies, including quantitative surveys, statistical analyses, and qualitative interviews, which collectively provide a comprehensive understanding of the relationship between behavior change communication interventions, attitudes, and road safety among Boda-boda motorcyclists in Kenyan cities. The findings of the study were in line to the finding of Raminéz (2020) which showed that Facebook increased road safety knowledge by 22% through the posters shared on Facebook, which was noted as a good platform for sharing knowledge widely. The findings were also similar to the findings of Vingilis *et al* (2018) who concluded that videos could influence behaviours of some viewers especially young male.

In conclusion, From the findings, it can be concluded that the media campaigns play a crucial role in shaping the attitudes and behaviours of Boda-boda motorcyclists towards road safety. These campaigns, whether through traditional channels like radio and television or modern platforms like social media, serve as powerful tools for disseminating information, raising awareness, and promoting behavioural change. The research reveals that effective media campaigns require tailored messaging, cultural sensitivity, and sustained efforts to maximize their impact on Boda-boda riders' road safety practices.

VIII. RECOMMENDATIONS

For enhancing managerial practices related to media campaigns, it is recommended to invest in comprehensive audience research to understand the specific needs, preferences, and behavioral drivers of Boda-boda motorcyclists. Tailoring media content and delivery channels to resonate with the target audience can maximize the effectiveness of road safety messages. Moreover, fostering partnerships with media outlets, community organizations, and government agencies can expand the reach and impact of campaigns. Regular monitoring and evaluation of media initiatives are also crucial for assessing their effectiveness and informing iterative improvements.

To foster positive attitudes towards road safety among Boda-boda motorcyclists, it is recommended to implement targeted awareness campaigns and educational initiatives that address underlying beliefs, perceptions, and social norms related to risk-taking behaviours and safety practices. Employing persuasive messaging techniques that appeal to riders' sense of responsibility, community, and self-efficacy can help shift attitudes towards safer riding practices. Moreover, integrating attitude-focused components into behavior change communication interventions, such as role modelling, testimonials, and peer-to-peer advocacy, can reinforce positive behavioural norms and values within Boda-boda communities. Continuous monitoring and evaluation of attitude change initiatives are essential for assessing their effectiveness and guiding iterative improvements.

REFERENCES

- [1] BAK – Boda-boda Safety Association of Kenya (2023)
- [2] Bonnet E., Lechat L., Ridde, V. (2018) What interventions are required to reduce road traffic injuries in Africa? A scoping review of the literature. PLOS ONE 13(11)
- [3] Creswell, J.W., & Creswell, J.D. (2018) Research Design: Qualitative. Quantitative and mixed methods approaches. Thousand oaks, CA Sage publication Inc.
- [4] Cooper, M. D. (2016a). Navigating the safety culture construct: A review of the evidence. Franklin, IN, USA: BSMS.
- [5] Dawadi, S. (2019). Impact of the Secondary Education Examination (English) on Students and Parents in Nepal. An unpublished PhD thesis. The Open University, UK
- [6] Hossain, M., Kim, M., & Jahan, N. (2019). Can “Liking” Behaviour Lead to Usage Intention on Facebook? Uses and Gratification Theory Perspective. Sustainability, 11(4), 1166.
- [7] Kabue, J. M. (2018). Influence of Road Safety Audits on Road Safety Projects Performance in Kenya. *International Journal of Business Management and Processes (ISSN 2616-3209)*, 2(2), 7-7.
- [8] Kapur R., (2018) Barriers to effective communication
- [9] Kalu N (2023), Importance of visuals in behaviour change communication, researchgate.com
- [10] Kasirye, F. (2021). The Importance of Needs in Uses and Gratification Theory (Doctoral dissertation, Doctoral dissertation, International Islamic University Malaysia).
- [11] Kithae, P. P. (2022). Traffic Law Enforcement, Road Safety Campaigns, and Behavior Change among Road Users in Kenya. *International Journal of Interdisciplinary Civic & Political Studies*, 17(2).
- [12] KNBS. (2021). Kenya population and housing census reports. *Nairobi: Kenya National Bureau of Statistics*, 49.
- [13] Lee, J. A., Armes, L., & Wachira, B. W. (2022). Using social media in Kenya to quantify road safety: an analysis of novel data. *International journal of emergency medicine*, 15(1), 1-6.
- [14] Luvunga, K. C., & Kilasara, S. A. (2020). The financial implications of Boda-boda transport business among youths in Arusha-cost benefit analysis. *Advances in Social Sciences Research Journal*, 7(4), 177-185.
- [15] Mc’opiyo, S. (2019). *Traffic management and road safety in Kisumu County, South Western Kenya* (Doctoral dissertation, Kampala International University, College of Humanities and social sciences.)
- [16] Melkote S.R. (2018) Communication for development and social change: An introduction [Journal of Multicultural Discourses](#) 13(2):1-1.
- [17] Muguro, J. K., Sasaki, M., Matsushita, K., & Njeri, W. (2020). Trend analysis and fatality causes in Kenyan roads: A review of road traffic accident data between 2015 and 2020. *Cogent Engineering*, 7(1), 17979
- [18] Muluya, K. M., Mugisha, J. F., & Kithuka, P. (2021). Effect of Training “Boda-boda” Riders on Community-Based Referrals for Maternal Outcome.
- [19] Ngene, A. H., & Ifeanyi Anorue, L. (2021). Evaluating the FRSC's "Don't Drink and Drive" media campaign in south-east, Nigeria: effects on motorists' exposure and compliance levels. *Transactions on transport sciences*, 12(1), 38-47.
- [20] Ndungu S.K. (2022) Behaviour change communication strategies and men’s response to prostate cancer screening in central kenya Unpublished PHD thesis Karatina University

-
- [21] Nwangu E., Yohanna W., Abugu L., Onunuji A., (2020) Behaviour change communication for control of tuberculosis by health care workers in DOTS facilities in Nigeria. *Pan African medical Journal*.
- [22] Nyachio, G. (2020). Levels of Rider Training and Its Influence on Road Safety among Motorcycle (*Boda-boda*) Riders in Kisumu East Sub-County in Kisumu County, Kenya. *Journal of Research Innovation and Implications in Education*, 4(4), 119-129.
- [23] Putranto, Rostiana (2016) the effect of type of traffic safety campaign material to attitude change of motorcyclists among undergraduate university students in Indonesia, Department of Civil Engineering Tarumanagara University Jakarta Indonesia
- [24] Ramírez, Y. G., Torres, J. P., & Salazar, M. T. (2020). Promoting road safety education in young adults with Facebook: a mini-case study in engineering university students in Ecuador. *Avances: Investigacion en Ingenieria*, 17(1), 1-16.
- [25] Rani U., (2016) Communication barriers, *Veda's Journal of English and literature*
- [26] Rugut, J., & Makori, B. (2015). Determinants Influencing Performance of Alternative Public Transport in Kenya: A Case of Motor Cycle Transport, Nakuru County. *The strategic journal of business and change management*, 2(62), 436-471.
- [27] Vingilis, E., Yildirim-Yenier, Z., Vingilis-Jaremko, L., Seeley, J., Wickens, C. M., Grushka, D. H., & Fleiter, J. (2018). Young male drivers' perceptions of and experiences with YouTube videos of risky driving behaviours. *Accident Analysis & Prevention*, 120, 46-54.
- [28] Wimmer, R.D., & Dominick, J.R. (1994). *Mass media research: An introduction*. Belmont, CA: Wadsworth
- [29] World Health Organization. (2016). *Road safety mass media campaigns: A toolkit*.
- [30] World Health organization 2024
- [31] Smith, K., Cinnamon, J., Kumi, E., & Das, M. (2017). Transport and social inequalities: New directions for research. *Journal of Transport Geography*, 58, 1-8.
- [32] Stajkovic A & Stajkovic K (2019) *Social cognitive theory researchgate.net*
- [33] Singh R., Prasad R., Kumar K., (2020) Effective behaviour change communication interventions in adults by community health workers: A Scoping Review Protocol. <https://doi.org/10.1101/2020.11.29.20240432>
- [34] Takashorri A., Johnson R.B., Teddlie C. (2021) *Foundations of mixed methods research*. Thousand Oaks, CA Sage Publications Inc.