



**ASSESSING THE COMMUNICATION STRATEGIES OF THE NATIONAL
ROAD SAFETY AUTHORITY IN EDUCATING THE PUBLIC ON THE
RISKS OF OKADA USE IN ACCRA**

BY

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DECLARATION

DECLARATION BY STUDENT- DISSERTATION

I hereby declare that this research is a result of my own original research and that, no part of it has been presented for another degree in this university or any other higher education institute. I further declare that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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SUPERVISOR'S CERTIFICATION

I hereby certify that the preparation of this dissertation was supervised by me in accordance with the guidelines of supervision of dissertation laid down by the University of Media, Arts and Communication UniMAC-IJ.

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ABSTRACT

This study examined the communication strategies employed by the National Road Safety Authority (NRSA) to educate the public on the safety risks associated with commercial motorcycle (Okada) operations in Accra. Using a mixed-methods approach, data were collected from 189 survey respondents, comprising riders and passengers, and 10 NRSA officials. The study assessed the visibility, clarity, relevance, and behavioural influence of NRSA's safety messages, and analyzed the factors that facilitate or hinder their effectiveness. Findings revealed that while NRSA's campaigns achieve moderate levels of public awareness, their impact on behaviour remains limited. Riders and passengers reported knowing the safety messages but not consistently applying them, indicating an awareness-action gap. Key constraints identified include irregular funding, limited localization of messages, weak collaboration with grassroots actors, and the absence of strong monitoring mechanisms. Structural pressures such as economic necessity and peer influence further reduce behavioural compliance. The study recommends sustained and well-resourced communication campaigns, tailored and localized messaging, strengthened collaboration with rider unions and enforcement agencies, integration of incentives with communication, and improved monitoring and evaluation systems. The study concludes that more targeted, consistent, and community-driven communication is essential for reducing Okada-related risks and enhancing road safety outcomes in Accra.

Keywords: Communication; Strategies; Okada; Behaviour; Reducing; Enhancing Road Safety Outcomes.

DEDICATION

This work is lovingly dedicated to my daughter, Makedah Naa Dedei Aryeetey, and my two sons, Nii Ayiwulu Aryeetey and Nii Armahwulu Aryeetey, whose presence inspires my perseverance and gives deeper meaning to every achievement.

I also dedicate this dissertation to my uncle, Bishop Seth Aryeetey, whose guidance, encouragement, and unwavering belief in my potential have been a constant source of strength.

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CHAPTER ONE

INTRODUCTION

1.1 Chapter Overview

This chapter serves as the introductory chapter to the study. It begins with a general discussion of the background of the study, the problem statement and presents the research objectives and questions. The chapter further discusses the relevance of the study to various stakeholders and concludes by outlining how the study is organized.

1.2 Background to Study

In recent years, the persistent challenge of unemployment, particularly among Ghanaian youth, has contributed to the widespread adoption of commercial motorcycle transport, popularly known as *Okada*, as a means of livelihood. For many young people, *Okada* riding offers a quick entry into self-employment with minimal capital requirements, providing a lifeline in the face of limited formal job opportunities (Oteng-Ababio & Agyemang, 2015). In urban centres like Accra, *Okada* has also become an indispensable mode of transport for commuters navigating heavy traffic congestion and poorly served public transport routes. Its flexibility, affordability, and accessibility make it especially popular among low-income earners and residents of peri-urban and inner-city areas (Oteng-Ababio & Agyemang, 2012).

Ghana's urban areas, particularly Accra, experience chronic traffic congestion and limited public transport options. The Ghana Statistical Service (2021) notes that daily commuter trips in the Greater Accra Metropolitan Area exceed 1.5 million, with average travel times during peak hours stretching over 90 minutes for journeys that would normally take less than 40 minutes. The rapid urbanization

rate, projected at over 56% in 2022 (GSS, 2022), has outpaced improvements in road infrastructure and formal public transport supply. These constraints have made motorcycles a convenient and time-saving transport alternative for many city dwellers.

The commercial motorcycle industry emerged in Ghana in the late 1980s and early 1990s, initially popular in northern and border towns such as Bawku, Tamale, and Aflao, where poor road conditions made conventional transport difficult. Over time, economic hardships and growing urbanization contributed to its spread to major cities, including Accra, Kumasi, and Takoradi. According to the National Road Safety Authority (NRSA, 2023), there are more than 200,000 registered motorcycles in the Greater Accra Region, with thousands more operating informally without registration or insurance. This expansion highlights both the growing demand for flexible mobility and the lack of alternative employment opportunities among the youth.

However, the proliferation of Okada has not been without controversy. Some schools of thought, including policymakers, road safety advocates, and sections of the general public, have called for a complete ban on the business. Proponents of a ban argue that Okada operations are largely unregulated, contribute significantly to the rising tide of road traffic accidents and fatalities, and often violate traffic laws, creating hazards for other road users (Zava, 2021; Agyekum-Boamah, 2012; Iribhogbe & Odai, 2009). The Okada business has also been associated with increased crime rates (Giwa, 2023); some studies have shown that the public perceives commercial motorcyclists to be involved in various criminal activities, including armed robbery, snatching valuables, and kidnapping (Ukwayi et al., 2013).

According to the NRSA (2023), motorcycle crashes accounted for approximately 35% of all road traffic fatalities in Ghana in 2022, while in the Greater Accra Region alone, more than 600 motorcycle-related injuries were recorded within the same year. A report by the Korle-Bu Teaching

Hospital's Trauma and Emergency Unit (2022) also revealed that motorcycle crashes constitute nearly one-third of all trauma cases received annually. For instance, *Daily Graphic* (March 2023) reported a series of fatal Okada accidents in Accra's Madina-Adenta enclave, where five deaths occurred within two weeks due to speeding and helmet non-use.

Critics of Okada also point to issues of lawlessness, lack of insurance coverage, and the strain on emergency medical services as reasons why the practice should be outlawed (Marnah & Manortey, 2022; Adogu et al., 2010; Iribhogbe & Odai, 2009). Recent media reports, including those by *Citi Newsroom* (2023) and *MyJoyOnline* (2023), document numerous instances of Okada-related Road crashes and fatalities. For example, in February 2023, three Okada riders died in a head-on collision on the Spintex Road in Accra, prompting renewed calls from the NRSA for stricter regulation. Yet, despite repeated calls for its prohibition, Okada continues to thrive in Accra and other Ghanaian cities. The enduring presence of Okada can be attributed to several factors: the failure of public transport systems to adequately serve urban and peri-urban communities, the high demand for fast and flexible transport options, and the absence of viable alternative employment opportunities for thousands of riders (Tuffour, 2014). Attempts to ban or clamp down on Okada operations have often met resistance, underscoring its deep-rooted role in the urban economy and its significance as a survival strategy for many young people. For many households, Okada is not just a means of mobility but also a critical source of income and sustenance (Agyekum-Boamah, 2012).

It is important to note that Okada refers specifically to commercial passenger motorcycle transport, distinct from motorcycle courier or delivery services, which are generally regulated and operate under business licensing frameworks. Similarly, the "*Pragya*" tricycles, although sometimes grouped under informal transport, differ from Okada because they are three-wheeled and designed for

carrying multiple passengers. Nonetheless, both modes share similar regulatory and safety challenges within Ghana's urban transport system.

Given that Okada has become a permanent feature of Ghana's urban commuting landscape, there is a growing consensus that a more pragmatic approach, rather than outright prohibition, is needed to address the associated risks. Development communication, particularly through Social and Behaviour Change Communication (SBCC) strategies, presents a critical pathway for fostering safer practices among Okada riders and users (Nthoki, 2025). Comparable studies in Nigeria, Kenya, and Uganda have demonstrated that targeted communication interventions can reduce road-traffic accidents among motorcycle riders (Nwagwu & Olatunji, 2012; Nthoki, 2025). In Ghana, Osei-Tutu (2021) examined the impact of community road-safety campaigns in Kumasi, highlighting the role of participatory education in improving helmet use and traffic compliance. These studies underscore the importance of structured and evidence-based communication strategies in achieving behavioural change.

By deploying well-designed communication campaigns, awareness-creation initiatives, advocacy, and participatory engagement, stakeholders can educate the public and riders about the risks of unsafe Okada practices and promote responsible behaviour. Such strategies aim not only to increase knowledge but also to influence attitudes and behaviours, helping to curtail accidents, improve compliance with traffic regulations, and protect lives (Nthoki, 2025; Nwagwu & Olatunji, 2012). This study, therefore, seeks to assess the communication strategies employed by the National Road Safety Authority (NRSA) in educating the public about the risks associated with Okada use in Accra. It focuses on evaluating the content, delivery channels, reach, and perceived effectiveness of these strategies, as well as identifying challenges and opportunities for improvement.

The study adopts a descriptive and exploratory research approach within the qualitative and quantitative paradigm, supported by elements of the Social and Behaviour Change Communication (SBCC) framework and the Theory of Planned Behavior (TPB). Data will be collected through interviews, focus-group discussions, and document reviews, enabling a holistic assessment of NRSA's communication strategies. The evaluation entails examining message design, delivery channels, audience reception, and behavioural outcomes to determine the effectiveness and limitations of the Authority's current communication interventions.

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1.3 Problem Statement

Commercial motorcycles, popularly referred to as Okada, have become an indispensable part of the urban transport system in Accra. They provide an affordable, flexible, and time-saving mode of transport for many residents, particularly in low-income and high-traffic areas (Amoako & Yankson, 2015). Despite these benefits, the operations of Okada remain largely informal and unregulated, contributing significantly to road traffic accidents, injuries, and fatalities in Ghana (Ackaah & Afrifa, 2010). According to the National Road Safety Authority (NRSA), motorcycle-related accidents have accounted for a growing proportion of road crashes in the past decade, raising serious concerns about public safety (NRSA, 2021).

To address these risks, the NRSA has deployed various public awareness campaigns and educational programs aimed at promoting safer riding practices and informing the public about the dangers of unregulated Okada use. These strategies include radio and television campaigns, stakeholder engagements, community outreach, and advocacy (Abane, 2013). However, the persistence of unsafe rider behaviour, poor adherence to road safety rules, and the high incidence of Okada-related

crashes suggest that these communication efforts may not be achieving the desired impact (Nartey & Codjoe, 2022).

While several studies have extensively examined the regulatory challenges, socio-economic implications, and risks associated with Okada operations, particularly in countries like Nigeria (Arosanyin & Agunloye, 2014; Olvera et al., 2012; Adogu et al., 2010; Iribhogbe & Odai, 2009) and Kenya (Nthoki, 2025; Nkurunziza et al., 2012; Nwagwu & Olatunji, 2012; Mitullah & Ochieng, 2011), these studies, though insightful, are not specific to the Ghanaian context. Moreover, the existing literature in Ghana (Tuffour, 2014; Agyekum-Boamah, 2012; Oteng-Ababio & Agyemang, 2012) predominantly focuses on the challenges, risks, and economic aspects of the Okada business, often overlooking the critical role that development communication strategies can play in influencing positive behaviour and attitudes towards safer Okada practices.

There is therefore limited empirical evidence on how well the NRSA's communication strategies are designed, delivered, and received by Okada riders and users in Ghana, and whether these efforts translate into meaningful awareness and behavioural change. Without such evidence, it becomes difficult to improve communication campaigns to enhance their effectiveness in promoting road safety. This study thus seeks to fill this gap by assessing the communication strategies employed by the NRSA in educating the public on the risks of Okada use in Accra.

1.4 Research Objectives

The primary objective of this study is to assess the communication strategies of the National Road Safety Authority (NRSA) in educating the public on the risks of Okada use in Accra.

The specific objectives are to:

1. Identify the communication strategies employed by the National Road Safety Authority (NRSA) in educating the public on the risks of Okada transport in Accra.
2. Examine how these communication strategies are designed and deployed, including message content, delivery channels, frequency, and audience segmentation in raising public awareness of Okada-related risks.
3. Evaluate the effectiveness of NRSA's communication strategies in raising awareness and influencing behaviour change among Okada riders and passengers.
4. Assess the challenges faced by the NRSA in implementing communication campaigns on Okada-related risks, including the perceptions and experiences of target audiences such as Okada riders, passengers, and community members.
5. Recommend practical ways to improve NRSA's communication strategies for greater impact in promoting road safety and behaviour change among motorcycle users.

1.5 Research Questions

1. What communication strategies does the NRSA use to educate the public about the risks of Okada transport in Accra?
2. How are these strategies designed and deployed in terms of message content, channels, timing, and audience targeting?
3. How effective are these communication strategies in creating awareness and influencing safer practices among Okada riders and users?

4. What challenges does the NRSA encounter in executing its awareness campaigns on Okada-related risks, from both institutional and audience perspectives?
5. How can NRSA's communication strategies be improved to enhance public awareness and sustainable behaviour change regarding motorcycle safety?

1.5 Significance of the Study

The importance of the study is defined in three major dimensions, including academia, practice, and policy. Academically, the research contributes to the available body of literature on development communication and road safety by critically examining the role of communication strategies in influencing the awareness and behaviour of the people in the urban transport safety context. Particularly, the paper places road-safety communication in the wider context of development communication, and demonstrates how Social and Behaviour Change Communication (SBCC) strategies can be used to change transport-related behaviour. The research shows the practical implementation of development communication theories to a modern social issue by examining the integration of message design, audience segmentation, and participatory engagement in the campaigns of NRSA, thus broadening the field of the discipline beyond the traditional health or environmental campaign to transport and public-safety communication. Although a lot of research has been conducted on the regulatory, economic, and safety issues of Okada activities in other countries like Nigeria and Kenya, there is little empirical research that has specifically evaluated the design, delivery, and reception of development communication tools to promote safe riding behavior, especially in the Ghanaian context.

This research therefore addresses a gap that is very critical in the literature by offering context-specific evidence on the effectiveness of the communication strategies used by the NRSA and the importance of communication in the management of road-safety issues in the urban setting in Ghana. In practical terms, the results of this research will be applicable to road-safety professionals, communication officers, and public-education departments of the NRSA, and other stakeholders in the field of transport-safety advocacy. The research will determine what is working with the current communication strategies, what needs to be improved, and what is acting as a barrier to the uptake of the messages and behaviour change in Okada riders and users. The study will assist practitioners to improve their practices and increase the relevance and delivery of messages and eventually increase the compliance of people with road-safety rules.

In terms of policy implications, the research will provide evidence-based suggestions to policy makers, regulatory agencies, and advocacy groups interested in enhancing road-safety in Ghana. With the country struggling to deal with the increasing number of motorcycle-related accidents, the results highlight the importance of supportive policies, well-coordinated campaigns aimed at raising public awareness, and specific communication frameworks that can be effective in influencing attitudes and behaviours. This will assist in enhancing national road-safety, lowering the rate of accidents and encouraging safer movement in the urban areas in accordance with the overall development objectives of Ghana.

Theoretically, the research is based on the Social and Behaviour Change Communication (SBCC) model that focuses on participatory communication, audience research, and strategic message design to facilitate voluntary behaviour change. In theory, it is based on the Theory of Planned Behaviour (TPB) that describes how attitudes, subjective norms, and perceived behavioural control influence the intentions and behaviour of individuals. These frameworks combined offer an avenue through

which the communication messages of NRSA can be analysed in terms of knowledge, perceptions, and behavioural outcomes among Okada riders and the general population.

The research design is qualitative descriptive research design methodologically backed by the aspects of exploratory inquiry. The data will be gathered using semi-structured interviews, focus-group discussions, and document analysis to get in-depth information about the NRSA officials and Okada riders. The population of study will be NRSA communication officers, representatives of Okada rider associations, and the selected Okada riders and passengers in the Accra Metropolis. The purposive sampling method will be used to make sure that the participants who have the relevant experience and knowledge of NRSA campaigns are included. This method is reasonable as it would allow the researcher to obtain a wide range of yet informative views on communication practices, issues, and results, which is critical to a comprehensive assessment of the strategies of NRSA.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter is organized into three main sections: the theoretical review, the empirical review, and the conceptual framework. The theoretical review discusses the key theories that underpin the study and provides a foundation for understanding the relationship between communication strategies and behavioral change towards safe okada practices. The empirical review examines previous studies conducted on the subject, highlighting key findings, trends, and gaps in the existing literature. Finally, the conceptual framework presents the structure and direction of the study, illustrating how the main concepts are connected and guiding the overall research approach

2.2 Conceptual Framework

In this research, the primary objective is to assess and evaluate the communication strategies of the National Road Safety Authority (NRSA) in promoting safer Okada riding practices in Accra. To achieve this, the study adopts an evaluation-oriented conceptual model inspired by the Context, Input, Process, and Product (CIPP) Evaluation Framework developed by Stufflebeam (2003). The CIPP model provides a comprehensive structure for assessing the quality and effectiveness of programmes by examining their design, implementation, and outcomes. It helps determine whether an intervention was appropriately planned, adequately executed, and capable of achieving its intended objectives.

Applied to this study, the CIPP model is used to guide the systematic evaluation of NRSA's communication strategies. The context component focuses on the social and institutional

environment in which the NRSA operates, assessing the relevance of its communication objectives in addressing the Okada safety problem in Accra. The input component considers the design of these communication strategies, including message content, media channels, and audience segmentation. The process component examines how the communication activities are implemented, coordinated, and monitored to ensure consistency and coverage. Finally, the product component assesses the extent to which the communication strategies have produced the desired behavioural outcomes, such as increased awareness, improved compliance with traffic laws, and a reduction in road accidents involving Okada riders. Through this framework, the study evaluates not only the results of the communication strategies but also their design quality, contextual appropriateness, and implementation effectiveness.

Building on this evaluative foundation, the conceptual framework for this study, as illustrated in Figure 1, shows how NRSA's communication strategies are theorised to influence safer Okada riding behaviours in Accra. The framework integrates two complementary perspectives, Social and Behaviour Change Communication (SBCC) and the Theory of Planned Behavior (TPB), to explain both the external and internal processes through which communication can shape behaviour. At the base of the framework are NRSA's communication strategies, which constitute the independent variable. These strategies are guided by SBCC principles and encompass advocacy, social mobilisation, and behaviour change communication. Advocacy seeks to influence policy and institutional actors to create enabling laws and regulations that support road safety. Social mobilization engages communities and local stakeholders to build peer support and collective responsibility for safer riding practices. Behaviour change communication, delivered through mass media, interpersonal communication, and educational outreach, targets individual riders and users with specific messages about the risks of unsafe behaviour and the benefits of compliance.

The SBCC framework emphasizes that effective communication operates on multiple levels of influence, individual, interpersonal, community, and societal. At the individual level, communication enhances knowledge, awareness, and risk perception. At the interpersonal and community levels, it fosters social support and establishes norms that encourage safe behaviour. At the societal level, advocacy sustains enabling policies and enforcement structures that reinforce positive behavioural change. This multi-level approach underscores that sustainable safety outcomes depend on a combination of individual learning, social reinforcement, and institutional support.

Embedded within this structure are the constructs of the Theory of Planned Behavior (TPB), which explain the internal psychological mechanisms that lead to behaviour change. According to the TPB, a person's intention to perform a particular behaviour is shaped by their attitude towards that behaviour, their perception of social expectations (subjective norms), and their perceived behavioural control, or the belief in their ability to perform the behaviour successfully. Within this study's framework, exposure to NRSA's communication campaigns is expected to influence these three constructs. For example, effective safety messages may lead riders to develop positive attitudes towards helmet use, feel social pressure from peers and family to ride safely, and gain confidence in their ability to comply with traffic laws. These cognitive and psychological processes serve as mediating variables that translate communication exposure into observable behavioural outcomes.

The dependent variable in this study is safer Okada riding behaviour, measured through observable indicators such as helmet use, adherence to speed limits, compliance with traffic laws, and avoidance of risky riding practices. Altogether, the conceptual framework explains how NRSA's SBCC-based communication strategies, operating across multiple levels of influence and filtered through the psychological pathways outlined in the TPB, are expected to produce measurable behavioural improvements. The inclusion of the CIPP evaluation model strengthens the framework by ensuring

that the study assesses not only the presence of change but also the quality, relevance, and effectiveness of the communication interventions that generate that change. By combining these models, the framework provides a coherent analytical lens for evaluating both the design and the reception of NRSA's communication strategies and for identifying areas that can inform the development of more effective road-safety campaigns in Ghana.

The conceptual framework for this study as depicted in figure 1 illustrates how the study intends to assess the National Road Safety Authority (NRSA)'s communication strategies are theorized to influence safer *Okada* riding behaviors in Accra. The framework integrates two complementary theoretical perspectives, Social and Behavior Change Communication (SBCC) and the Theory of Planned Behavior (TPB), to explain both the external and internal processes through which communication can impact behavioral change.

At the foundation of the framework are the NRSA's communication strategies, which are conceptualized as the independent variable. These strategies are guided by SBCC principles and include advocacy, social mobilization, and behavior change communication. Advocacy targets policy and institutional actors to create supportive laws, policies, and environments for safe riding practices. Social mobilization engages communities and stakeholders at the grassroots level, fostering collective action and peer support for safer behavior. Behavior change communication, often delivered through targeted mass media campaigns, interpersonal communication, and educational outreach, focuses on reaching individual riders and users with tailored messages about the risks of unsafe practices and the benefits of compliance.

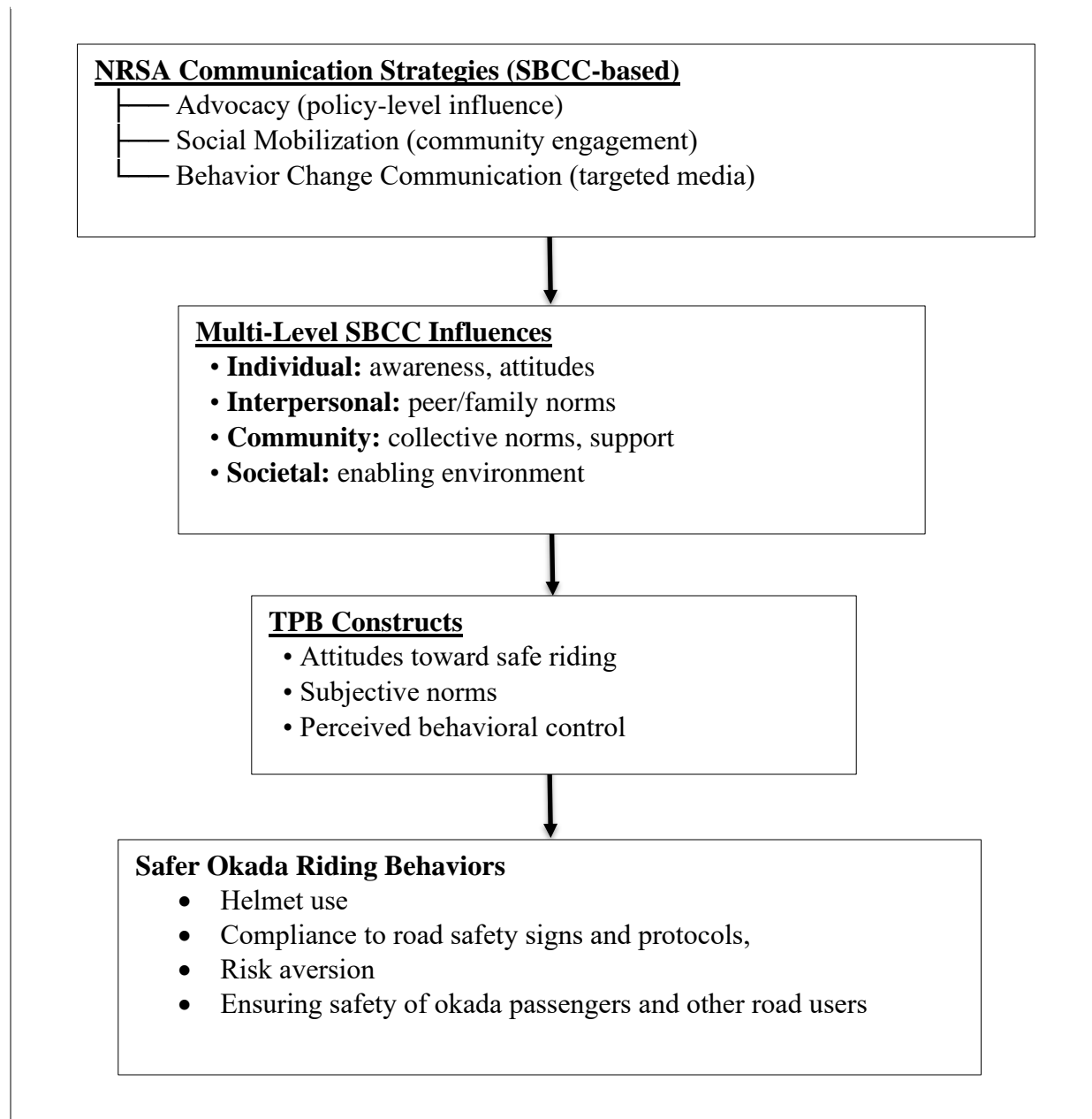
The SBCC framework emphasizes that effective communication must operate on multiple, interconnected levels of influence, individual, interpersonal, community, and societal. At the individual level, messages are expected to increase awareness, knowledge, and risk perception. At

the interpersonal and community levels, social support and normative expectations are strengthened to encourage compliance. At the societal level, advocacy ensures the presence of enabling laws, policies, and enforcement mechanisms that sustain positive change.

Embedded within this multi-level structure are the constructs of the TPB, which explain the internal, psychological pathways that lead to behavior change. According to TPB, riders' intentions to adopt safe practices are shaped by their attitudes toward safe riding, subjective norms, or the perceived expectations of significant others, and perceived behavioral control, which reflects their confidence in their ability to comply despite barriers. These constructs serve as mediating variables between exposure to communication strategies and actual behavior. For instance, a rider exposed to NRSA's campaigns may develop a more positive attitude towards helmet use, feel greater social pressure from peers and family to comply, and feel empowered to adopt safer riding behaviors.

The dependent variable in the framework is safer riding behaviors among *Okada* riders and users, operationalized as observable practices such as helmet use, adherence to speed limits, compliance with traffic laws, and general risk aversion. In summary, the conceptual framework articulates a pathway by which NRSA's SBCC-informed communication strategies are expected to generate cognitive, attitudinal, and normative changes at multiple levels, which – through the psychological mechanisms described by TPB – translate into safer riding behavior. This framework not only guides the empirical analysis but also highlights the importance of evaluating both the design and the reception of communication strategies to identify areas for improvement and inform more effective road safety campaigns in Ghana.

Figure 1: Conceptual Framework illustrating how NRSA's SBCC-based communication strategies influence safe Okada riding behaviors through multi-level and psychological pathways.



2.3. Theoretical Review

The theoretical framework provides the foundation for understanding the relationship between development communication strategies and their influence on public awareness, attitudes, and behaviors toward road safety. This study is guided by two key theories; the Social and Behavior Change Communication (SBCC) Theory and the Theory of Planned Behavior (TPB). These theories help explain why organizations, such as the NRSA, should adopt strategic, audience-centred communication approaches in addressing road safety challenges, and how such strategies can influence both individual and collective behaviors toward safer okada practices. Together, these theories provide a lens for analyzing how well-designed communication interventions contribute to creating an informed, motivated, and compliant public, thereby enhancing road safety outcomes in urban Ghana.

2.3.1 Social and Behavior Change Communication (SBCC) Theory

The Social and Behavior Change Communication (SBCC) theory represents an integrated, evidence-based approach to designing and implementing communication interventions that aim to influence individual and collective behaviors, attitudes, and social norms in a sustainable manner (Kaur, 2022). Rooted in the principles of participatory communication, social learning, and systems thinking, SBCC moves beyond the traditional “information dissemination” paradigm to acknowledge that knowledge alone does not necessarily lead to behavior change (Bandura, 2001). Instead, SBCC emphasizes the need to address the broader social, cultural, interpersonal, and structural factors that shape individual and group decision-making. (Lamstein et al., 2014).

At its core, SBCC involves the strategic use of advocacy, social mobilization, and behavior change communication to create an enabling environment for positive social change. It encourages active participation of target audiences, engagement of stakeholders at multiple levels, and the tailoring of messages and delivery channels to the specific context and needs of the audience (McKenzie-Mohr, 2000). By integrating multiple levels of influence, from individual beliefs to community norms and policy environments, SBCC promotes not just awareness, but also the motivation, skills, and supportive conditions necessary for sustained behavior change (Kaur, 2022; Bandura, 2001).

In relation to road safety and the operation of commercial motorcycles (Okada) in urban Ghana, SBCC provides a highly relevant and appropriate theoretical lens for this study. Okada riding behavior is influenced not only by individual knowledge and risk perceptions, but also by entrenched social norms, peer influence, economic pressures, and the wider regulatory environment (Odoom et al., 2023; Teye-Kwadjo, 2019). This complexity requires a communication approach that addresses these multi-dimensional drivers of behavior rather than relying solely on the transmission of information.

Specifically, this study leverages SBCC theory because it aligns closely with the nature of the problem being addressed, the persistence of unsafe okada practices despite ongoing awareness campaigns. The theory helps to explain why previous efforts by the NRSA, which have largely focused on mass media messaging and public education, may have had limited impact on actual behavior change. By emphasizing participatory engagement, context-sensitive messaging, and community-level social mobilization, SBCC offers a framework for analyzing not only whether the NRSA's strategies are reaching their audience, but also whether they are fostering the attitudinal and normative shifts required for sustainable improvements in road safety.

Furthermore, employing SBCC theory enables this study to assess the extent to which NRSA's communication campaigns incorporate key components such as audience segmentation, message tailoring, community involvement, and the creation of enabling environments for behavior change. It justifies a focus on evaluating not merely the content of communication, but also the processes, channels, and social dynamics through which road safety messages are delivered and internalized by Okada riders and users.

In sum, SBCC theory underpins this study by providing a holistic and actionable framework to interrogate the effectiveness of development communication in addressing urban transport safety challenges. It guides the investigation into whether NRSA's strategies go beyond raising awareness to actually catalyzing behavioral and social change, and it supports the development of evidence-based recommendations for enhancing the impact of communication interventions in promoting safer Okada practices. This theoretical foundation is particularly justified given the complexity of the road safety challenge and the need for communication approaches that are grounded in the realities of the target audience and the socio-cultural environment in which they operate.

2.3.2 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), serves as an important complementary framework to the SBCC theory by providing a psychological lens through which individual behavior change can be understood and influenced. TPB posits that an individual's intention to perform a particular behavior is the most immediate predictor of that behavior (Kiriakidis, 2015). This intention, in turn, is shaped by three key determinants: attitudes toward the behavior, subjective norms, and perceived behavioral control (Rhodes et al., 2002).

Specifically, **TPB** suggests that individuals are more likely to engage in a desired behavior if they hold a positive evaluation of the behavior (attitude), believe that significant others such as peers, family, or community members support and expect the behavior (subjective norms), and perceive themselves as capable of performing the behavior effectively despite potential barriers (perceived behavioral control) (Barbera & Ajzen, 2020; Wen, 2008; Ajzen, 2006). Applied to this study, **TPB** implies that Okada riders are more likely to adopt safe riding practices when they view such behaviors as beneficial and necessary, when there is social pressure or expectation from their peers and the wider community to prioritize safety, and when they feel empowered and competent to comply with safety regulations and adopt protective behaviors (Ajzen, 2008).

This theory is particularly relevant to this study because it illuminates the individual level cognitive and motivational factors that influence behavior, complementing the broader social and structural emphasis of **SBCC** (Tunnickliff et al., 2012; Watson et al., 2007). While **SBCC** underscores the importance of creating enabling environments and addressing societal and cultural norms through participatory and multi-level communication strategies, **TPB** provides insight into the internal psychological processes that drive personal intention and action. In essence, **TPB** explains how and why individual riders form the intentions that lead to safe or unsafe riding behavior, which can then be targeted through effective communication (Tankasem et al., 2016)

The connection between **SBCC** and **TPB** is thus significant: **SBCC** provides the overarching strategic framework for designing interventions that engage individuals, communities, and systems, while **TPB** helps to identify and address the specific attitudinal, normative, and control beliefs that must be influenced to achieve behavior change at the individual level (Kaur, 2022). By integrating these two theories, the study adopts a holistic approach that recognizes both the internal psychological

determinants of behavior and the external social and environmental factors that shape and sustain those behaviors.

This study employs **TPB** as a supporting theory because it enhances the explanatory power of the **SBCC** framework by focusing explicitly on the individual level intentions and beliefs that often mediate the effects of communication interventions. Understanding the attitudes, subjective norms, and perceived behavioral control of okada riders enables the study to assess not only whether the **NRSA's** communication strategies reach their audience but also whether they effectively influence the cognitive antecedents of safe riding behavior. This justification is particularly important given that road safety behaviors are often the result of both personal choices and social influences.

Hence, the **Theory of Planned Behavior** underpins this study by offering a nuanced understanding of the psychological mechanisms through which communication strategies impact behavior. Its integration with **SBCC** allows for a comprehensive analysis of how development communication can be designed and implemented to address both internal and external drivers of behavior change. By employing **TPB** as a supporting theory, this study ensures that the evaluation of **NRSA's** communication strategies is grounded in a robust theoretical understanding of how intentions and behaviors are formed, making it possible to develop recommendations that are both contextually relevant and psychologically sound.

2.4 Empirical Literature

2.4.1 Related Studies

Extant literature has explored the commercial motor riding (okada) business. This section reviews some relevant studies conducted in this area. First, Oteng-Ababio (2012) examined the virtue of

necessity of urbanization, urban growth, and Okada services in Accra, Ghana. Using questionnaires and in-depth interviews, the study explored how rapid urbanization has strained infrastructure and degraded the quality of urban life, creating a demand for informal and flexible transport options such as Okada. The findings revealed that despite violating regulations, the commercialization of motorcycle transport has thrived due to weak enforcement and the inability of authorities to plan holistically for urban transport needs. The study concluded that the proliferation of Okada reflects a breakdown in urban transport planning, forcing commuters to seek alternative strategies.

In a related study, Oteng-Ababio (2015) discussed what he termed the Okada War in Urban Ghana: A Polemic Issue or Policy Mismatch. Although the methodology was not explicitly stated in the abstract, the paper provided a critical analysis of the policy and institutional challenges contributing to the rise of Okada. The author argued that the decline of organized public transport, coupled with inefficiencies exacerbated by structural adjustment programs, has led to increased congestion and accidents. The study highlighted how policy failures and a mismatch between commuter needs and regulatory approaches have enabled the growth of informal motorcycle transport in Ghanaian cities.

Marnah et al. (2022) investigated the prevalence and risk factors for motorcycle accidents at Korle-Bu Teaching Hospital in Ghana. The study employed a cross-sectional design, using structured questionnaires and systematic sampling to collect data. Findings indicated that demographic factors such as age, marital status, education, and occupation significantly influenced helmet use, while education, religion, and occupation were linked to knowledge of road regulations. The authors identified low insurance coverage, over speeding, and non-adherence to road signs as major contributors to motorcycle accidents.

Similarly, Agyekum-Boamah (2012) examined the growing use of motorcycles for commercial transport and its implications for traffic safety in Ghana. The study conducted field surveys involving

200 operators and 100 users across three regions, Greater Accra, Volta, and Upper East, using questionnaires. Results showed that although Okada services were increasingly popular because of affordability, convenience, and speed, they were associated with significant safety risks due to the lack of insurance, improper clothing, and low helmet usage. The author recommended a combination of stricter enforcement and public education campaigns to mitigate these safety concerns.

Tuffour and Sam (2014) explored the operation and public perception of motorcycle taxis in Accra. Data were collected through interviews with operators, users, and non-users to capture their opinions and experiences. The study found that Okada services were primarily used by young male commuters for short distances during peak hours. However, public opinion was divided: while users valued the convenience and speed of Okada, non-users expressed concerns about safety and supported enforcement of the ban.

Beyond the Ghanaian context, Nwagwu and Ojemeni (2012) conducted a study on the life-saving information behaviours of commercial motorcyclists in a metropolitan city in Nigeria. Using questionnaires administered to 301 Okada operators, the authors found that riders prioritized their own safety over that of passengers and relied heavily on radio and television as their main sources of safety information. The study also noted that educating passengers could improve road safety by empowering them to demand safer practices from operators.

Agossou et al. (2021) modeled communication strategies aimed at reducing public road accidents involving two-wheel motorized vehicles in the cities of Cotonou and Parakou in Benin. This cross-sectional analytical study surveyed 1,497 road users using mobile phone-based questionnaires and employed multivariate analysis. The study developed an integrated communication model described as persuasive and engaging, which significantly reduced motorcycle accidents. The authors

concluded that national-level, integrated communication programs incorporating advocacy and context-sensitive interventions are essential for improving road safety.

Agyemang et al. (2010) provided a comparative cross-cultural analysis of road safety attitudes and behaviors among vulnerable road users in Ghana and Norway. Using stratified sampling and questionnaires, the study revealed that while Ghanaian road users had a heightened perception of risk and more favorable attitudes towards safety compared to their Norwegian counterparts, unsafe practices persisted. The authors recommended holistic and multi-level communication strategies targeting individual, community, and policy levels to improve road safety behavior.

2.4.2 Identification of Empirical Gap

The empirical review highlights extensive research on the socio-economic drivers, risks, and public perceptions associated with Okada operations in Ghana and beyond. Studies such as Oteng-Ababio (2012; 2015), Agyekum-Boamah (2012), and Tuffour and Sam (2014) provided valuable insights into the rise of Okada as an alternative urban transport mode, largely driven by poor public transport systems, weak enforcement, and commuter demand. Other studies, including Marnah et al. (2022) and Agyemang et al. (2010), documented the demographic and behavioral risk factors contributing to high accident rates among Okada riders, while works by Nwagwu and Ojemeni (2012) and Agossou et al. (2021) demonstrated the potential of communication strategies in influencing rider safety practices in other African contexts.

Despite these contributions, an important empirical gap remains in understanding the role and effectiveness of development communication strategies employed by the National Road Safety Authority (NRSA) in Ghana. Specifically, while studies outside Ghana, such as Nwagwu and

Ojemeni (2012) in Nigeria and Agossou et al. (2021) in Benin, have shown that persuasive, engaging, and audience-centered communication can positively influence road safety behaviors, there is limited evidence on how such strategies are applied within the Ghanaian context. The reviewed Ghana-based studies largely focused on regulatory challenges, safety risks, and public perceptions but did not empirically assess how communication interventions, particularly those by the NRSA are designed, delivered, and received by Okada riders and users, or whether they translate into meaningful awareness, attitudinal shifts, and behavior change.

This study therefore fills this gap by assessing the NRSA's communication strategies aimed at educating the public on the risks of Okada use in Accra. It examines not only the content and delivery of these strategies but also how they are perceived and internalized by the target audience. By doing so, the study contributes empirical evidence on the effectiveness of development communication in promoting safer Okada practices, which is critical for informing improvements in future road safety campaigns.

CHAPTER THREE

METHODOLOGY

3.1 Chapter Overview

This chapter outlines the methodological approach that will be employed for this study. It covers research design, study area, target population, sample size and sampling techniques, data collection instruments and procedures, as well as data analysis methods.

3.2 Research Design

This study employed descriptive cross-sectional survey design. This design was appropriate because it enabled the researcher to assess the current state of the NRSA's communication strategies, as well as their perceived effectiveness, at a single point in time. A descriptive design allows for the systematic collection and analysis of data to describe the level of awareness, attitudes, and behaviors of Okada riders and users with respect to road safety practices. The cross-sectional nature of the design provided a snapshot of the situation without manipulating any variables, making it suitable for evaluating development communication strategies in a real-world urban context.

3.2 Research Approach

The study employed a mixed-methods research approach, combining both quantitative and qualitative methods to provide a comprehensive understanding of the research problem. The quantitative component involved the use of structured questionnaires administered to Okada riders and users to gather measurable data on their exposure to, and perceptions of, NRSA's

communication strategies, as well as their reported safety behaviors. The qualitative component involved semi-structured interviews with key NRSA officials and stakeholders to gain deeper insights into the rationale, design, and challenges of implementing these strategies.

3.2 Study Area

The study was conducted in the Accra Metropolis, which has the highest concentration of Okada operations in Ghana. Accra is characterized by high urban density, traffic congestion, and significant reliance on informal transport modes, making it a relevant context for assessing the NRSA's communication efforts.

3.3 Target Population

The target population for the study comprised two main groups; Okada riders operating in selected areas of Accra and Okada users (commuters who regularly patronize Okada services). In addition, NRSA officials were engaged to provide institutional perspectives.

3.4 Sample Size and Sampling Techniques

The study employed a sample of approximately 200 respondents, consisting of 150 Okada riders and 50 Okada users. Purposive sampling was used to select high-Okada-traffic areas such as Circle, Lapaz, Madina, and Kasoa junctions. Within these areas, systematic random sampling was used to select Okada riders and users for survey participation. Interviews were also conducted with 10 NRSA

officials and stakeholders, selected purposively based on their roles in communication strategy development and implementation.

3.5 Data Collection Instruments and Procedures

Data for this study was collected using two main instruments: a structured questionnaire and a semi-structured interview guide. The structured questionnaire was administered to Okada riders and users to obtain quantitative data on their exposure to NRSA communication campaigns, their perceptions of the relevance and delivery of these messages, and their self-reported behavioral changes in response to the communication campaigns. In addition, a semi-structured interview guide was used to conduct interviews with selected NRSA officials. These interviews elicited qualitative insights into the planning, objectives, and challenges associated with the implementation of the communication strategies.

3.6 Data Analysis

Quantitative data from the questionnaires were coded and analyzed using Stata statistical software. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the data and assess the effectiveness of communication strategies employed by the NRSA. Qualitative data from interviews will be analyzed using the thematic analysis. The thematic analysis involves identifying recurring themes and patterns that reflect stakeholders' perspectives on the effectiveness of NRSA's communication strategies.

3.7 Ethical Considerations

Ethical considerations are critical for research studies because they guide researchers in their interactions with research participants and ensure that the participant's rights and well-being are protected. These considerations include obtaining participants' informed consent, ensuring data confidentiality and anonymity, and minimizing any potential harm to participants. According to Gorman and Clayton (2015), Individuals participating in a research study have the right to confidentiality and anonymity, as well as voluntary participation and informed consent.

When it comes to informed consent, each respondent was given prior notice of the study's objectives and given the choice to participate or not. No respondent was forced to participate in this study. The participants were fully informed about their privacy and that their responses were to be utilized exclusively for academic purposes

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Chapter overview

This chapter presents the results as obtained from the data analysis. The results were further discussed in relation to existing studies, and theories that were expounded in the chapter two of this study.

4.2 Discussion of Demographic Characteristics

The demographic characteristics of the 189 survey respondents and the perspectives of the 10 NRSA officials provide valuable context for understanding the dynamics of Okada usage and safety in Accra. The demographic characteristics results are displayed in table 1 and 2

Table 1: Demographic characteristics of Survey Respondents

Variable	Category	Frequency (n)	Percentage (%)
Respondent Category	Okada Rider	150	79.4
	Passenger/User	39	20.6
Gender	Male	120	63.5
	Female	69	36.5
Age Group	18-25 years	47	24.9
	26-35 years	46	24.3
	36-45 years	41	21.7

Variable	Category	Frequency (n)	Percentage (%)
	46-55 years	36	19.1
	56+ years	19	10.0
Education Level	No formal education	33	17.5
	Primary/JHS	40	21.2
	SHS/Vocational	70	37.0
	Tertiary	46	24.3
Location	Circle	60	31.7
	Madina	49	25.9
	Kasoa	43	22.8
	Lapaz	37	19.6

Source; field survey, 2025

Table 2: Demographic Characteristics of NRSA Officials

ID	Position/Role	Age	Educational Qualification	Years Experience	of Gender
R1	Public Education Officer	30 -39	Degree	5	Male
R2	Principal Road Safety Educator	40 - 49	Degree	8	Female
R3	Senior Programs Officer	30 -39	HND	10	Male
R4	Communications Manager	30 -39	Degree	12	Female

R5	District Road Safety Officer	20 -29	HND	6	Male
R6	Assistant Safety Officer	40 - 49	Degree	4	Male
R7	Data & Research Analyst	30 -39	MBA	7	Female
R8	Regional Coordinator	50 -59	Degree	11	Male
R9	Safety Campaign Facilitator	40 - 49	MBA	3	Female
R10	Senior Enforcement Liaison Officer	40 - 49	MBA	9	Male

Source; field interviews, 2025

From table two, the demographic characteristics of the 10 NRSAs interviewed reflect a diverse mix of professional backgrounds, age groups, and educational qualifications that strengthen the credibility and depth of the qualitative insights gathered. The officials span various operational units including Public Education, Communications, Programs, Enforcement, Community Outreach, Monitoring and Evaluation, and Regional Coordination, demonstrating that perspectives were obtained across the full spectrum of NRSAs' communication and enforcement functions. In terms of age distribution, most officials fall between 30-49 years, with one representative in the 20-29 bracket and another in the 50-59 category. This balance indicates a team composed of both early-career and highly experienced personnel who bring varied generational perspectives to road safety communication. Educational qualifications ranged from HND to MBA, with the majority possessing a degree or higher, highlighting a professionally trained workforce equipped with the necessary

theoretical and practical grounding in communication, public administration, safety management, and related fields.

The years of experience, ranging from 3 to 12 years, suggest that the officials possess significant institutional knowledge of road safety programming and communication dynamics within Ghana's urban transport environment. This depth of experience adds weight to their assessments of the strengths and limitations of NRSA's communication strategies. Gender representation was also balanced, with six males and four females, which aligns with efforts toward inclusive professional representation in the authority. Overall, the demographic profile of the NRSA officials shows that the study engaged knowledgeable and experienced experts capable of providing informed, context-rich insights into the planning, dissemination, and challenges of Okada-related safety communication in Accra. Their diverse roles and experiences strengthen the validity of the qualitative findings and reinforce the relevance of the perspectives captured under the CIPP evaluation themes.

From the survey data from table 1, the results show that Okada riders constituted 79.4% of the sample, while passengers accounted for 20.6%, reflecting the study's purposive emphasis on riders, who are the primary actors in the Okada system. This distribution aligns with Oteng-Ababio and Agyemang's (2015) observation that riders play a central role in shaping road safety outcomes in the Okada sector. That the NRSA officials interviewed acknowledged riders as the main target of their communication campaigns further validates the sampling structure adopted in this study.

Age distribution findings revealed that although youth (18-25 years) formed a significant group (24.9%), the majority of respondents were between 36-55 years (42.4%). This suggests that Okada riding and usage are not exclusive to young people, contradicting the popular assumption that Okada

riding is predominantly a youth-driven activity. This aligns with Tuffour (2014), who argued that Okada transport attracts individuals across age groups due to its relatively low capital entry requirement and the flexibility it offers for income generation. NRSA officials corroborated this by stating that they often encounter both young and middle-aged riders during safety education campaigns, reflecting the socio-economic breadth of people who rely on Okada either for livelihoods or mobility.

The gender distribution, 63.5% male and 36.5% female, demonstrates a notable presence of women within the Okada transport ecosystem, particularly as passengers. While riders remain largely male, the high proportion of female respondents who are predominantly passengers supports earlier empirical studies suggesting that women increasingly depend on Okada for fast, flexible mobility within congested rural-urban areas, where taxis and buses (trotro) are scarce (Agyekum-Boamah, 2012). NRSA officials indicated that women often express stronger safety concerns during educational campaigns, especially regarding helmet use and rider behaviour, highlighting gendered differences in risk perception that align with the survey findings.

Respondents were drawn from major Okada-intense areas; Circle, Lapaz, Madina, and Kasoa, which the NRSA officials also identified as “safety hotspots” due to heavy traffic flow and frequent motorcycle-related crashes. This geographical diversity enhances the representativeness of the study. Circle recorded the highest number of respondents (31.7%), consistent with its designation in transport literature as Ghana’s busiest mobility hub (Oteng-Ababio & Agyemang, 2012). NRSA officials interviewed noted that Okada safety regulations enforcement and communication exercises are more challenging in these areas due to congestion, rider indiscipline, and the sheer volume of daily movements, which supports the quantitative findings showing these locations as major centres for Okada use.

Educational levels varied widely, with 17.5% having no formal education and 24.3% having tertiary-level education. This heterogeneity reflects the socio-economic diversity of the Okada system and confirms findings from Nwagwu and Olatunji (2012) that transportation-related communication requires simplified messaging due to varying literacy levels among riders and users. NRSA officials echoed this challenge, explaining that communication materials often need translation, visual aids, and symbolic messaging to ensure comprehension across audiences. They also highlighted that low literacy levels sometimes hinder the uptake of behavior change communication, reflecting the moderate awareness and behavioral scores found in the quantitative analysis.

Thus, the demographic profile of the Okada transport system is a rather complex and diverse one, as there are young and older people, men and women, and people with all types of educational backgrounds. These findings are in perfect agreement with what the literature has to say and they were verified when the researcher interviewed the NRSA officials. In essence, this demographic results therefore form the basis of the subsequent sections in which the study delves into the awareness, perceptions, behavior and the extent to which the NRSA communication efforts are actually successful.

4.3 Discussion of Results

The findings on awareness of NRSA's safety communication show a moderate level of public exposure to, and recognition of, the authority's campaigns. For the quantitative data, the descriptive statistics was employed, and mean scores were used for the interpretation, where a mean score above 4.0 ($\mu > 4.0$) indicates strong agreement, a mean score between 3.0 to 4.0 ($3.0 < \mu < 4.0$) indicates a fair level of agreement, a mean score between 2.0 and 3.0 ($2.0 < \mu < 3.0$) represents a neutral stance,

while mean scores below 2.0 ($\mu > 2.0$) represents disagreement to various statements posed to the respondents. The descriptive statistics results are displayed in table 1 below.

Table 3: Descriptive Statistics Results

Variable	N	Mean	Std. Dev	Min	Max
Seen_NRSA_Messages	189	3.17	1.47	1	5
Messages_Clear	189	3.12	1.37	1	5
NRSA_Provides_Information	189	3.08	1.46	1	5
Accessible_Channels	189	2.98	1.45	1	5
Messages_Reach_Public	189	2.98	1.47	1	5
Okada_Risky	189	3.08	1.40	1	5
Riders_Disobey_Rules	189	3.13	1.45	1	5
Helmet_Important	189	3.07	1.40	1	5
Overspeeding_Danger	189	2.96	1.42	1	5
Overloading_Danger	189	3.03	1.37	1	5
Prefer_Safe_Riders	189	3.02	1.48	1	5
Helmet_Important_Trip	189	3.13	1.39	1	5
Avoid_Unsafe_Behaviour	189	3.05	1.48	1	5
Confident_Refusing_Unsafe	189	2.99	1.38	1	5
Follow_Traffic_Rules	189	2.96	1.48	1	5
NRSA_Influences_Decisions	189	2.84	1.38	1	5
NRSA_Increases_Awareness	189	2.94	1.47	1	5
NRSA_Encourages_Safety	189	3.16	1.37	1	5
NRSA_Reduces_Accidents	189	3.05	1.39	1	5

More_NRSA_Education_Needed	189	2.93	1.41	1	5
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Source; field survey, 2025

4.3.1 Awareness level of NRSA’s Okada Safety Campaigns

From the descriptive statistics results, the highest mean scoring item; *“I have seen NRSA messages on Okada safety”* (Mean = 3.17), suggests that respondents generally acknowledge the existence of safety communication efforts. However, the two supporting items; *“The channels used by NRSA are accessible to me”* (Mean = 2.98) and *“NRSA messages reach a large number of people”* (Mean = 2.98), indicate that although safety information is visible, its reach and accessibility remain quite limited. This moderate awareness level aligns with earlier studies on transport-related communication in Ghana, which show that road safety messaging often suffers from inconsistent implementation and inadequate dissemination, especially within informal transport sectors (Marnah & Manortey, 2022). According to NRSA officials interviewed, the authority undertakes multiple forms of communication, radio jingles, community outreach visits, social media posts, stakeholder forums and periodic enforcement-backed sensitization. However, they emphasized that budget limitations, irregular airtime purchases, lack of localized messaging, and the absence of sustained outreach cycles undermine message frequency and coverage, which directly corresponds with the moderate survey ratings.

These findings reflect a broader trend in the literature where SBCC outcomes are weakened when communication is occasional rather than continuous, and when audiences cannot access messages through their preferred communication channels (Nthoki, 2025). For Okada riders, the informal nature of their work means many spend long hours on the road and may miss radio or TV

broadcasts, a challenge highlighted by Oteng-Ababio and Agyemang (2012), who noted that the mobility patterns of riders limit their ability to benefit from mass media campaigns. Several NRSA officials reiterated this point, explaining that riders often do not have consistent access to mainstream media channels, and that physical outreach in hotspots is far more effective, but costlier. This mirrors SBCC principles, which emphasize multi-level, audience-tailored communication to ensure that messages reach those most at risk.

The Theory of Planned Behavior (TPB) also offers insight into the moderate awareness scores. According to TPB, awareness alone is insufficient for behavioural change; individuals need frequent cues, reinforcement, and accessible information to shift attitudes or strengthen perceived behavioural control. The modest awareness levels found in this study therefore reflect the limitations of NRSA's communication strategies in shaping riders' internal behavioural predictors. An NRSA official echoed this by stating, *"People see the messages, but they are not consistently exposed enough for it to influence their judgment or riding habits."* This suggests that NRSA's current communication approach may not provide the repeated exposures needed to sustain message recall and influence decision-making.

Furthermore, the moderate awareness scores align with findings from Nwagwu & Olatunji (2012), who observed that transport safety communication in West Africa often fails to penetrate deeply due to inconsistent funding, lack of localized strategy, and weak stakeholder collaboration. These same issues were identified by NRSA officers, who noted that the authority does not always collaborate sufficiently with rider unions, metropolitan assemblies, private media houses, and community leaders to ensure broader dissemination. This lack of coordinated multi-stakeholder participation weakens message reach, an issue also highlighted in the CIPP framework, where inadequate "inputs"

(resources, partnerships, content design) limit the “process” (dissemination) and eventually the “product” (awareness and behaviour change).

From the above survey and interview findings, both the survey results and the interview narratives reveal that NRSA’s communication strategies have achieved visibility but not saturation. Awareness is present but inconsistent, reflecting a communication environment where the public recognizes NRSA as a safety authority, yet does not perceive its messages as widely or consistently accessible. The empirical literature supports this interpretation, suggesting that unless NRSA strengthens the intensity, frequency, cultural relevance, and channel diversity of its campaigns, particularly in high-risk Okada communities, awareness will remain moderate and unlikely to translate into strong behavioural impact.

4.3.2 Perception of Okada Safety Risks

The survey results reveal that respondents hold a moderate but significant perception of the risks associated with Okada transport. Key indicators such as “*Riders disobey rules*” (Mean = 3.13), “*Okada is risky*” (Mean = 3.08), “*Helmet importance*” (Mean = 3.07), and “*Overloading danger*” (Mean = 3.03) demonstrate that riders and passengers generally recognize Okada as a high-risk activity. These results align closely with empirical literature documenting the accident-prone nature of motorcycle transport in Ghana and West Africa. Studies by Iribhogbe and Odai (2009), Agyekum-Boamah (2012), and Zava (2021) consistently show that Okada operations are associated with high levels of crashes, poor compliance with traffic regulations, and unsafe behaviours such as over speeding, overloading, and non-use of helmets. The moderate mean scores observed in this study therefore reflect a realistic understanding of the risk environment, yet they also reveal a lack of strong or urgent perception of danger among respondents.

The qualitative interviews with NRSA officials further reinforce this pattern. Officials noted that although the majority of riders and passengers are aware that Okada use is risky, many still underestimate the severity of potential injuries or believe that accidents are “rare” or “unlikely to happen to them.” This perception gap aligns with earlier findings that Okada riders often normalize risk as part of their daily economic activity (Oteng-Ababio & Agyemang, 2015). NRSA officials stressed that familiarity with risk reduces fear, leading riders to downplay dangers even when they have witnessed or experienced accidents. This psychological normalization of risk is consistent with the Theory of Planned Behavior (TPB), which posits that knowledge of risk alone does not lead to behaviour change unless accompanied by strong attitudes, supportive social norms, and high perceived behavioural control.

The results also highlight an interesting paradox: although respondents acknowledge the importance of helmet use and other safety practices, the willingness to change behaviour remains low. This reflects TPB’s assertion that risk perception must be accompanied by confidence in one’s ability to act safely, as well as external factors such as enforcement and availability of safety equipment. For example, NRSA officials pointed out that some riders cite financial constraints, heat and discomfort, or peer pressure as reasons for not wearing helmets consistently. As a result, their perception of risk does not translate into safer riding behaviour. This gap is also reflected in the survey’s moderate safety behaviour scores discussed later.

It is also important to situate these findings within broader structural and environmental conditions. Respondents and NRSA officials emphasized poor road conditions, traffic congestion, and weak enforcement as contributing to unsafe riding practices, factors well-documented in the literature. Tuffour (2014), for instance, argues that the structural design of urban transport systems in Ghana often compels riders to weave through traffic, speed, or take shortcuts, increasing both the perception

and the reality of risk. Riders in this study echoed similar sentiments, noting that congested routes like Circle, Lapaz, and Madina require “agile manoeuvring,” which they know is risky but consider unavoidable.

Furthermore, the moderate risk perception scores support the broader SBCC argument that communication must not only inform but also shift attitudes and social norms. Nwagwu and Olatunji (2012) contend that behaviour change is more effective when communication campaigns address the underlying social environment, including peer influence, economic survival, and cultural acceptance of unsafe practices. NRSA officials confirmed that many riders adopt unsafe behaviours not just out of ignorance but due to “group norms” within Okada stations, where riders imitate each other and resist being seen as timid or overly cautious. This social dynamic weakens individual perceptions of risk and reinforces the need for targeted communication interventions focused on social and peer-based influence.

Finally, the results highlight the challenge noted widely in the literature: riders and passengers often recognize that Okada is risky, yet they continue to use or operate it because of economic necessity, speed, and lack of transport alternatives. Oteng-Ababio & Agyemang (2012) and Agyekum-Boamah (2012) both emphasize that in contexts where public transport is inefficient, users choose Okada despite understanding the risks. This study’s findings reflect the same pattern, underscoring that perceptions of risk are shaped not only by safety concerns but also by socio-economic realities.

Thus, the moderate risk perception scores from the quantitative analysis, reinforced by qualitative insights from NRSA officials, show that while awareness of Okada-related dangers exists, it is not strong enough to trigger consistent behavioural change. This limited perception of risk, when viewed in relation to empirical literature and behavioural theory, highlights the continuing need for targeted,

multi-layered communication strategies that intensify public understanding of risk while addressing broader structural and social influences on rider behaviour.

4.3.3 Discussion of Safety Behaviour Among Riders and Passengers

The survey findings on safety behaviour reveal moderate adherence to safe riding practices among both Okada riders and passengers. The mean scores for statements such as *“I wear a helmet or ensure the rider wears one”* (Mean = 3.13), *“I avoid unsafe riding behaviours”* (Mean = 3.05), and *“I feel confident refusing unsafe rides”* (Mean = 2.99) indicate that although respondents are aware of the importance of safety practices, their actual behaviours remain inconsistent. These scores suggest that safety behaviour is influenced by a mixture of personal attitudes, situational pressures, and broader contextual factors, a pattern documented extensively in prior studies on Okada safety. For example, Agyekum-Boamah (2012) and Iribhogbe & Odai (2009) found that riders often acknowledge safety rules but fail to comply due to convenience, time pressure, economic incentives, or lax enforcement. The moderate scores in this study therefore match existing literature that highlights a persistent gap between safety knowledge and safety practice.

The qualitative data from NRSA officials reinforce this pattern. One recurrent theme was the economic rationality that shapes riders’ behaviour. Officials explained that many Okada riders prioritize quick turnover, higher trip frequency, and customer satisfaction over strict compliance with safety guidelines. As one official noted, *“If they ride slowly or insist on helmets, some passengers will simply choose another rider who is faster.”* This comment illustrates how market competition and customer expectations feed into risky behaviours, an observation consistent with Oteng-Ababio & Agyemang’s (2015) argument that Okada operations exist within a competitive and informal transport economy that often rewards risk-taking. This also explains the low confidence score (Mean

= 2.99) for refusing unsafe rides by passengers. Respondents reported that urgency, lack of transport alternatives, and fear of argument often force them to accept unsafe riding conditions.

The findings are also well-aligned with the Theory of Planned Behavior (TPB), which posits that behaviour is shaped by attitudes, subjective norms, and perceived behavioural control. In this study, respondents appear to have positive attitudes toward safety (e.g., recognizing helmet importance), yet the influence of subjective norms, especially those within Okada stations, seems to weaken safety behaviour. NRSA officials noted that many riders emulate the conduct of their peers, and unsafe behaviours such as weaving through traffic, speeding, or riding without helmets have become normalized in certain hotspots. These norms discourage individual compliance even when riders intellectually acknowledge the risks. Similarly, perceived behavioural control appears weak: passengers often feel they cannot influence rider behaviour, while riders feel constrained by customer expectations, time pressure, and fear of losing income. These findings mirror studies such as Nwagwu & Olatunji (2012), who highlight that TPB constructs remain powerful predictors of transport-related safety compliance in developing urban contexts.

Moreover, the moderate safety behaviour scores expose structural constraints previously highlighted in the literature. Poor road designs, traffic congestion, and a lack of dedicated motorcycle lanes, observed by Tuffour (2014) increase the likelihood of unsafe maneuvers even when riders intend to behave safely. NRSA officials echoed this sentiment, noting that environmental challenges often force riders to adopt risky shortcuts, ride on shoulders, or perform sudden lane switching. This structural dimension reinforces that safety behaviour cannot be understood solely from an individual perspective; rather, it is the outcome of the interaction between personal choices and external conditions.

The findings also reveal the limitations of current safety communication strategies, as discussed in earlier sections. Although respondents acknowledge the importance of safety, their actions do not consistently reflect this awareness. This suggests that NRSA messages may be increasing knowledge but not sufficiently shifting attitudes, social norms, or behavioural control factors. According to SBCC principles, behaviour change requires repeated exposure, community engagement, and the involvement of targeted influencers such as station leaders and union representatives. NRSA officials confirmed that campaigns often lack the intensity and consistency needed to transform deep-seated behavioural habits within the Okada community. The CIPP framework also helps explain this gap: while NRSA has made commendable efforts in developing safety messages (Input) and distributing them (Process), the observable behaviour outcomes (Product) remain modest, indicating room for strategic enhancement.

Another important insight from both quantitative and qualitative data is that passengers often feel disempowered in promoting safety. The score on “*confidence refusing unsafe rides*” (Mean = 2.99) suggests that many passengers reluctantly accept risky riding behaviour. Interviews with NRSA officials suggest that educating passengers is more challenging because they are more dispersed and less formally organized than riders. This contributes to limited passenger assertiveness, reinforcing findings by Ukwai et al. (2013) that passengers in motorcycle-dominated transport systems usually possess low bargaining power, particularly during peak traffic hours or emergency travel.

In summary, the moderate safety behaviour observed among both riders and passengers reflects a complex interplay of personal attitudes, socio-economic pressures, environmental realities, and social norms. These results align with empirical literature and behavioural theory, revealing that while awareness of safety practices may be improving, behaviour has not yet shifted sufficiently. The findings point to the necessity of strengthening NRSA’s communication strategies, intensifying

community-level engagements, and pairing communication with stronger enforcement and structural reforms. Without addressing the full ecosystem of influences on safety behaviour, significant and sustained behavioural change among Okada users will remain difficult to achieve.

4.3.4 Discussion of Perceived Effectiveness of NRSA Campaigns

The findings on the perceived effectiveness of NRSA's communication campaigns indicate that while respondents recognize the presence and intentions of these campaigns, their influence on actual behaviour remains modest. The statement "*NRSA campaigns encourage safe behaviour*" had the highest mean score (Mean = 3.16), suggesting that the public perceives the campaigns as generally positive and well-intentioned. Likewise, "*NRSA campaigns reduce Okada accidents*" (Mean = 3.05) and "*NRSA campaigns increase awareness*" (Mean = 2.94) show moderate agreement that NRSA's initiatives contribute to safety awareness and accident reduction. However, the lowest score in this category, "*NRSA messages influence my decisions when using Okada*" (Mean = 2.84), reveals a crucial gap: although people see, hear, and sometimes appreciate NRSA's messages, these messages do not significantly shape their riding or commuting choices. This pattern reflects what many behaviour change scholars describe as the "awareness-action gap," where knowledge does not automatically translate into behavioural adjustment.

The qualitative insights from the 10 NRSA officials interviewed support this interpretation. Officials consistently highlighted that while their campaigns often succeed in raising awareness, they struggle to achieve deep, sustained behaviour change. Several reasons were cited, including irregular campaign cycles, limited budget for media placements, insufficient field personnel, and lack of follow-up enforcement. One officer stated, "*People listen to the messages, but once we leave the community, things go back to normal.*" This reinforces the empirical literature which argues that

behaviour change communication must be continuous, repetitive, and well-coordinated to achieve meaningful transformation (Nwagwu & Olatunji, 2012; Nthoki, 2025). Sporadic campaigns may generate knowledge but are unlikely to influence long-term behaviour, particularly in high-risk transport environments.

The findings also align with the broader literature on Okada transport safety in Ghana and West Africa. Studies by Iribhogbe & Odai (2009), Agyekum-Boamah (2012) and Zava (2021) show that knowledge of road safety rules among motorcyclists is often high, yet compliance remains low. This parallels the quantitative results, where respondents agreed that NRSA promotes safety but did not strongly agree that campaigns affect their decisions. According to NRSA officers, this disconnect is exacerbated by riders' economic constraints. Because Okada is a livelihood strategy for many young and middle-aged men, riders often take risks, such as over-speeding, weaving through traffic, or carrying multiple passengers, to maximize income, even when they know such behaviours are unsafe. These findings echo Oteng-Ababio & Agyemang's (2015) argument that Okada riding is embedded within socio-economic pressures that inevitably undermine safety interventions which do not address livelihood realities.

From a theoretical perspective, the results can also be interpreted through the Theory of Planned Behavior (TPB). While NRSA campaigns may improve knowledge (affecting *attitudes*), they do not sufficiently shift *subjective norms* or *perceived behavioural control*, which TPB identifies as crucial determinants of behaviour change. Riders may agree that safe riding is desirable, but if their peers, station leaders, or passengers encourage fast or risky riding, the subjective norm weakens the influence of NRSA messages. Similarly, if riders feel constrained by time pressure, traffic congestion, or customer expectations, their perceived behavioural control becomes too weak for them to act

safely. This theoretical interpretation explains why respondents reported only moderate influence of NRSA messages on actual decisions, even though they acknowledged their general usefulness.

The SBCC framework also provides insight into the findings. SBCC emphasizes multi-level communication that targets not just individuals but also social groups, systems, and enabling environments. NRSA officials acknowledged that most of their campaigns emphasize individual awareness, such as wearing helmets, obeying traffic rules, or avoiding dangerous maneuvers, but do not adequately address structural and social barriers such as weak enforcement, dangerous road conditions, or peer pressure at Okada stations. Without addressing these external factors, even well-designed communication campaigns often fail to achieve strong behavioural outcomes. This aligns with Nthoki (2025), who argues that SBCC interventions must be supported by structural reinforcements, such as consistent enforcement and community mobilization, for sustainable behaviour change to occur.

Furthermore, the results highlight a critical issue emphasized in the CIPP evaluation framework: communication alone cannot achieve desired “product” outcomes (actual safety behaviour) if “context” (high unemployment, informal transport systems), “input” (limited resources), and “process” (irregular dissemination) are weak. The NRSA officials interviewed acknowledged that their campaigns often lack the intensity and continuity required to generate strong behavioural impact. For instance, campaigns in hotspots like Circle, Lapaz, and Kasoa are sometimes conducted only once or twice a year due to budget constraints, despite these areas being high-risk zones. This inconsistency weakens message retention and makes it difficult for the public to internalize safety behaviours. As one official put it, *“We are doing the work, but not at the scale the problem demands.”*

Another factor influencing perceived effectiveness is passenger behaviour. Although passengers can demand safer rides, the quantitative results show low confidence in refusing unsafe trips (Mean = 2.99). NRSA officials also stated that passengers are difficult to reach with communication because they are dispersed, transient, and not organized into groups like riders. This makes passengers less empowered and less likely to enforce safety behaviour, thereby reducing the overall impact of NRSA messaging. This observation aligns with Ukwayi et al. (2013), who found that passengers often tolerate unsafe riding due to urgency, limited transport options, or fear of conflict.

In summary, both the quantitative and qualitative findings reveal that NRSA's campaigns have achieved moderate success in raising awareness but limited success in influencing behavioural decisions. This pattern mirrors the broader empirical literature and reflects the complex interaction of economic, social, and structural factors that shape safety behaviour in the Okada sector. To enhance effectiveness, NRSA must adopt more intensive, multi-level, and community-driven communication strategies, supported by consistent enforcement and structural improvements in urban mobility.

4.3.5 Assessing NRSA's Communication Strategy using CIPP

The primary objective of this study was to assess the communication strategies of the National Road Safety Authority (NRSA) in educating the public on the risks of Okada use in Accra. To achieve this objective, the researcher employed the CIPP framework, to analyze the interview responses from the NRSA officials. The CIPP framework offer a structured lens through which the NRSA's safety communication efforts can be evaluated.

From the perspective of the NRSA officials, the context of Okada operations in Accra is characterized by persistent road safety challenges, urban congestion, unemployment, and inadequate public transport alternatives. Officials highlighted that the proliferation of Okada is driven primarily by economic necessity, confirming empirical studies such as Oteng-Ababio and Agyemang (2015) and Tuffour (2014), who observed that Okada riding is often a survival strategy for youth and low-income earners. The interviewed officials described areas such as Circle, Lapaz, and Kasoa as “accident hotspots,” reinforcing earlier findings from Marnah & Manortey (2022) that motorcycle-related injuries and fatalities have risen dramatically in major Ghanaian cities. This contextual understanding explains why communication interventions are necessary and aligns with the “Context” element of the CIPP model, which requires evaluators to understand the conditions under which programs operate.

The “Input” component focuses on the resources, tools, partnerships, and strategies NRSA uses to deliver safety communication. NRSA officials reported that although the Authority employs a combination of radio announcements, community outreach, school-based sensitization, station visits, billboards, social media, and stakeholder forums, their efforts are significantly constrained by limited funding, inadequate logistics, and insufficient staff capacity. This finding resonates with road safety literature indicating that African safety institutions often lack sustainable funding to support continuous behaviour change campaigns (Nwagwu & Olatunji, 2012; Marnah & Manortey, 2022). Officials explained that radio airtime and billboard placement are expensive and often beyond the Authority’s budget, resulting in irregular dissemination and weak reinforcement of messages. These limitations weaken the ability of NRSA to deliver targeted, audience-specific safety communication, a requirement emphasized in SBCC principles. In essence, the “Input” conditions, budget

limitations, inadequate personnel, and poor logistical support, emerge as major barriers to the full realization of NRSA's communication mandate.

The "Process" dimension examines how communication strategies are implemented. Interviews revealed that NRSA officers conduct roadside sensitization during enforcement exercises, collaborate with police on "stop-and-educate" campaigns, and periodically visit Okada stations for face-to-face engagements. However, the process is hindered by inconsistent outreach, often caused by financial or operational constraints. Several officers stressed that outreach is most effective when done consistently, but irregularity undermines retention and impact. This finding is consistent with behaviour change literature and SBCC theory, which argue that communication must be repetitive, interactive, and community-grounded to achieve behavioural impact (Nthoki, 2025). Additionally, language barriers and cultural dynamics were identified as challenges; many riders do not speak English fluently, and the effectiveness of messaging is reduced when materials are not translated or culturally adapted. This is supported by empirical findings from Oteng-Ababio & Agyemang (2012), who noted that transport safety messages often fail when not delivered in local dialects understood by informal sector workers. Furthermore, officials described resistance from riders who perceive safety campaigns as interruptions to their work, underscoring the socio-economic pressures shaping the implementation environment.

The "Product" element of the CIPP framework concerns the outcomes and impact of communication strategies. NRSA officials rated the outcomes of their campaigns as moderately successful, echoing the quantitative findings which showed that while awareness of NRSA campaigns was moderate (Mean = 3.0), direct influence on behavioural decisions was lower (Mean = 2.84). Officials observed improvements in helmet use awareness and increased willingness among some riders to engage in safety discussions, but they also noted that behavioural change remains limited

due to persistent structural and economic constraints. This is consistent with TPB, which posits that knowledge does not automatically translate into behaviour unless supported by improved attitudes, social norms, and perceived behavioural control. Officials also acknowledged that, in areas where campaigns were frequently conducted, such as Afienya, Pokuase, and portions of Madina, they observed some positive shifts in rider attitude. However, these changes were not widespread, illustrating the partial and uneven nature of the program's "Product" outcomes. The limited impact mirrors empirical studies like Agyekum-Boamah (2012), which emphasize that enforcement, economic alternatives, and structural interventions are necessary to sustain communication-driven behaviour change in the Okada sector.

In conclusion, these findings demonstrate that NRSA's communication interventions operate within a challenging contextual environment shaped by socio-economic pressures, infrastructural deficits, and limited institutional capacity. While the Authority employs a variety of communication tools, constraints related to funding, logistics, and language restrict the reach and consistency of campaign delivery. These constraints undermine the potential effectiveness of NRSA's communication strategies and campaigns, and explain why awareness is moderate, but behaviour change remains modest. The findings are also consistent with SBCC theory, which reinforces that effective behaviour change requires both strong communication processes and supportive environmental and input conditions. Additionally, the insights shared by NRSA officials closely align with the quantitative results, strengthening the validity of the interpretation that communication has had some impact, but not yet at the scale necessary to meaningfully reduce Okada-related accidents in Accra.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter provides the general conclusions drawn from the data analysis. The chapter presents the recommendations necessary to enhance the effectiveness of NRSA's communication strategies.

5.2 Conclusions

This study set out to assess the communication strategies used by the National Road Safety Authority (NRSA) to educate the public about the risks of commercial motorcycle (Okada) use in Accra. The evidence, drawn from a mixed-methods survey of 189 respondents (150 riders, 39 passengers) and interviews with 10 NRSA officials, shows that NRSA's campaigns are visible and broadly recognized, but they fall short of achieving consistent, widespread behavioural change among riders and passengers. Respondents reported moderate awareness of NRSA messages (e.g., mean scores around 3.0 on visibility and clarity items), yet the influence of those messages on actual decision-making was lower (mean = 2.84), indicating a persistent awareness-action gap.

Three interlinked explanations account for this gap. First, resource and input constraints (limited funding, irregular airtime and billboard placement, and insufficient field personnel) reduce campaign intensity, reach, and repetition, key ingredients for social and behaviour change communication (SBCC). NRSA officers acknowledged that outreach is often episodic rather than continuous, limiting message retention in high-risk hotspots such as Circle, Lapaz, Madina, and Kasoa.

Second, social and structural factors weaken the translation of awareness into safer practice. Riders operate in a competitive, informal market where income pressures, peer norms (station culture), and

customer expectations often incentivize risky behaviour (overspeeding, helmet non-use, overloading), eroding the behavioural impact of safety messaging. Passengers, who could act as demand-side enforcers, report low confidence in refusing unsafe rides. Third, the campaigns' design and process show limited tailoring and community embeddedness: language barriers, insufficient localization of messages, and weak collaboration with rider unions and local actors reduce message relevance and acceptability.

Viewed through the CIPP (Context-Input-Process-Product) and TPB (Theory of Planned Behavior) lenses, the study finds that while NRSA's inputs and processes produce some product-level gains (increased awareness and intermittent improvements in helmet awareness), these are partial and uneven. Awareness alone has not been sufficient to shift attitudes, subjective norms, or perceived behavioural control in ways that produce sustained safe riding behaviour. The evidence therefore points to a communication programme that has established visibility and legitimacy but requires strategic intensification, multi-level engagement, and structural support if it is to deliver measurable reductions in Okada-related accidents in Accra.

5.3 Recommendations

Based on the findings of this study, the following key recommendations are proposed to strengthen the National Road Safety Authority's (NRSA's) communication strategies on Okada safety and to enhance safety behavioral outcomes among riders and passengers.

1. Intensify and Sustain Communication Campaigns Through Increased Funding and Resource Allocation

NRSA needs a more predictable and adequate funding structure dedicated specifically to Okada-related education. The study showed that campaign frequency and visibility are limited by irregular resource flows, resulting in short bursts of activity rather than sustained engagement. To maximize behavioural impact, NRSA should advocate for a ring-fenced budget within government allocations, as well as explore partnerships with development agencies, telecom companies, and corporate sponsors. Stable funding would allow for year-round, high-frequency messaging, routine field presence in hotspots, and continuous placement of billboards, radio jingles, and community announcements. Consistency is crucial for reinforcing the safety norms that reduce risky riding behaviour.

2. Adopt Targeted, Localized and Audience-Specific Messaging

Findings revealed gaps in message relevance due to language barriers, low literacy levels, and insufficient localization. NRSA should therefore segment its audience, riders, passengers, union leaders, and community members, and tailor the tone, language, and format of messages accordingly. For riders, messages should focus on helmet use, speed moderation, avoid overloading, and route discipline. For passengers, emphasis should be placed on asserting their safety rights and refusing unsafe rides. Content must be translated into major local languages and disseminated through communication channels that rider's access daily (e.g., station announcements, market-center megaphones, mobile platforms, and short video clips on social media). Tailoring increases message comprehension, relatability, and retention.

3. Strengthen Collaboration with Rider Unions, Community Influencers, and Enforcement Agencies

The study indicates that NRSA's communication efforts are weakened by limited partnerships with grassroots actors. To address this, NRSA should develop a structured collaboration framework with Okada station leaders, transport unions, assembly members, and community opinion leaders. These

stakeholders are influential in shaping rider norms and can reinforce safety behaviours more effectively than external actors. NRSA should also work closely with the Motor Traffic and Transport Department (MTTD) to synchronize enforcement with education. Regular joint operations, community engagement sessions, and safety clinics at stations will create immediate feedback loops and promote shared ownership of safety outcomes.

4. Combine Communication with Incentives and Visible Enforcement to Strengthen Behavioural Change

Communication alone cannot drive behavioral changes in contexts where economic pressures and peer norms sustain risky practices. NRSA should pair safety messaging with a balanced mix of enforcement (e.g., routine checks, penalties for non-compliance) and positive incentives. Recognizing compliant riders and stations through certification, reflective jackets, fuel vouchers, or branded helmets can encourage the adoption of safe practices. When riders see that safe behaviour leads to tangible benefits, not just warnings, they are more likely to internalize and sustain recommended actions.

5. Enhance Monitoring, Evaluation, and Data-Driven Adaptation of Campaign Strategies

The study showed that NRSA lacks strong M&E systems to track behavioral outcomes of its campaigns. To improve effectiveness, NRSA should develop clear, measurable indicators such as helmet-use rates in hotspots, levels of compliance with traffic rules, passenger willingness to refuse unsafe rides, and accident trends involving motorcycles. Regular data collection, rapid assessments, and feedback sessions with riders and union leaders will help identify what is working and where adjustments are needed. A learning-oriented M&E system will enable NRSA to refine its strategies, allocate resources more efficiently, and build evidence for scaling successful interventions.

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APPENDICES I

QUESTIONNAIRE FOR OKADA USERS / PASSENGERS

This questionnaire aims to gather information to assess the communication strategies employed by the National Road Safety Authority (NRSA) in educating the public about the risks associated with Okada use in Accra. The data collected will be used strictly for academic purposes.

Participants are kindly encouraged to respond honestly. Your anonymity and confidentiality are fully guaranteed.

Thank you for your participation.

SECTION A: RESPONDENT INFORMATION

(Tick or fill as appropriate)

1. **Respondent Category:**

Okada Rider Okada Passenger/User

2. **Age:**

18-25 26-35 36-45 46-55 56+

3. **Gender:**

Male Female

4. **Location of Interview:**

Circle Lapaz Madina Kasoa

5. **Education Level:**

None Primary JHS SHS Tertiary

6. **Frequency of Okada Use (Passengers only):**

Daily 2-3 times weekly Weekly Occasionally Rarely (*If Rider, skip*)

7. **Years of Riding Experience (Riders only):**

_____ years (*If Passenger, skip*)

SECTION B: AWARENESS OF NRSA SAFETY COMMUNICATION

Likert Scale Key

For all questions below, use the following scale:

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

SECTION B: AWARENESS OF NRSA SAFETY COMMUNICATION

Statements	1	2	3	4	5
I have seen or heard NRSA messages about Okada safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA safety messages are clear and easy to understand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA provides regular information on Okada safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA messages use channels that are accessible to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA messages reach most riders and passengers in Accra.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION C: PERCEPTIONS OF OKADA SAFETY RISKS

Statements	1	2	3	4	5
Okada transport is generally risky for road users.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many Okada riders do not follow traffic rules.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Riding without a helmet is dangerous.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overspeeding contributes to most Okada accidents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carrying more than one passenger increases danger.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION D: SAFETY BEHAVIOUR (RIDER & PASSENGER BEHAVIOUR)

Statements	1	2	3	4	5
I prefer or choose riders who ride safely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I consider helmet use important for every trip.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I avoid unsafe riding behaviours (or avoid unsafe riders).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel confident refusing unsafe rides or behaviours.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I follow (or expect riders to follow) traffic rules at all times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(NOTE: Riders interpret these as self-behaviour; passengers interpret them as their expectations/choices.)

SECTION E: PERCEIVED EFFECTIVENESS OF NRSA CAMPAIGNS

Statements	1	2	3	4	5
NRSA messages influence my decisions about Okada safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA campaigns have increased my awareness of safety risks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA messages encourage me to adopt safer behaviours.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA campaigns can reduce Okada-related accidents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRSA should increase the frequency of Okada-safety education.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. What suggestions do you have to improve NRSA's communication?

INTERVIEW GUIDE FOR NRSA OFFICIALS

1. Can you describe your role in the NRSA and how it relates to road safety communication?
2. How would you describe the current situation of Okada-related safety issues in Accra?
3. What specific problems or risks motivated the NRSA to design communication interventions for Okada riders and users?
4. How do you decide the type of messages that should be communicated to riders and the general public?
5. What communication strategies does NRSA use to engage Okada riders and passengers, and why were these approaches chosen?
6. How does NRSA select the channels or platforms for disseminating Okada safety messages?
7. What factors or research insights influence the development of your safety messages?
8. Can you walk me through how Okada-safety campaigns are implemented in high-traffic areas such as Circle, Lapaz, Madina, and Kasoa?
9. What challenges do you typically face when trying to communicate safety practices to Okada riders and passengers?
10. How does NRSA monitor or follow up on the communication campaigns it delivers?
11. From your observations, what changes, if any, have occurred among riders and users as a result of your communication efforts?

12. How do you assess whether your campaigns are achieving their intended impact?
13. In your view, what aspects of NRSA's communication strategies work well for Okada-related safety issues?
14. What areas of communication strategy do you think need improvement or rethinking?
15. What recommendations would you propose to make future Okada safety communication more effective?

APPENDICES II

Main Theme	Sub-theme	Codes	Sample Indicators
Context	Nature of Okada issues	Accidents, risk behaviour, congestion	“Riders disobey laws”, riders do not adhere to safety protocols. Riders over-speed
Context	Rationale for communication	High accident rates, public pressure, high death rates, disabilities arising from okada accidents	“We needed to intervene”
Input	Strategy design	communication, advocacy, mass media	“We use radio and community outreach”
Input	Message development	Data-driven, stakeholder input	“Messages come from crash analysis”
Input	Resources	Budget limits, staff, partnerships	“Limited funds affect coverage”
Process	Implementation	Sensitization, outreach, media	“We go to hotspots to educate”
Process	Challenges	Rider attitudes, language, funding	“Some riders ignore messages”
Process	Monitoring	Field reports, follow-ups	“We track activities weekly”

Product	Behavioural change	Helmet use, safer riding	“Some riders are improving”
Product	Impact level	Moderate success, message recall	“People remember our campaigns”
Recommendations	Improvements	More frequency, local languages	“We should intensify education”
Recommendations	Policy changes	Enforcement, structural support	“More support from MTTD needed”