

Mobility Challenges Faced by Rural Women and the Implementation of the National Transport Policy in Busega District, Tanzania

*Deborah Andrew Ngusa**

Abstract

This article is a product of a study that sought to analyse mobility challenges faced by rural women in Busega District, Tanzania, and examine the practice of implementing the National Transport Policy of 2003. Through adopting the intersectionality theory, the study sought to establish a connection between the implementation of the National Transport Policy (NTP) and its potential to improve the mobility of rural women. The study utilized a cross-sectional research design to collect data from a sample of 210 respondents through a household survey, interviews, focus group discussions, non-participant observation, and documentary review. Thematic analysis was applied to qualitative data, while descriptive statistics and Chi-square test were used for quantitative data. Based on the distribution analysis, it is evident that the majority of rural women were compelled to walk a long distance to access public transportation services. In addition, the Chi-square test results indicate a statistically significant difference at $p < 0.001$ from the five-point Likert-scale, implying that rural women's satisfaction level on the access to transportation services differed based on the location of their households. The study concludes that despite the intentions of the NTP, its practical implementation has failed to adequately address the unique transport needs and mobility challenges faced by rural women. The study recommends that the government undertake an intersectional analysis of the existing transport policy by identifying and addressing the mobility challenges faced by rural women when accessing public transportation services. This should be achieved by implementing measures that improve the accessibility and availability of transportation options for rural women. Also, the government can promote an equitable and inclusive transportation system that caters for the needs of all citizens.

Keywords: *intersection, mobility, Tanzania national transport policy, rural women*

1. Introduction

National transport policies emerge as beacons of hope, providing comprehensive frameworks for addressing transportation-related challenges across nations (Rode et al., 2019). The ability of nations to enact and enforce transportation policies plays a pivotal role in facilitating the seamless movement of people, goods, and services across geographical boundaries. Effective implementation of transport policies is highly required to improve access to transportation and reduce geographical barriers. Specifically, an effective implementation of the transport policy can be better understood and facilitated

* Institute of Development Studies, University of Dodoma, Tanzania: deborah.ngusa@udom.ac.tz

by applying the intersectionality theory, which acknowledges the interconnected and overlapping social identities and systems that influence mobility experiences and access among diverse individuals and communities. In this article, successful implementation of the Tanzania National Transport Policy (NTP) requires a holistic and integrated approach, which is exemplified by the utilization of the intersectionality theory, to elucidate the interplay between the NTP and mobility. As such, the intersectionality theory has been used in this study to explain the practice of implementing the TNTP to enhance the mobility of rural women.

The concern of the implementation of the transport policy transcends borders, and is a shared challenge faced by both developed and developing countries, though differently. In many parts of the world, particularly in rural areas, the implementation of the policy remains inadequate, yielding unsatisfactory outcomes for improving people's ability to travel to various locations (Berg & Ihlström, 2019; Sewell et al., 2019). Evidence shows that, in England, despite the implementation of transport policies within countries in the European continent, there has been little national success in promoting active travel in the entire country (Bloyce & White, 2018). In China, despite the implementation of transport policies, some citizens still face challenges due to inequality as a result of various social, economic, and cultural factors that limit their ability to travel and access opportunities outside their local communities (Zhao & Yu, 2020). In Pakistan, the national transport strategy recognizes restricted access to transportation services as a major challenge, particularly for underserved rural areas with limited infrastructure (Starkey et al., 2021).

Simultaneously, a diverse range of challenges persist with regard to the implementation of transport services, as mobility options in Africa are still limited (Ehebrecht et al., 2018). As such, limited access to reliable and efficient public transportation in Africa hinders the potential for transforming rural development, addressing poverty, and reducing inequality (Murty & Shankar, 2020; Foley et al., 2022; Jennings et al., 2022). In Sub-Saharan Africa (SSA), the government has not managed to address challenges that are particularly acute, and rural women are among the people who are mostly affected by limited access to transportation (Afukaar et al., 2019; Ngezahayo et al., 2019; Jones et al., 2020). In West Africa, for example, low-income countries lack the evidence base to support the implementation of transport policies (Gorman et al., 2019). For instance, Nigeria has experienced inadequate access to transportation since the early 1970s, with little influence of the country's initiative to improve the situation (Abdulkarim, 2020). In East Africa—e.g., in Kenya—the strategies applied to improve transportation have not been successful in meeting the desired standard to effectively support people's mobility (Rajé et al., 2018). Also, although Rwanda has taken different approaches to improve transportation, people still face difficulties when travelling within the country from one location

to another (Loo & Siiba, 2019). The situation in Tanzania, an East African country, is no exception. Despite recent efforts to improve transportation infrastructure and services through the implementation of the NTP of 2003, many rural areas in Tanzania continue to have limited access to affordable and reliable transportation (Mulongo et al., 2020). This necessitates the implementation of a policy that underscores the imperative of promoting sustainable and accessible transportation services (URT, 2017).

With growing awareness of the crucial role that transportation plays in fostering economic development and societal well-being, governments across the globe are actively taking steps to implement and enhance transport policies tailored to their respective contexts. Similarly, the government of Tanzania developed the NTP, which outlines the country's transportation development goals and strategies for the next decade (Tanzarn, 2020). The policy has made strides in addressing transportation issues, although actual implementation remains uncertain, presenting a significant challenge that must be overcome to ensure tangible improvements in the transportation sector. It is possible that the NTP can impact rural women's mobility indirectly, particularly in terms of transportation (Rode et al., 2019; Phillips, 2022). Improving rural women's mobility requires effective implementation of the NTP that provides guidelines to develop "... efficient and cost-effective domestic and international transport services" (URT, 2003:2). Although the importance of achieving rural women's mobility through the implementation of the NTP is recognized, there exists a research gap regarding the specific challenges and barriers faced by rural women in relation to transportation, as well as the effectiveness of the policy measures in addressing these issues. Women, in particular, often face significant transportation challenges due to gender-based barriers that hinder their mobility (Al-Rashid et al., 2020; Iqbal et al., 2020). Limited empirical studies have focused on examining the direct impact of the policy on rural women's mobility, leaving a gap in understanding the extent to which the implementation of the policy has effectively improved their access to transportation services.

The study was conducted in Busega District as a representative case for assessing the effectiveness of implementing the transport policy in addressing the challenges of rural women's mobility. The study sought to address the following research questions: What are the key challenges faced by rural women in Busega District, Tanzania, in accessing transportation services? How does the implementation of the NTP impact their mobility? To answer these research questions, the means of transport used by rural women were examined. Distance to transportation hubs, transportation services, security concerns, availability of transportation options, and gender-sensitivity were examined to determine the mobility challenges faced by rural women. Furthermore, the analysis was done to assess whether the NTP has been effectively put into

practice, and the resulting achievement on rural women's access to transportation services and mobility. The analysis involved a thorough examination of the policy's provisions, highlighting their potential for transformative impact on rural women's mobility. Therefore, to ensure a comprehensive understanding of each pertinent aspect, contexts related to rural women mobility were identified to determine whether there were some elements indicating their implementation.

2. Rural Women's Mobility and Intersectionality Theory Lens

The study employed the Intersectionality Theory as a framework to elucidate the primary variables under examination. The Intersectionality Theory was developed in the late 1980s and early 1990s by Kimberlé Crenshaw, a feminist scholar in the United States. Crenshaw coined the term "intersectionality" to describe how women experienced a unique form of discrimination that was not adequately captured by the legal frameworks for addressing racism or sexism. The theory identifies the complex and intersecting factors that shape individuals' experiences of oppression and privilege (Ruiz et al., 2021; Simon et al., 2022). Crenshaw argued that women faced a form of "double jeopardy" that resulted from the intersection of both racism and sexism. The theory emphasizes the complexity of social identity and the ways in which different identities interact to shape individuals' experiences of oppression, privilege and discrimination. The main argument of the theory is that understanding and addressing socio-economic and political welfare require intersections that provide underlying policies, principles, concepts and mechanisms.

The Intersectionality Theory has garnered attention and sparked debates within academic and social justice circles. It offers a framework to analyse the complexities of social inequality and the interplay of various social identities. The theory has strength as it allows for a more comprehensive understanding of social inequality. To translate this statement into policy, could lead to the development and implementation of inclusive policies that aim to address systemic inequities and promote equal opportunities for all individuals, regardless of their intersecting identities. The theory provides assumptions that highlight the need for policies that acknowledge and address the complexity of individuals' experiences by considering their intersecting identities. By implementing inclusive and intersectional policies, societies can strive for greater equity, justice and inclusivity of the needs of all individuals. The theory underscores the vital importance of prioritizing the experiences and perspectives of marginalized individuals and communities, serving as a fundamental cornerstone for fostering inclusiveness in the formulation of policies. It recognizes that those at the intersections of multiple identities often face unique challenges that may differ from those faced by individuals with single-axis identities.

Critics argue that the theory can lead to a fragmented understanding of social issues. It has also been criticized for being too complex and abstract, making it difficult to apply to real-world situations. Also, scholars argue that the theory's focus on multiple identities and their intersection can make it challenging to analyse and address specific issues (Pinto, 2019; Few-Demo & Allen, 2020). Moreover, it has been accused of neglecting class-based analysis and the role of economic inequality in shaping individuals' experiences of oppression and privilege (Nazzal et al., 2022). The critics further argue that the theory's focus on identity politics can overshadow the importance of socio-economic class in shaping individuals' experiences to address problems facing marginalized individuals (Ma et al., 2022). Critics also contend that by placing strong emphasis on the experiences and voices of marginalized individuals and communities based on their intersecting identities, there is a risk of neglecting or overlooking other dimensions and perspectives that contribute to a comprehensive understanding of social issues. They maintain that focusing solely on specific identity factors may limit the scope of analysis, and fail to capture the full complexity and interconnectedness of societal challenges.

On the other hand, proponents of the intersectionality theory recognize the intersections of multiple identities to address the interconnectedness of social inequalities. The theory provides a framework for identifying root causes and promoting inclusive solutions that benefit all individuals and communities. Intersectionality promotes inclusivity, diversity and equal opportunities for all. In addition, intersectionality challenges essentialist perspectives that treat social identities as static and homogenous categories. Instead, it recognizes that identities are fluid and multifaceted, influenced by social, cultural and historical contexts. By emphasizing diversity within groups, intersectionality avoids oversimplification, and fosters a more nuanced understanding of the complexities of identity and oppression.

In contrast, opponents of the theory claim that intersectionality sometimes results in the prioritization of certain identities over others. This can lead to a mentality of 'oppression Olympics', where different groups compete for recognition and resources. They argue that the theory's complexity can make it challenging to implement in practice; potentially impeding effective policy development and activism. The debate is on whether it is necessary and useful to consider the diverse needs and experiences of different social groups when addressing socio-economic welfare (Yang et al., 2019; Verlinghieri & Schwanen, 2020).

However, the positive side of the debate lies in recognizing the importance of considering the diverse needs and experiences of different social groups, linked in this article with the transport policy. This recognition enables to explain the development of inclusive, equitable, and sustainable transportation systems that enhance accessibility, social inclusion, economic opportunities,

environmental justice, and participatory decision-making, ultimately promoting socio-economic welfare for all members of society. Scholars who support intersectionality in transportation emphasize the importance of considering the diverse needs and experiences of social groups (Rigon, 2022). This approach aligns with the mission of the NTP, which aims to intergrade transport infrastructure and operations to meet the needs of all people of travelling and transporting items (URT, 2023).

In this article, the NTP and rural women's mobility are the two main variables linked to the intersectionality theory. Rural women's mobility is the dependent variable, as it is one of a socio-economic welfare to sustain livelihood. The NTP is the independent variable, as its implementation is one of the mechanisms to address the phenomenon of rural women mobility. The theory aims to offer services to support access to transportation and mobility to the population and sectors. The study draws from the privilege needed by rural women of transporting items from different locations to their households. Applying an intersectional perspective to the NTP helps uncover the complex and intersecting factors that shape rural women's experiences in relation to transportation. The intersectionality theory is linked to the study to offer a more inclusive and nuanced understanding of socio-economic welfare in the topic of transportation. Upon drawing from the lens of the intersectionality theory, the study employs the assumption that implementing the NTP effectively holds the potential to address and improve people's socio-economic welfare. It suggests that by implementing the policy, which takes into account the unique needs and circumstances of rural women, policymakers can effectively address the overlapping oppressions and systemic barriers they face.

The intersectionality theory informs the NTP by recognizing unique challenges faced by social groups in their day-to-day life. The theory holds that individuals from different social groups may face unique barriers and challenges in accessing various socio-economic systems. In the context of the intersectionality theory, they put emphasis on addressing needs for the entire population, and not at an individual basis. Therefore, this study aimed to fill the identified research gap by providing a comprehensive examination—through an intersectional lens and drawing from the NTP—to address the specific challenges and barriers faced by rural women in relation to transportation, while also evaluating the effectiveness of policy measures in addressing these issues.

3. Research Methods

3.1 Study Area

The study was conducted in Busega District, one of the five districts of Simiyu Region, Tanzania. The district, with its administrative centre in Nyashimo, is bordered by Lake Victoria and Bunda District to the North, Bariadi District to

the East, and Magu District to the South. Other districts in the region include Itilima, Maswa and Meatu. The study specifically focused on six villages: Yitwimila A and Yitwimila B in Kiloleli Ward, Bulima and Bukabile in Nyashimo Ward, and Kabita and Nyamikoma in Kabita Ward. Busega District is predominantly rural, with agriculture and livestock farming as the primary livelihoods of the majority of its population. The district is home to diverse ethnic groups, the Sukuma being the largest. It experiences two main rainy seasons each year: the long rains from March to May, and the short rains from November to December. The district is traversed by several significant rivers, including the Mara River and the Simiyu River, which serve as crucial water sources for irrigation and other uses. Additionally, a part of Lake Victoria is situated within the district. The Busega District was selected for this study due to its potential for inter-regional travel opportunities; where, however, persisting challenges of local travel, particularly for women, remain an important aspect to be addressed (Cyrilo & Mung'ong'o, 2020). The district's rural areas lack proper connectivity to major roads and transportation hubs, making it difficult for residents to access transportation networks efficiently. The lack of transport connectivity in Busega District poses a significant challenge, particularly for women, impacting their ability to access essential services, economic opportunities, and social interactions: all of which further exacerbate gender disparities and hinder the overall development in the district.

3.2 Research Design

The study employed a cross-sectional research design, which involved the collection and analysis of data from a specific sample at a particular point in time. This design facilitated the examination of relationships between variables and the determination of their prevalence or distribution within the population, providing a snapshot of information at that given moment. To investigate the outcomes of exposure of rural women to the mobility process in the search of household basic needs, interviews were conducted with respondents, visiting them in their households. Both qualitative and quantitative data were collected and analysed to gather comprehensive details on the current situation and factors related to rural women's mobility in Busega District, with specific focus on the implementation of the NTP. The application of the cross-sectional research design was suitable for assessing the existence of the problem within the population during a single visit, considering its nature.

3.3 Sampling Frame, Sample Size and Procedures

The sample frame consisted of rural women actively engaged in household chores and responsible for transportation within their households. Within each household, a single rural woman was selected as the unit of analysis. These rural women were specifically targeted in this study due to their eligibility for

mobility based on their responsibilities within the household. The sample size was determined using the formula developed by the International Fund for Agricultural Development (IFAD) for studying rural communities. This formula was chosen as it is suitable for determining an appropriate sample size for conducting household surveys within rural communities. It provides a more accurate factor for calculating the sample size required to represent a population. The utilization of the IFAD formula was justified by its alignment with the research design, which involved collecting data at a single point in time.

The IFAD formula is:

$$n = \frac{t^2 \times p(1 - p)}{m^2}$$

Where:

n = required sample size

t = confidence level at 95% (standard value of 1.96)

p = estimated percentage of the problem (16.3%)

m = margin of error at 5% (standard value of 0.05)

Calculations:

$$\begin{aligned} n &= \frac{1.96^2 \times 0.163(1 - 0.163)}{0.05^2} \\ &= \frac{3.8416 \times 0.026569}{0.0025} \\ &= \frac{0.52411333}{0.0025} \\ &= 209.645332 \sim 210 \end{aligned}$$

Simple random sampling was employed to select respondents, as it facilitated the application of a probability-based approach to ensure representativeness of subjects. The list of households in the selected villages was obtained from the village executive officer. Subsequently, respondents were selected by systematically skipping one household at a time until the required sample size was achieved. This method possesses attributes and strengths that allow for approximating what would have been obtained if the entire population had been measured, as each unit of the population had an equal chance of being selected.

On the other hand, purposive sampling was utilized to select key informants. The selected key informants included two village executive officers, two ward executive officers, two community development officers, the district commissioner, district transport officer, district administrative officer (DAS), two public transportation agents, and one personnel from the Ministry of Transport,

making a total of twelve (12) participants. Key informants were interviewed to gather specialized knowledge, experience, and expertise pertaining to their specific positions and roles in serving the community. This intentional selection of informants aimed to ensure comprehensive understanding of the subject matter from diverse perspectives. They contributed a more robust and informed analysis of the implementation of the National Transport Policy and its relation to the current status of rural women's mobility in Busega District.

3.4 Data Collection Instruments and Methods

Data collection methods were applied to collect both qualitative and quantitative data based on the research objectives and questions. The instruments were meticulously prepared and utilized in strict accordance with precise methodological requisites, tailored to a multitude of research contexts. The rationale of using multiple instruments was to collect comprehensive datasets that encompass both qualitative and quantitative data, thereby enabling a holistic understanding of the research phenomena. Data collection methods applied were household survey, focus group discussions, non-participant observation, and documentary review. Multiple instruments were employed for data collection including a structured questionnaire, interview guide, focus group discussion guide, observation checklist, and a policy document analysis tool.

A household survey was carried out to gather qualitative and quantitative information from rural women based on various issues that were probed in this study. Prior to the survey, a questionnaire that consisted of a list of questions was designed. Questions focused on the frequency of travel, transportation cost, safety concerns, and access to transportation services. A survey team consisting of four participants visited the selected households to hold the interviews. Data was collected by using both paper forms and tablets, with the option to enter responses directly into a computer or record them manually. The utilization of a household survey served multiple purposes. Firstly, it enabled individual respondents to be privately interrogated, allowing for a comprehensive understanding of their specific transportation-related experiences and challenges. Moreover, the survey created an open forum for discussions, facilitating the exploration of additional issues and concerns raised by the respondents. By applying this technique, a comprehensive dataset was obtained, enabling a detailed analysis of the situation of rural women's mobility and their access to essential services.

In addition, qualitative data was collected to supplement the quantitative data, to obtain a comprehensive dataset that incorporated rich contextual understanding of the study topic. Qualitative data collection methods, such as interviews with key informants, focus group discussions, and non-participant observation were applied to capture the experiences and the situation of rural women in Busega District regarding their mobility and the implementation of the NTP.

Key informant interviews were conducted as a vital component of this research to get valuable insights from individuals possessing expert knowledge and experience in the field. The interview guide consisted of a list of open-ended questions designed for conducting dialogue with key informants. Key informants were visited in their working places, where face-to-face interviews were conducted in relation to each one's understanding of the situation of rural women's mobility, and the implementation of the NTP in the study area. Key informant interviews were suitable as they allowed the collection of in-depth knowledge and expertise of participants from their respective fields or positions. Their insights and perspectives were valued for providing a broad understanding of the research topic. The key informant interviews were complemented by other methods.

Focus group discussions (FGDs) were among the other methods applied to enrich the content of the study. The discussions were conducted to gather in-depth data from groups of rural women in Busega District who shared similar socio-economic backgrounds or travel patterns. A total of six (6) focus group discussions were conducted, each comprising of ten (10) participants, resulting in a total of 60 participants. The participants for these discussions were purposively selected during the household survey based on their ability and confidence in sharing information. The discussion was conducted by asking open-ended questions to gather rural women's views, experiences and perspectives on the status of their mobility. FGDs were chosen because they encouraged group dynamics and interaction, disclosing how individuals interacted with one another when discussing a topic at hand. The primary objective of the study was to collect comprehensive information by obtaining consensus among rural women. This approach aimed to ensure that the data gathered represented the perspectives and experiences of the rural women accurately. The use of FGDs enabled deeper exploration of the experiences and perspectives of rural women regarding their mobility and the implementation of the NTP, shedding light on shared challenges, unique insights, and potential solutions.

Non-participant observation was employed as an additional method to complement the insights gained from other data collection methods. An observation list was prepared to ensure a comprehensive coverage of the entities to be observed throughout the process. The entities selected for observation encompassed transport services, types of means of transport utilized in households, and the daily activities performed by rural women. Prior to conducting the observation, the researchers familiarized themselves with the observation setting, including its layout and the individuals involved. The observation was carried out subsequent to the household survey during the visitations, with comprehensive note-taking to accurately record the observed entities. The inclusion of observation in the study was motivated by its ability

to provide direct and first-hand information on behaviour, interaction, and contextual factors, thereby facilitating the collection of unbiased and detailed data that enhanced the depth and accuracy of the research findings.

Documentary review was also conducted to collect secondary data. Document review involved reviewing and analysing the NTP, reports, and other relevant materials related to rural women's mobility in Busega District. A policy document analysis tool was developed to review and analyse the NTP of 2003, reports, and rural women's mobility in Busega. The tool included items such as the policy goals, objectives, and strategies related to rural women's mobility. The process was done by reading and analysing the policy, taking notes, highlighting key points related to the study; and reading the vision, mission, objectives and issues related to the research topic. Documentary review was used because it allowed to examine and interpret a wide range of sources of information to build a comprehensive and objective view of this particular topic of the study. This worked as a valuable tool to conduct a far-reaching and rigorous assessment of the NTP.

3.5 Data Processing and Analysis

Data in this study was analysed by utilizing both qualitative and quantitative techniques. However, qualitative data analysis took precedence, focusing on data obtained from interviews, FGDs, non-participant observation, and documentary review. Thematic analysis, renowned for its flexibility, was extensively employed to scrutinize the information collected from these four methods. The primary aim of thematic analysis was to identify prominent themes and patterns within the variables examined. The initial step involved acquainting oneself with the data by thoroughly reading and re-reading various sources such as interview transcripts, FGDs, and open-ended survey responses to gain a comprehensive understanding of the content. Subsequently, initial codes were generated by extracting relevant words, phrases, and concepts that captured the fundamental ideas and themes present within the data. The code generation process entailed both deductive approaches, guided by a pre-existing theoretical framework, and inductive approaches, which emerged from the data itself. Once the initial codes were established, the subsequent step was to develop broader themes. This involved amalgamating related codes into overarching themes that encapsulated the key concepts and ideas prevalent in the data. Throughout this process, themes were refined, and sub-themes were identified as necessary, ensuring a comprehensive and systematic analysis of the qualitative data.

The subsequent step entailed reviewing and refining the identified themes, ensuring their distinctiveness, coherence, and relevance to the research questions. Themes were carefully examined, merged, split, or discarded as necessary to accurately reflect the content of the data. Once the themes reached their final form, the following step involved providing descriptive and concise

names that captured the essence of each theme. This process entailed selecting labels that effectively conveyed the core ideas encapsulated in the respective themes. The conclusive phase of the thematic analysis involved interpreting the data. This entailed utilizing the established themes to draw comprehensive conclusions regarding the research questions, and to identify key findings and their implication. The interpretations were substantiated by concrete examples from the data, establishing a clear link between the research questions, the broader literature, and the observed patterns and themes.

Moreover, the NTP was systematically analysed by using a policy document analysis tool. This tool facilitated the creation of an examination checklist comprising crucial policy objectives, vision, and mission statements. The analysis encompassed a comprehensive review of sections pertaining to rural transport, complemented by consultations with policy experts and stakeholders. Meticulous scrutiny of the content was conducted, establishing a clear connection to the present state of policy implementation concerning the mobility of rural women. The primary objective of this analysis was to evaluate the policy's implementation and efficacy in addressing the identified challenges and enhancing the transportation experiences of rural women.

Lastly, descriptive statistics were employed to summarize and present the collected data from the household survey, showcasing frequencies and percentages. This statistical analysis provided a comprehensive description of the transportation patterns utilized by rural women for mobility purposes. Furthermore, the Likert-scale responses were analysed to assess the agreement with the statement: *'The means of transport used by rural women daily are conducive for travelling to different locations'*. The Likert-scale comprised five response options: *'Strongly Agree'*, *'Agree'*, *'Neutral'*, *'Disagree'*, and *'Strongly Disagree'*. Additionally, the Chi-square test was applied to examine the association between the level of satisfaction agreement and the location of rural households in relation to the public means of transportation.

The formula for the Chi-square test is:

$$X^2 = \frac{\sum(O - E)^2}{E}$$

Where:

X is the test statistic

\sum is the sum of the calculations for all categories

O is the observed frequency for a category

E is the expected frequency for a category

4. Findings and Discussion

This study aimed to explore various aspects of transportation and mobility in rural areas, with specific focus on the experiences and challenges faced by rural women. The study examined different factors related to transportation, such as the means of

transportation used, distances travelled, transportation costs, satisfaction with public transportation services, security concerns when using motorcycles, ownership of transport equipment, gender-sensitive transport initiatives, and the implementation of the NTP. These factors are discussed in the sections that follow.

4.1 Means of Transportation Used by Rural Women

The study findings revealed that, similar to other regions in Tanzania, the means of transportation in Busega District exhibit variations based on factors such as location, infrastructure, and the availability of transportation services. The research examined the prevalent modes of transportation used by rural women in the district, which included carrying luggage on the person, bicycles, motorcycles, buses, minibuses, trucks, lorries and wheelbarrows. According to the respondents, carrying luggage emerged as the most commonly utilized means of transportation, particularly in areas with limited transportation infrastructure. Many rural women faced the arduous task of travelling long distances on foot to access essential services such as water sources, forests for firewood, healthcare, education, worshiping places and markets. The District Transportation Officer affirmed the aforementioned by the following comment:

Bicycles have emerged as the prevalent mode of transportation within Busega District, particularly in areas characterized by relatively flat terrain. They are frequently employed for the transportation of both goods and individuals, including school-going children. Additionally, motorcycles have been witnessed as a growing popular means of transportation in the study area. Their utilization predominantly revolves around taxi services facilitating the transportation of people and goods to neighbouring villages, towns, and markets. Buses and minibuses play a significant role in the transportation network, facilitating the movement of individuals and commodities between rural areas and nearby urban centres. However, it is worth noting that trucks and lorries are primarily used for transporting goods from rural regions to markets and towns. Regrettably, these vehicles are often overloaded, posing risk to road users. In areas with waterways, boats serve as a vital mode of transportation, particularly in locations where roads are either impassable or non-existent. This is especially pertinent in certain parts of Kabita Village (Busega District Transport Officer, 19/08/2023).

It was revealed from the FGDs that rural women used wheelbarrows as a common means of transporting various commodities like crops, firewood, water and construction materials. However, the women further expounded on the inherent limitations of using wheelbarrows; emphasizing their constrained carrying capacity and unsuitability for long distances. Furthermore, the physical exertion required to manoeuvre wheelbarrows emerged as a noteworthy obstacle for certain individuals, particularly those grappling with some form of physical disability or health issues.

The study findings highlight the widespread popularity of the wheelbarrow as a utilitarian tool in rural settings. This popularity stems from several key factors, including their affordability, ease of operation, and low maintenance cost. The cost-effectiveness of wheelbarrows makes them accessible to rural

communities with limited financial resources. Furthermore, their straight-forward design and uncomplicated operation enable individuals with varying levels of skills and experience to utilize them for moving items.

Other traditional transportation methods included donkeys and cattle-drawn carts. In the realm of traditional transportation methods, rural women expressed their concerns regarding the physically demanding nature of donkeys and cattle-drawn carts. These antiquated modes of conveyance were frequently laden with weight and posed significant challenges in terms of manoeuvrability, necessitating considerable physical exertion from the operators. Women explained how the operation of these carts could result in physical strain and fatigue, leading to enduring health complications such as chronic pain and musculoskeletal disorders. During a key informant interview, the District Commissioner shed light on the matter, providing clarification on the situation. She admitted that the issues and concerns raised by the women were indeed valid; to corroborate their first-hand accounts, she had the following to say.

The reliance by rural women on carts for transportation significantly exacerbates their workload in managing household tasks. The utilization of donkeys or cattle-drawn carts as a means of travel proves to be a time-consuming endeavour, as these transportation methods are characterized by their sluggishness and inefficiency. Consequently, rural women find themselves devoting extensive hours each day to the arduous journey required to fetch water, gather firewood or other essential commodities. This leaves them with limited time for engaging in other pursuits, including education or income-generating endeavours (District Commissioner, 19/08/2023).

Despite their limitations, donkey and cattle-drawn carts, as mentioned earlier, continue to be utilized because, first, they are relatively low-cost and do not require fuel or extensive maintenance, making them an affordable and accessible option for rural communities with limited resources. Secondly, these carts are well-suited for navigating narrow paths, rugged terrain, and areas with limited infrastructure, where other modes of transportation may be unsuitable or unavailable. Lastly, the use of donkeys and cattle-drawn carts carries cultural and historical significance, contributing to their persistence as means of transportation and preserving traditional practices within the rural communities.

4.2 Distance and Transportation Costs

An investigation was conducted to determine the distance between households and public transportation services, specifically focusing on motorcycles and buses. The accessibility of these transportation services was assessed by collecting information on the location of public transportation services and the addresses of households within the study area. As shown in Table 1, the distances between households and transportation services were categorized into three groups: Group I - ranging from 1-3km; Group II - ranging between 4-6km; and Group II - ranging between 7-9km. Of the total, 33% were situated within 4-6km of the public transportation services, and these were people who went on foot mostly.

Table 1: Distance from Rural Women’s Households to the Bus Stand

Interval of km	Frequency	Percentage
1-3	76	36.19
4-6	112	53.33
7-9	22	10.48
Total	210	100.00

Source: Survey Data, 2022

Table 1 further show that a significant proportion (36.19%) were located within 1-3km, while a smaller proportion of 10.48% were positioned at distances of 7-9km from the transportation services. These findings indicate that access to transportation is a challenge for some residents in the study area, particularly those who lack access to private transportation. A community development officer weighed in on the matter as follows:

In the surveyed area, it was observed that a significant number of women had to traverse considerable distances on foot to accomplish their household tasks. Sometimes, where the distances exceeded five kilometres, rural women often relied on motorcycles for transportation. Nevertheless, these journeys presented challenges, particularly when these women had to transport heavy loads (Community Development Officer, 23/08/2019).

The study further examined the pricing structure implemented by motorcycle drivers, a prevalent mode of public transportation for rural women. Figure 1 illustrates the variation in prices for motorcycle rides across different villages, with charges of TZS1,500 in Yitwimila A, TZS1,500 in Yitwimila B, TZS1,500 in Bulima, TZS1,000 in Bukabile, TZS1,000 in Kabita, and TZS1,000 in Nyamikoma. Furthermore, pricing arrangements in Busega District were influenced by factors such as type of transportation infrastructure and cost, competition among transport providers, and demand for services. Fuel prices emerged as a major determinant of transportation charges, with high fuel costs contributing to increased expenses for providers due to long distances and rough roads.

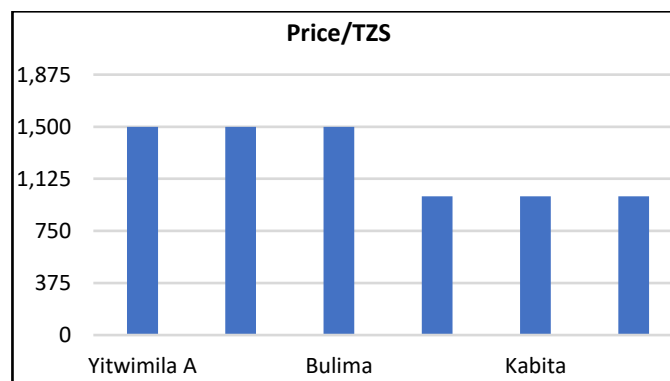


Figure 1: Charges for Riding a Motorcycle for each Village

Source: Survey Data, 2022

Effective monitoring of fuel prices and the quality of petroleum products by regulatory authorities like the Tanzania Energy and Water Utilities Regulatory Authority (EWURA) plays a pivotal role in addressing the challenges associated with transportation costs in rural areas. The absence of standardized pricing makes it necessary for transportation providers and policymakers to focus on developing transportation systems that are both efficient and affordable, catering specifically to the distinct needs of rural communities. By implementing measures to ensure fair and transparent pricing, stakeholders can work towards bridging the gap in the accessibility to essential services and opportunities, thereby reducing economic and social disparities between urban and rural areas.

Moreover, this study analysed the NTP with regard to fuel, which determines the process of pricing. The research findings indicate that there is a correlation between policy strategies and the ability of rural women to access transportation. To measure the strength of the association between these two categorical variables, Cramer's V and the contingency coefficient values were computed. As per the standard model of interpretation, values above 0.35 are deemed '*Strong*'; values between 0.25 and 0.35 are '*Moderately Strong*', and values below 0.25 are '*Weak*' (Gupta, 1991). The calculated values for this study were 0.46 and 0.42. These values indicate a strong association with a p-value of 0.00. Therefore, the significance level at p-value 0.05 confirms the statistical significance, as illustrated in Table 2.

Table 2: National Transport Policy and the Pricing Process

Respondents' Experiences (Experienced/Not experienced)		Value	Approx. Sig.
Policy strategies and ability to access transportation	Cramer's V	0.456	0.000
	Contingency Coefficient	0.415	0.000
Total		210	

Source: Survey Data, 2017

The study findings suggest that the strategies of the NTP on fuel pricing have a significant impact on rural women's ability to access transportation in Tanzania. During the focus group discussions, women acknowledged the fact that when the price of fuel increased, it affected the entire transportation industry, including public transportation and ride-sharing services. The cost of fuel was a significant expense for transportation companies, which often passed on the cost to consumers by raising fares or adjusting their pricing models. This, in turn, affected rural women who relied on public transportation services. While this practice may help ensure the economic viability of transportation services, it is important to examine the implications for rural women, who may already be facing various socio-economic challenges.

4.3 Satisfaction with Common Public Transportation Services

The Likert-scale survey statement, “The means of transport used by rural women daily are conducive for traveling to different locations,” was analysed using a five-point Likert scale. The results displayed in Table 3 indicate that 8.10% of the respondents ‘strongly agreed’, 11.43% ‘agreed’, 2.38% were ‘neutral’, 32.90% ‘disagreed’, and 46.19% ‘strongly disagreed’ with the statement. These findings suggest that a considerable majority, comprising 78.09% of the respondents, expressed dissatisfaction with the means of transport they were using on a day-to-day basis. To explore the relationship between satisfaction levels and the location of rural households in relation to the means of transportation, a chi-square analysis was conducted on the five-point Likert-scale responses. The location of rural households, in this analysis, was determined by the distance in kilometres to public service centres, and it was considered as the independent variable. Rural women’s satisfaction, assessed through the five-point Likert-scale, served as the dependent variable in the study.

Table 3: Distribution of Five-Point Likert-Scale Responses

Parameter	Frequency	Percent
Strongly agree	17	8.10
Agree	24	11.43
Neutral	5	2.38
Disagree	67	31.90
Strongly disagree	97	46.19
Total	210	100.00

Source: Survey Data, 2017

The results of the conducted Chi-square analysis, as presented in Table 4, revealed that the test had 4 degrees of freedom (df=4), yielding a highly significant result at $p < 0.001$. This indicated a substantial disparity between the observed and expected frequencies, suggesting an unequal distribution of satisfaction levels among rural women respondents.

Table 4: Chi-Square Test on the Five-Point Likert Scale

Chi-square Test	Value	df	Asymp. Sig. (2-sided)	χ^2
Pearson Chi-Square	1.532 ^a	4	0.001	6
Likelihood Ratio	1.898	4	0.004	
Linear-by-Linear Association	0.056	1	0.654	
N of Valid Cases	210			

Source: Survey Data, 2017

The outcome of the Chi-square test suggested a rejection of the null hypothesis, which proposed no significant difference between the observed and

expected frequencies. The p-value of less than 0.005 further strengthened this conclusion, indicating that the observed variation in frequencies was not due to a random chance but represented a genuine distinction in the distribution of satisfaction levels. Consequently, the study concluded that there existed a statistically significant difference in the satisfaction levels of the respondents. The results suggested the presence of underlying factors influencing the distribution of satisfaction levels within the population, such as distance between households and public transport service centres.

The lack of standardized pricing for transportation services introduced inconsistency and unpredictability in costs, making it difficult for rural women to budget for their travel expenses. This could be especially burdensome for those with limited financial resources. The inadequate suitability of the means of transport posed physical challenges to these women. Whether they were walking long distances or using motorcycles, the journeys could be toilsome, particularly when these women needed to carry heavy luggage. This physical strain contributed to fatigue, affecting their overall well-being and productivity. The limited availability and accessibility of transportation services in rural areas further exacerbated the dissatisfaction. This lack of efficient and convenient transportation options hampered the mobility of rural women and limited their opportunities for economic and social advancement.

4.4 Security Concerns Regarding Transportation by Motorcycles

It is crucial here to address the security risks associated with the use of motorcycles as a means of transportation for rural women. While motorcycles can provide convenience and guarantee cost-effectiveness, it is important to acknowledge the potential dangers they pose, especially in areas where traffic regulations may be inadequate, or roads are poorly maintained. Of particular concern is the issue of security when traveling after dark. Many rural women relied on motorcycles for transportation, and they expressed worries about the safety of the riders. A woman from Busega District shared her perspective, emphasizing the need to address these security concerns:

Motorcycles in the area are normally operated by young boys, and it has been observed that some of them engage in risky behaviours, including operating their vehicles under the influence of alcohol. This poses a significant concern as it leads to loss of control, over-speeding, and an increased likelihood of accidents caused by reckless driving. The village is concerned about the irresponsible operation of motorcycles, particularly among these young boys. It is crucial to address this issue and promote safer practices to ensure the well-being and safety of both riders and other road users (Busega District, 26/08/2019).

In comparison with other vehicles, motorcycles are deemed more challenging to handle. This is a bigger problem to young and inexperienced riders who do not yet have the requisite skills and experience to manoeuvre their motorcycles safely on the road. Moreover, the perilous combination of

reckless driving and excessive speeding poses a heightened risk for motorcycle riders. The slightest error in judgment can rapidly escalate into a serious accident and/or severe injury. The Village Executive Officer emphasized this concern as he gave the following comment:

In the light of women's increasing utilization of motorcycles for transportation purposes to various destinations, it becomes imperative to proactively tackle this concern by promoting the adoption of safe driving practices and instilling a sense of responsibility among young riders when operating motorcycles. Achieving this objective calls for the implementation of comprehensive strategies, encompassing educational initiatives and awareness campaigns, coupled with stringent enforcement of traffic regulations and penalties for reckless driving. Ultimately, mitigating the frequency of motorcycle accidents and associated injuries requires collaborative effort involving riders, law enforcement agencies, and the wider community (Busega District, 26/08/2019).

In addition to concerns regarding transportation safety, the women respondents expressed their apprehension regarding reports of criminal activities involving motorcycle riders. Specifically, there had been incidents of riders engaging in robbery, particularly targeting passengers in secluded areas. Such behaviour dents the trustworthiness and integrity of these riders, posing a significant threat to the safety and security of individuals utilizing motorcycle transportation services. Such cases have been reported worldwide, particularly in areas where motorcycle transportation is prevalent, and regulatory measures may be lacking (Alimo et al., 2022; Sobrino et al., 2023). It is important to caution that not all motorcycle riders are involved in criminal behaviours. However, passengers should remain vigilant of the associated risks; and take necessary precautions to ensure their personal safety when utilizing such services.

While it is important to acknowledge that criminal activity among motorcycle riders is not limited to any specific sex, it is crucial to recognize that women, in particular, are more vulnerable in such situations. The vulnerability of women stems from various factors, including social norms, power dynamics, and the prevalence of gender-based violence, and their daily mobility. The isolated nature of some motorcycle routes, coupled with the lack of proper lighting and surveillance, exacerbates the risks faced by women when using them.

4.5 Ownership of Transport Equipment in Selected Rural Areas

Section 6.0 of the NTP places significant emphasis on the ownership of transport equipment, aiming to enhance the availability and accessibility of transportation resources at the village, ward, and district levels (URT, 2003: 26). One of the specific objectives outlined in the policy (6.12.1) is to "... increase the supply and ownership of transport means/equipment" (ibid: 26). Additionally, the policy encourages collaboration between the private and public sectors to deliver competitive and affordable transportation services to rural communities (ibid: 28).

However, the study findings revealed that the implementation of the NTP in Busega District, similar to other districts in Tanzania, has not given adequate

attention in the development of rural transport infrastructure. Observation shows that essential activities such as the paving of rural roads and the expansion of public transportation services in rural areas have not been adequately addressed. Consequently, the objective of promoting the ownership of transport equipment has not been effectively implemented, leading to adverse consequences to rural women who heavily rely on motor vehicles to move from place-to-place in performing household chores and accessing vital services.

Limited progress in improving rural transport infrastructure has negatively impacted the mobility of rural women; hindering their ability to access essential services such as healthcare, education, markets, and others. Despite the good intentions outlined in the NTP, the practical implementation of measures outlined in the policy has not adequately addressed the specific needs and challenges faced by rural women. Observation shows that most efforts were directed on paving the highway from Mwanza to Musoma, and not in remote areas. Consequently, these women's mobility and access to vital services remains largely unchanged, impeding their overall well-being, and perpetuating gender disparities in rural areas.

By aligning policy implementation with the specific needs of rural women, there is opportunity to enhance their mobility, improve their access to essential services, and foster inclusive development in rural communities. It is crucial to prioritize the empowerment and inclusion of rural women in transportation planning and decision-making processes to ensure that their needs are adequately represented and addressed. This holistic approach will contribute to the fulfilment of the NTP's objectives of fostering equitable and sustainable transportation systems that benefit all members of society, particularly the most vulnerable population in rural areas.

4.6 Gender-Sensitive Transport in Busega Rural

The analysis conducted in this study indicates that the NTP incorporates gender-sensitive transport planning principles, acknowledging the unique mobility requirements and obstacles confronted by rural women. The policy recognizes the importance of providing safe and affordable transportation in rural areas. However, despite the presence of these policies and strategies aimed at enhancing rural transport infrastructure and services, significant challenges persist in translating these measures into tangible outcomes, particularly within the rural context. The District Transport Officer in Busega District elaborated on the observed difficulties in the implementation of the policy:

The policy has suitable strategies that are capable of improving rural roads. However, we face challenges during the implementation of this policy. These challenges include limited resources, inadequate maintenance of existing infrastructure, and difficulties in reaching remote or isolated areas. Additionally, traditional gender roles and cultural norms may hinder women's participation in the transport sector: both as users and as providers of transportation services (Busega District, 26/08/2019).

Observation showed that rural women struggled with the lack of reliable and efficient transportation, which increased their economic burden by making it more difficult to transport goods to markets, or access resources and other items daily needed in their households. This has been due to failure to implement the NTP, which could have far-reaching consequences on the transportation sector, economy, access to social services, political participation and the environment: all of which bear heavily on rural women who experience increased economic burden as they are more often engaged in income generating activities, such as farming or trading.

4.7 Rural Women's Mobility and Implementation of the NTP

The Tanzania's NTP of 2003 aims to facilitate rural women's access to means of transportation. The policy recognizes that the road is the dominant means of transportation in rural areas. The study focused on Section 6.6 of the policy, which gives a gender perspective to the policy addressing the objective of minimizing rural transport related problems to women. In Section 6.6.2.1, the policy states as follows:

Women are traditionally most active in their day-to-day upkeep of rural life. They spend an estimated 75% of their time walking long distances to and from farms and other production centres. Due to poor rural transport infrastructure what they produce is very little (URT, 2003).

Section 6.0 of the policy puts emphasis on motorized transport services with objective 6.0.1.1 which reads: "To provide for motorized transport as a cost-effective transport means at village, ward and district levels" (URT, 2003: 26). Despite this emphasis in the policy, the process of improving transportation in the rural areas of Busega District has not been successful. Access to public transportation is biased towards centres located along the highway from Mwanza to Musoma. The findings show that local buses are not accessible between villages and wards since the roads are not paved. Unpaved roads can be a significant barrier to rural women's mobility, and limit their opportunities for economic and social empowerment. The study suggests that improving transportation infrastructure and services, including paving rural roads, will help to overcome these challenges and increase the mobility and independence of rural women.

In addition, the study examined the intersectionality between the NTP and mobility of rural women, using the intersectionality theory to gain a comprehensive understanding of the interconnectedness between these factors. By employing an intersectional analysis, the study explored how the implementation of the transport policy influences rural women's access to, and experience with, transportation. In the specific context of Busega, it became evident that rural women are disproportionately affected by challenges such as inadequate transportation infrastructure, lack of reliable transportation services, and limited access to public transportation.

The study reveals that the significance of reliable transportation for rural women cannot be understated, as they often bear responsibilities related to childcare, domestic work, and income-generating activities. The availability of dependable transportation is crucial for them to meet their daily needs effectively. Through an intersectional analysis, it became apparent that various factors, including income and location, intersect with gender, shaping women's access to transportation services. Through FGDs, participants admitted that rural women with lower incomes faced problems in paying for private transportation services, forcing them to prioritize other essential expenses, such as food and healthcare, over transportation.

The study suggests that taking into account the intersectional dynamics at play, policymakers and stakeholders can now get a deeper understanding of the multifaceted challenges faced by rural women in accessing effective and affordable transportation. This understanding will inform the development and implementation of targeted strategies to address the specific needs faced by this marginalized group. Improving transportation infrastructure by expanding reliable and affordable transportation services in rural areas, and exploring subsidy programmes or alternative funding mechanisms, would contribute to enhancing rural women's mobility and overall well-being. It is essential to consider intersectionality as a framework for analysing the NTP and its impact on rural women's mobility. This calls for policymakers to work towards creating inclusive and equitable transportation systems that consider the specific needs and experiences of rural women, ultimately contributing to their empowerment and social inclusion.

5. Conclusion and Recommendations

It is evident that rural women walk long distances due to limited transportation options, inadequate infrastructure, and unaffordable transport charges that disproportionately affect their mobility to different geographical locations. Even though motorcycles are used because they were convenient and cost-effective, they are not safe and secure for rural women, especially when travelling for long distances and during late hours. The study found that rural women also employed various alternative means of transportation, including donkeys and cattle-drawn carts, bicycles, wheelbarrows, buses, minibuses, trucks and lorries. However, these options proved inadequate in fulfilling their diverse and specific mobility requirements. Too, there was no standardized pricing system for transportation services; which led to inconsistent and unpredictable costs, making it difficult for rural women to budget for their mobility expenses. In addition, slow progress in improving rural transport infrastructure has negatively impacted the mobility of rural women, hindering their ability to access essential services such as healthcare, education, markets, and others.

Despite the implementation of the NTP in the country, significant challenges still persist in translating these measures into tangible outcomes, particularly within the rural context. The study is of the opinion that an intersectional analysis of transport policy and mobility in Busega is required to provide a more comprehensive understanding of how different social categories intersect to shape individual transportation experiences. The application of the intersectionality theory has underscored the significance of the transport policy by demonstrating the required implementation to meet the needs of diverse individuals and communities, as elaborated in the study. The findings demonstrate that recognizing the intersectionality theory is crucial for comprehending the multifaceted challenges that rural women encounter in accessing transportation. The study findings revealed that the intersectionality of the implementation of the NTP influences rural women's access to transportation. Also, it assists related stakeholders to grasp the intricate barriers faced by rural women, including inadequate infrastructure, limited services, and affordability of transport costs.

To address the transport challenges faced by rural women, the government should implement the NTP by prioritizing the needs of rural women and providing affordable and safe transportation services that are accessible. Secondly, the government should invest in transport infrastructure, promote equity, encourage environmental sustainability, digitalize and adopt multimodal transportation systems to improve the overall efficiency and effectiveness of transport systems. Policymakers, transportation planners, and researchers should include intersecting factors that shape rural women's mobility experiences in policy formulation and implementation. Finally, monitoring and evaluating the effectiveness of the policy is essential to ensure that it achieves its objectives and addresses the challenges faced by rural women in Tanzania.

Acknowledgements

The author acknowledges the financial support provided by the University of Dodoma through the Directorate of Research, Consultancy, and Publication during the process of writing this academic paper.

Credit Author Statement

The author declares that this research was conducted in the absence of any relationships that could be construed as a potential conflict of interest.

Data Availability

The data that has been used is confidential.

Submission Declaration and Verification

Submission of an article implies that the work described has not been published previously.

Author Contributions

The author's contribution is on conceptualization, designing, data collection and analysis, interpretation, writing and reviewing the contents of the paper.

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