

## Women's safety and security in public transport in Mekelle, Tigray

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### ABSTRACT

The study assesses the women's personal safety and security in public transport, it examines gender inclusiveness in public transport in Mekelle, Tigray. Both primary and secondary data of target women in Mekelle city has been collected. Multi-stage stratified cluster sampling was used as sampling technique strategy to draw representative target women. Mixed research method was also instrumented; exploratory and confirmatory data analysis for quantitative data, and thematic analysis for qualitative data was utilized to obtain the findings, and extract evidences from the data. Besides, systematic review was used to strengthen the analysis. The findings of the research revealed that Mini-bus taxi is found the most preferred mode of transport due to its accessibility across the city. Public transport service provision in the city remains to be largely gender insensitive. Women's safety and security is often compromised due mainly to cultural norms and values that reflect in their daily trips. Harassments in the form of verbal and psychological abuse become rampant especially inside Mini-bus taxi. The result further showed that women have been harassed while waiting for means of transportation and while walking in the streets to catch public transport vehicles. Despite the modest progress on legal protection, harassment against women and girls is still widespread. Harassments in the urban public transport sector can be deterred through ethical training and awareness creation and strict rule enforcement mechanisms.

**Keywords:** women; public transport; safety; harassment; inclusive transport

### INTRODUCTION

The role the transport sector plays in stirring socio-economic development of a country is immense. Efficient transfer of people, goods and services creates a necessary condition for improved quality of life and sustainable livelihoods. Efficient mobility, in turn, entails inclusiveness in which services take into account idiosyncratic needs of marginalized groups including women, children, the elderly and people with disability [1].

In developing countries women's mobility patterns are different from that of men and can be characterised by the use of public transport avenues, making short-distance movements and avoiding rush hour trips for different reasons [2]. Women's mobility is to a large extent influenced by their domestic responsibilities and hence faces cultural restrictions. Therefore, public transport planning and decision making in developing countries like Tigray should take into account these down-to-earth realities. The current condition falls short of addressing specific needs and priorities of vulnerable groups such as women as they can be vulnerable to safety and

security issues including gender-based violence and different forms of harassments at different times.

Inclusive transport reflects gender-equitable transport. Despite the lack of study on inclusive transport in the country, the practice on the ground demonstrated poor functional integration in addressing the issue of gender inclusiveness in the transport sector. The overall aim of the study is to examine gender inclusiveness in urban public transport with particular reference to the situation of women in Mekelle city, Tigray focussing on assessment of the existing situations related to women's personal safety and security in the context of urban public transport by looking at women's everyday mobility experience. Assessment of their mode of transport choice and reason, perpetrators of harassment, reaction to harassment, women's level of satisfaction and suggestions for improvement are investigated.

## METHODS

The study method consists a comprehensive literature reviews of papers and detail analysis of data collected based on both primary and secondary data. Primary data was obtained using a questionnaire-based quantitative survey and qualitative ethnographic observations; while secondary data was harnessed using comprehensive reviews of relevant documents from both published materials and grey literature. Exploratory and confirmatory data analysis trajectories were applied for quantitative data, while qualitative data was analysed using thematic phenomenological methods. Triangulation was ensured by linking the results of survey data with ethnographic accounts. Primary data obtained from different sources was then discussed in reference to secondary data outlined in the literature review as well as baseline information describing the situation of the urban public transport conditions in Mekelle city.

### *Literature review*

Mekelle is the capital city of the National Regional State of Tigray, it is the second biggest and most populated city in the country next to Addis Ababa, with 51% women in a population more than half a million inhabitants. Transport in the city is composed of both motorised and non-motorised transport with percentage share of 33.5% and 66.5% respectively [3]. The domain urban public transport service covers in the modes of City bus, Mini-bus taxi and Bajaj/Rickshaws. Out of the three modes of transport, the Mini-bus taxi is most dominant in the city as a means of public transport.

Women encounter violence and harassment when they are using public space in general and public transport in particular. Gender-based violence is an umbrella term for any harmful act that is perpetrated against a person's will. Women and girls are more commonly affected by gender-based violence due to the subordinate status of women in many societies, discrimination against them and their higher vulnerabilities to violence. Gender-based violence takes many forms, including sexual, physical, and psychological abuse [4].

Harassment is a daily occurrence for many women when using public transport in both the developed and developing world. This has been confirmed in a number of studies and came to the forefront after the distressing event in 2012 when a young student was raped and murdered while attempting to return home by bus in Delhi. This horrifying event stimulated actions. A study by Jagori [5] showed that over 90% of women had faced some form of harassment in the previous year while using public space including public transport in India. The study has found that 51% have experienced harassment inside the public transport vehicles 42% happened while waiting for it (at bus stops or stations).

In another study on linkages between gender and transport in low- and middle-income countries, attempts were made to examine women's and girls' safety and security conditions in public transport services. The findings of the study show that 50.8% of women and girls have

experienced at least one type of violence while using public transport [6]. The study recommends that cities have to focus on developing gender-sensitive public transport service plans and policies that consider the special needs of women and girls in public transport and ways to improve women's safety and security conditions.

### ***Data collection and analysis***

The study was conducted in Mekelle city, both primary and secondary data (relevant literatures) on safety and security of women public transport users were collected from all the seven sub-cities of Mekelle. In the process of identifying the target population for the study, women aged 18 and above (stratified into female students, working women and housewife) who used public transport (City bus, Mini-bus taxi and “Bajaj”) at least once a day were considered. Multi-stage stratified cluster sampling was used as sampling technique strategy to draw representative women who use public transport to travel from one place to another within the city for their day-to-day activities one or more times a day.

A digital survey questionnaire is designed using a statistical package known as Census and Survey Processing System (CSPPro) and loaded on mobiles and tablets to gather mainly quantitative survey data from the target women. The survey questionnaire is structured and therefore, consisted of closed-ended question items which were related to women's security/safety in public transport, their personal daily mobility, including information on modal choices for their trips and transport times of trips, the survey seeks to identify whether public transport in Mekelle is gender inclusive and the extent of its inclusiveness. One major part of the questionnaire focuses on questions related to women's safety and security, namely whether women face harassment, type of harassment (verbal, non-verbal, and physical), effect of harassment (physical, and psychological), place (City bus, Mini-bus taxi, Bajaj), time of harassment (morning, afternoon, and evening), perpetrator of harassment, its intensity, the reactions and perceived factors that motivate its occurrence.

The qualitative survey bases on ethnographic study namely Key informant interview (KII), In-depth interviews (IDI), Participant observation (PO) and Focus group discussion (FDG).

**Key Informant Interviews:-** Key informants in Mekelle, which includes targeted high-school/college/university female students, female urban transport operators, officials of associations, and driver union leaders, transport professionals, policy makers directly involved in decision making on sustainable transport, made to engage to shed light on the topic of mobility and its inter-sectorial development dimensions.

**In-depth Interviews:-** Selected stories of victim women transport users in Mekelle were documented for a further longitudinal examination of their lived experiences while use public transport and working in transport sectors. The method assisted the research informants to look back in detail across their entire life courses with respect to their experiences, vulnerabilities and capabilities in adapting to and coping with the challenges in transport sectors in the city. The cases were selected from different target and age groups of women in the study sites.

**Participant Observation:-** This method of participant observation was used to identify and understand the aspects of the behaviour of passengers, drivers and conductors and, more generally, daily life of women's travels in urban public transport, daily life of women workers in transport sectors, what the quality of transport infrastructure is, how people commonly behave in a particular public transport and to obtain additional insights into the daily life of women.

**Focus Group Discussions:-** Though different group discussions with male/female focal persons, namely business men/women, drivers, university students, had been planned to understand means of transport available in the city, gender-differentiated transport needs and use of available transport means, and challenges and restrictions facing women using public transport, it has not been possible to conduct this element of the study due to the on-going war and security issues in Mekelle city, and the region as a whole.

Mixed research method was instrumented for the analysis; exploratory & confirmatory data analysis for quantitative data, and thematic analysis for qualitative data was utilized to obtain the findings, and extract evidences from the data.

Data analyses of quantitative survey questionnaires have been made using exploratory (descriptive statistical) and confirmatory (inferential statistical) data analyses techniques. The exploratory data analysis is predominantly made use of simply to summarize the demographic characteristics of participant women, their experience of harassment and measures taken while using the public transportation, characterise the nature of inclusiveness of public transport to women and women with special needs, to identify the proportion of women who used public transport, describe the proportion of harassment victims and perpetrators etc. A confirmatory data analysis, chi-square independence test, was used to determine whether two categorical variables of interest, such as women's age against harassment and frequency of harassment; women's education level against reaction to harassment, women's reaction to harassment against their awareness to laws, women's age against user's mode of transport, user's mode of transport against reason of preference to the mode of transportation, mode of transport against reasons for usage, etc. were associated or not. The contingency coefficient was also computed to know the magnitude of association between the two attributes.

The qualitative data gathered through ethnography from key informant interviews, in-depth interview and participant observations, collected to consolidate and enrich the evidence from survey, were translated from the local language in to English. Then, the responses were categorized under relevant themes and features that are characteristics of the majority of the respondents and eventually analysed by thematic analysis.

Stakeholder engagement is considered as one of the major instrument, starting from the inception of the study, for identification, data collection as well as dissemination and capacity building. Initially *briefing meeting*, with key stakeholders and focal persons from the relevant offices of the city, is carried out to explore more in-depth insights about women transport uses, needs, challenges, restrictions and suggestions for improving women's access to transport. Multi-stakeholder *consultation workshop* is organised for those actors of the public transport service offices and policy makers from government and private sectors in the research work. Its main purpose was to share preliminary findings with key stakeholders, obtain feedback and inputs from the participating stakeholders, and identify gaps in addressing the concerns of women transport users in the context of safety and security and obtain inputs from the stakeholders.

## RESULTS AND DISCUSSION

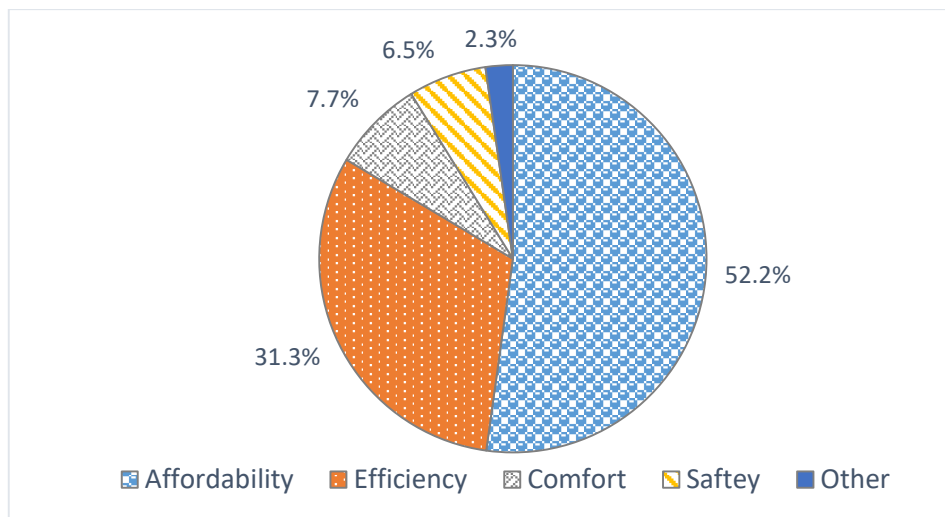
Women's safety and security in the urban public transport sector is a function of various factors. This includes convenience of mode of transport to women, awareness of laws by service providers and service users, adherence to laws by service providers and related issues. The age, marital status and educational level of women public transport users can be associated with varying degree of vulnerability to harassment at different times. Women have particular purpose and reasons for the choice of particular mode of transport which translates into proximity, cost and efficiency. To look at how these factors interact to affect the safety and security of women in Mekelle city, types of transport women often use for transportation was covered in the study. It is found that, see Table 1, Mini-bus taxi are the main transport frequently used by women in the city which account for about 81% of the respondents followed by Bajaj (17%) and least used were city bus and other means, accounting for about 2% of the women public transport users. City bus in the city are limited in number, these limited buses run to the different corners of the city thus people had to wait for long hours at the stations to get the service; and they are not a faster way to get to one's destination because of the time wasted embarking and disembarking people in the various stations that are located close to one another.

The choice of mode of transport naturally varied among women of different demographic characteristics. Table 1 shows the choice of mode of transport according to varying age categories. It indicates that 382 individuals which account for over 80% of those in the age category of 18-30 used Mini-bus taxi; while the figure for older adults (i.e., ages 46 to 65) was found out to be slightly higher than 77% (i.e. 61 from 79 people stating so). Consequently, it is worth noting that minibus taxi is the most frequently used mode of transport in all age categories. A chi-square test is conducted for the two categorical variables Age group vs. user's mode of transport, the value of chi-square is 23.2 which is significant indicating that there is a significant association between women's age group and their use of different mode of transports.

**Table 1** Age group and mode of transport cross tabulation

Age group	Mode of transport				Total
	Mini-bus taxi	Bajaj	City bus	Other	
18-30	382	79	6	2	469
31-45	200	45	2	0	247
46-65	61	11	4	3	79
Above 65	3	1	0	0	4
Total	646	136	12	5	799
Percent	81%	17%	1.5%	0.5%	100%

Respondents also reflect the main reason for choosing the mode of transport to travel from a place to another in the city. As shown in Figure 1 the main rationale behind choosing these mode of transport for their daily purposes was its affordability, which was mentioned by about 52% of the respondents; efficiency was also highlighted as the second reason by 31% of the respondents. The result also suggested that safety and comfort are problems of these mode of transport. This goes in line with the fact that only 6.5 % of the women surveyed indicated they choose the mode because of its safety.



**Figure 1** Reasons for choosing the specific mode of transport

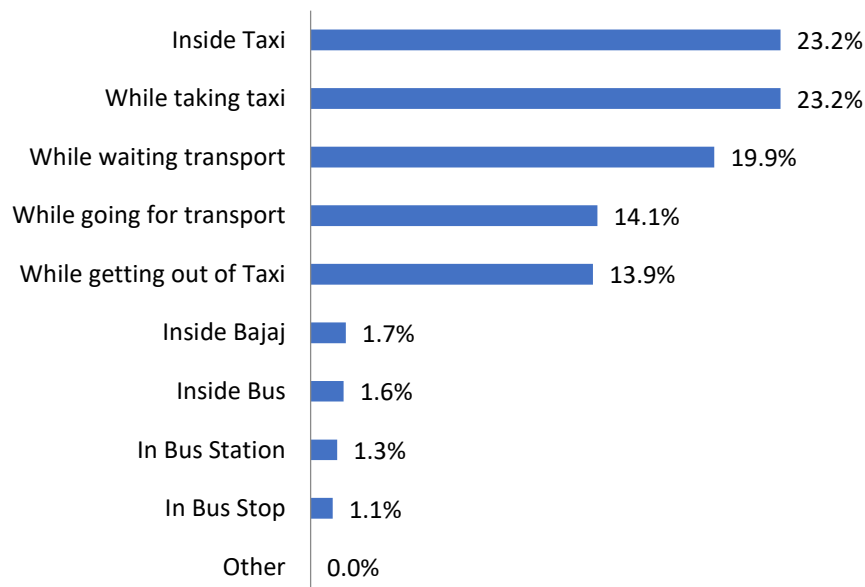
### *Perpetrators of harassment, time and location*

Harassments targeting women urban public transport users may be exercised by different perpetrators. The transport sector brings different sections of the community into play and hence anyone who has vested interest in the sector may be involved one way or another. Often

interactions are made between drivers, conductors and travellers and most of the harassment encounters involve any of these actors. The bulk majority of harassment was reported to have been performed by conductors (37%); followed by the passenger (24%), the remaining accounts to passer-by, drivers, station managers and beggars.

From the ethnographic survey it is found that most of the harassments tends to be verbal and were exercised in the form of insults, teasing and mockery. However, conductors could also go up to not being willing to pay back change, irregularly increase tariffs for women, denying access to transport service for some women because of their body size/weight, pregnancy or, because they carried children or goods along with them. Physical assaults against women passengers were, however, found to be rare and far below.

Public transport often involves people interacting in open public spaces and hence violations of some rights are expected. Attempts were made to identify salient locations where women's harassments were most frequently experienced in the urban public domain. Figure 2 indicates that, from the total 705 respondents surveyed, about 23% reported having suffered from harassment inside Taxi premises. The result further showed that about 20% of the women reported that they have been harassed while waiting for means of transportation and about 14% indicated they were harassed in the streets as they walked either to catch or get out from public transport vehicles.



**Figure 2** Locations of women's harassment

During the in-depth interviews one of the interviewee pointed out that the conductor nagged and insulted her just because she protested about overloading and demanded for change; another who had disability and was looking for taxi service had to be ignored by drivers and conductors who often said *“sorry, we cannot take you because the taxi is full”* even if there was enough space—a lame excuse for not giving her a ride. Yet another interviewee had to deal with the difficult circumstance of having to pay more money because of her body size: *“You are fat. You need to pay more!”* insulted by the conductor. Actually, these remarks came because he was not able to add a third person in the two-seater as they normally do, and ends up asking the woman double the price.

In addition to the location, the result for the time of the day when respondents have experienced harassments can be summarized as about 55% respondents said during evening peak hours, about 34% morning peak hours, only 1% is in night times while the remaining respond as in all or other

time. This clearly shows that peak hours where women are more concerned with their own personal affairs (rushing to jobs, appointments or workplace) are opportune time for others to mistreat them. Rush hours also mean that less attention is given to what goes around people's environments and hence offenders can easily evade possible harsh consequences from concerned bodies including the police.

### **Reaction to harassment**

The reaction of women to different types and magnitude of maltreatments may be affected by several factors, not least by their own upbringing, social environment and the legal environment. Women urban public transport users covered in the study were indicate about their reactions when they get harassed by another person or group of persons.

Most of the women (about 42% of respondents) do nothing as a reaction to harassments they encountered. According to the qualitative interviews, this could be either because they are afraid of the consequences; or just because they take them for granted as normal due to their repetitive nature. However, a good proportion of the respondents (32%) said they would confront the offenders head on, one way or another. Confrontations rarely involve physical encounters and are most likely to be in the form of verbal protests.

Attempts were made to see differences in reaction to harassment by educated and uneducated women. The assumption was that educated women are likely to be aware of the laws which enables them to become assertive enough to fight back. However, the distribution of reactions of harassed respondents by level of education table 2 shows that, a good proportion of those that are not educated (over 38% i.e. 8 out of 21 respondents) said they were helpless and did nothing in response to harassments; as well as a greater number of those who are highly educated (i.e. over 44% i.e. 72 out of 162 of those who have degree and above) also choose to keep silent and non-reactive to the offences. Hence the hypothesis that education makes a difference in the way women react to harassment is not supported by evidence. The most common reaction to harassment remains to be silence.

The results of the qualitative study as well indicate that verbal harassments against women by all actors are taken for granted as something not serious. Sometimes, teasing of women passengers by drivers, conductors, or/and bystanders becomes entertaining to fellow passengers to the extent that those who react negatively become out layers and are mocked at by other service users, male and female alike. According to one of the interviewees, to try to seek justice for verbal harassment is considered luxury in a society where serious cases of physical abuses are not reported and properly taken care of. Hence, she never went to the police in anticipation of a bad outcome as it always happens even with the rape of underage children.

**Table 2** Distribution of reactions of harassed respondents by level of education

<b>Educational Level</b>	<b>No of respondents with each reaction</b>								<b>Total</b>
	Moved Faster	Proportional Response	Called Police	Changed Places	Did Nothing	Request Help	Hide My self	Other	
Not formally educated	2	6	1	0	8	1	3	0	21
Grade 1 to 8	4	12	5	1	17	0	3	1	43
Grade 9 to 12	18	50	4	11	69	4	8	1	165
Diploma/TVET	11	35	2	4	42	0	8	1	103
Degree & above	15	55	5	9	72	1	2	3	162
Total	50	158	17	25	208	6	24	6	494

### ***Women's level of satisfaction with urban public transport and suggestions for improvement***

The majority of women covered in the study (51.2%) expressed their dissatisfaction with the current service provision in the transport sector. The main source of their frustration was the unpleasant and unethical behaviour of operators mainly conductors and the inefficient and unreliable time management entrenched in the system. As the bulk majority of women dwellers of the city use public transport to go to workplace, shopping and visit family and friends, the poor service was said to have serious ramifications on their day-to-day activities.

Those who reported they were satisfied with the current urban public transport service provision were further asked to give their level of satisfaction. The results show that the majority fall in the medium and low-level categories with a percentage share of 50% and 32% respectively. When transport users get dissatisfied with poor and uncomfortable urban public transport service provision, various actions can be adopted. One possibility is to try to shift from one mode to another to reduce the risk of being abused. Others, especially those with disabilities, might end up staying at home altogether as demonstrated in the following story extracted from the in-depth interview:

*“Abrehet<sup>1</sup>, a single mother with physical disability faced difficulties loading her wheelchair into taxis because the conductors or/and drivers wouldn't allow it even when there is enough space. These conditions significantly cubing her mobility and prevented her from participating in important economic and social activities. Consequently, her entire livelihood and wellbeing is put at stake. Attempts to report such incidents to the police often ended up in vain because even those without special needs got harassed and nobody reacted. She added she was always worried about a possibility of contracting COVID-19 given the lack of proper care inside the transport facilities [7]”.*

Factors that contributed to poor service provision in the urban transport sector include:

- Unclear organisational structure and responsibility assignments;
- Shortage of manpower in the transport office and gaps in organising and monitoring of duties;
- Vague, weak bondage and loose work division among traffic police and the transport office; i.e., the transport office does not have the mandate and authority to directly reprimand nor punish misbehaving drivers.
- Unclear chain of command between transport office and taxi associations;
- The transport office is not empowered in the proclamation to do what it is supposed to do;
- Lack of proper attention to the development of the sector by the top management;
- The drivers and conductors are not cooperative. They tend to focus on making profits rather than quality service provision;
- Transport service delays. One has to wait for 30-40 minutes to get the service because of long queues;
- Overloading. Usually, taxi conductors put more passenger into the vehicles creating havoc for those who already occupy their seats.

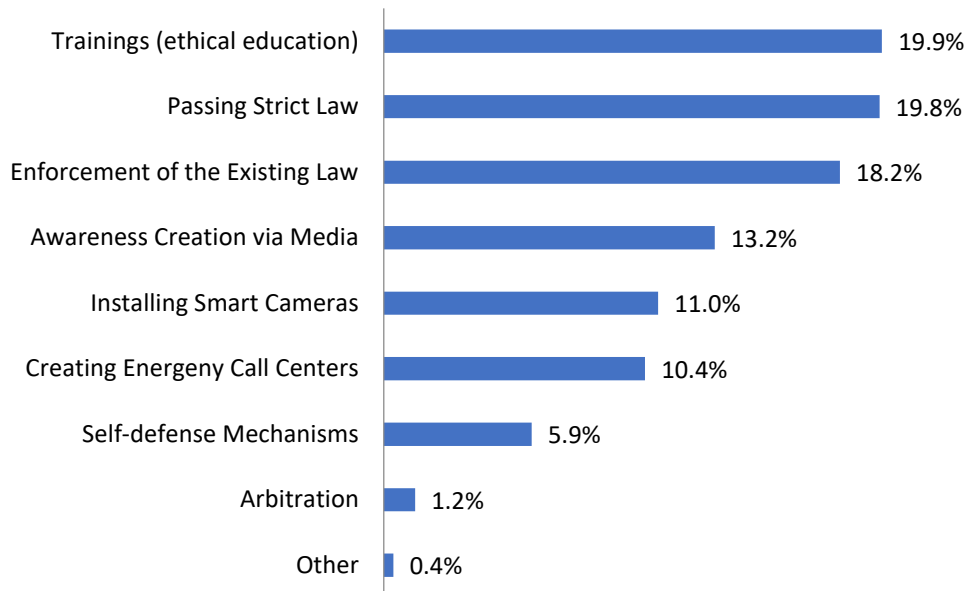
To assess the practice and experience how to deter the problems of safety and security, respondents of the survey were also asked what kind of measures they would suggest to minimize harassment against women in public transportation.

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<sup>1</sup> The true names of interviewee has been concealed for privacy purposes



As can be seen from Figure 3, an aggregate of over half of the respondents believed gender-based harassments in the urban public transport sector can be alleviated through ethical training and awareness creation and strict rule enforcement mechanisms. Some key informant interviewees have also indicated that cultural training on how to respect the rights of women should start at the level of the family whereby boys and girls are properly socialized to become responsible citizens. According to a key informant gender relation based on mutual respect and discipline provides the solution to such social ills in the transport sector.



**Figure 3** Respondents' suggestion to minimize harassments

## CONCLUSION

The study result reveals that safety and comfort are problems of the most preferred Mini-bus taxi mode of transport in the city and the concept of women's safety and security as elements of inclusive transport in the urban public transport sector in Mekelle city is not well developed and negatively impacts their daily travel. Public transport service provision in Mekelle city remains to be largely gender insensitive. Women's safety and security is often compromised due mainly to cultural norms and values that reflect in their daily trips. Harassments in the form of verbal and psychological abuse become rampant especially inside Mini-bus taxi. The bulk majority of harassment was reported to have been performed by conductors; followed by the passenger.

The result further showed that women users have been harassed while waiting for means of transportation and while walking in the streets to catch public transport vehicles. Mekelle public transport fails to be women-friendly in all its forms. Despite the modest progress on legal protection, harassment against women and girls is still widespread and is recognized as being a major barrier to the advancement of women. Incidents of harassments are rarely reported because of repressive cultural norms; and weak legal and regulatory frameworks; efforts to reverse the situation by different stakeholders has so far been unsatisfactory. The most common reaction to harassment remains to be silence due to the fact that any attempt to openly resist verbal harassment is not well reciprocated by fellow passengers. An aggregate of over half of the respondents believed gender-based harassments in the urban public transport sector can be deterred through ethical training and awareness creation and strict rule enforcement mechanisms.

Efforts to reverse the situation by different stakeholders has so far been unsatisfactory. Government priority settings of interventions often side-line transport related problems in the wake of other pressing problems besetting the region in general and Mekelle city in particular. With the current conflict and an increased impact of COVID-19, the issue of gender equity and inclusiveness in the transport sector has been given marginal attention.

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