

Users' experience on public transportation: qualitative analysis with gender perspective of the RUTA in Puebla

Authors: Alsacia San Martin, Karla Tepole & Sebastián Cortés

Universidad de las Américas Puebla (UDLAP)

Puentes Consortium Undergraduate Research Program

November 2022

Abstract

In this study, qualitative data is collected to observe the experience users from line two of the Urban Network of Articulated Transportation, or RUTA for its acronym in Spanish, have. The development of the literature regarding public transportation with a gender perspective is relatively recent and with the emergence of the 2030 Agenda this approach became even more relevant. The document finds that there is a contrast between men and women when they travel in the RUTA, women take longer to commute and spend more money on public transportation on a daily basis. Also, women feel more afraid of traveling in such a system as they have experienced harassment situations, and most of the interviewees have witnessed similar situations. These findings are similar to the results arrived by other authors in the past, studies that were conducted in developing and developed countries. This pattern calls for the attention of researchers and policy makers to propose solutions that make urban mobility safe and gender inclusive.

Introduction

Nowadays, the world population faces many challenges regarding economical, social and environmental problems. In Economics science the scarcity of resources is one of the underlying limitations when policy makers need to decide which social issue should be addressed. That is why the development of literature on a specific problem is helpful to improve the information available. In this case, we are generating qualitative data that sheds light on the experience citizens have on the Urban Network of Articulated Transportation (RUTA) in the city of Puebla, we use a gender perspective with the purpose of demonstrating that urban mobility and gender equality are closely related to each other.

The first motivation to conduct this qualitative analysis is the pressing matter of urban mobility. In 2021, 81% of the Mexican population lived in urban zones (World Bank, 2021), which leads to question the quality and sustainability of the mobility in Mexican cities. The metropolitan zone of Puebla, which is the fourth largest in Mexico and the focus of our study, had in 2015 a population of almost 3 million people.

Nevertheless, during this year the public investment in mobility focused on the infrastructure of private cars, leaving only 12.5% of its budget to public transportation. This decision had an impact on the time citizens lose every day due to traffic congestion as commuting from one place to another took 46% more time than it was actually needed. The study showed that Puebla has the second highest rate compared to other metropolitan zones in the country (Gobierno de Puebla, 2019). A clear concern arises, whether investment should target private or public infrastructure. Although with increases in population across cities, it is reasonable to believe that public transportation is the future of urban mobility.

Furthermore, a gender gap is observed in the mobility culture of Puebla. According to the Intersectional Survey of 2015, 91% of the occupied male population travels to work whereas only 86% of occupied females do (INEGI, 2015). This survey was conducted before the Covid-19 pandemic occurred; therefore, these differences are a consequence of the social norms that dominate public life. In this sense, a qualitative analysis allows us to be flexible when collecting data as we were able to introduce a gender perspective to the construction of our survey.

Another reason to collect qualitative data, is the opportunity to listen to the female and male RUTA users and learn what their perspectives are on women's safety when using the transportation system. It has been stated that violence against women is a discrimination against the female sex, as they are limited to private life and are prevented from going to work or any other activity that implies leaving the house (Dunckel, 2013). In the literature review and our findings, a tendency of violence against women in the public spaces is identified; such as, the shared notion among women in our sample that public transportation is not safe or the fact that more female respondents had experienced situations of harassment compared to the male respondents.

The final reason we had to develop literature around the subject of urban mobility and gender equality is the review of the 2030 Agenda built by the UN as a guideline for countries to enter the sustainability path and to improve their social conditions regarding inclusiveness and peace. The guideline contains 17 Sustainable Development Goals, there are two which we aim to address throughout this document: the number 5 which is concerned with gender equality and number 11 that contains an objective that states the necessity of having a transportation system that is inclusive and safe (United Nations, n.m.).

Once we conducted the surveys, a gender gap was distinguished in the results. In general, female interviewees spent more money on public transportation and took more time to get to their final destination than male interviewees. Also, women responded more often than men that they feel afraid when traveling aboard the RUTA. Some respondents spoke about situations of harassment that they had experienced or witnessed, women are frequently the victims of unwanted physical contact or uncomfortable looks. These scenarios might take place during the ride on the RUTA or on the way back to their homes, but the notion of women being more vulnerable than men in public spaces is shared by the majority.

We asked the volunteers that took the survey about their opinion on the pink bus that was implemented as a measure to make public transportation a safer place for women. It is a bus that only women can take, it commonly passes during peak hours. Although most of the respondents agreed that it was important for the safety of women, some female respondents explained that it was not fair for male users as they needed to get to places too and that women can also harass other women. When we asked them to propose some measures that might help to improve safety, the majority agreed that more buses were needed in order to decrease the number of people that take one bus. The route two of the RUTA connects the south with the north part of the city and it is overcrowded most of the time.

This document is organized in the following way, the next section presents the findings and theories of other authors regarding public transportation and gender equality. Then, we present the methodology and the steps we follow to construct the survey to collect qualitative data, users were randomly chosen in the stations and asked to answer a few questions on the experience they have aboard the RUTA. The results section presents our findings, when we looked at the data with a gender perspective we found differences in the experience women have compared to the experience men have. Finally, we summarize our conclusions and recommend developing information around public transportation and gender equality as it is the best approach to making urban mobility inclusive.

Public transportation and gender equality

Including a gender perspective in mobility within public transportation leads us to guarantee a more comprehensive vision of mobility, it also allows us to broaden the concept of security, specifically

addressing attacks against women and allows us to move towards the Gender equality. According to Ortiz et al. (2021) studying mobility from a gender perspective implies analyzing how gender roles influence the use and enjoyment of cities. Throughout the years the planning of transportation and mobility systems has been done following a model where masculinity predominates. Within feminist research in geography, it has been found and emphasized that urban mobility processes are heterogeneous and unequal (Soto, 2017).

This indicates that the interaction with urban spaces such as the infrastructure of public transportation is influenced by sociocultural factors such as gender. If we take into account the gender factor as a fundamental part of the structure of society, it not only contributes to defining practices, behaviors and expected roles for society, but also develops certain travel patterns and differential displacement practices (Soto, 2017). This tells us that existing mobility patterns can reinforce the position of women and men in their role in society and even in families. Apart from the differences in accessibility, it has been found that the division of labor causes women to have specific travel needs, this causes them to use transport differently from men which is not taken into account when planning mobility (Marciejewska, 2020).

Due to the existence of gender gaps, studies have been carried out that contrast the experiences of men and women in public transportation. It has been documented that the fear of violence is one of the factors that has the greatest influence on the urban mobility of women. However, the Latin American public agenda takes little notice on this issue and fails to recognize the importance of addressing issues of violence against women in the programs created to improve public transportation (Soto, 2017). Women's decisions on where to work or to study are influenced by what they expect to encounter when they transfer from their homes to the place they work or study.

The lack of importance given to the subject has led to the fact that in three of the main means of public transportation in Mexico City, more than 80% of the female users have been victims of some type of sexual violence, in addition to the fact that it has been proven that its metro is considered the second least safe metro among the fifteen largest cities in the world and the least safe in Latin America (Soto, 2017). The data makes us believe that among the public spaces in which women face more violence we can find public transportation.

According to the 2010 national survey on discrimination, seven out of ten women said they were afraid of being sexually assaulted when using public transportation, while eight out of ten men said they did not feel that type of fear (Soto, 2017). This information indicates that women tend to be more sexually, physically or verbally harassed on public transportation, they are more vulnerable and do not have an equal right to access dignified mobility. In Dunckel's (2013) study, 70% of the women

surveyed indicated that, due to their gender, public transportation makes them a target and that the streets are safer for men than for women.

A study carried out in Mexico City's metro stations found that the main attacks that women suffer in transport are morbid looks, groping, hugging and intimidation (Soto, 2017). These acts have led women to change their habits, routines and even the way they dress in order not to attract the attention of other people, considering that these actions, such as changing the way they dress, are a way of taking precautions and passing off as unnoticed. In other words, the emotions that women feel regarding the chosen transportation system led them to build interactions and routines, which reflect a state of alert against everything that causes them fear. The attacks that usually cause fear in women occur more likely when there is a greater influx of people, and many women even believe that the presence of someone else such as other users, police or merchants, does not imply protection or help (Soto, 2017).

Due to the notorious violence against women and the gender differences that exist within transportation, actions have been taken to reduce the numbers of assaults, such as the creation of lines and routes exclusively for women. Dunckel (2013) comments that this measure of segregating transportation has not had the desired effect on sexual abuse numbers. Surveys carried out documented that 66% of women responses said that exclusive transportation is safer, but 48% of women believe that transportation for women-only is not appropriate because men are not obliged to respect it. In the same study, the opinion of men was asked and 38 of 47 respondents considered that exclusive transport for women does not solve the safety problem (Dunckel, 2013). It is not a matter of delimiting one specific space for women-only use, but a matter of transforming the social norms that rule public interactions.

It can be argued that the safety issue on public transportation impacts everyone as there is a general belief that you can be robbed or assaulted when using public transportation. Nevertheless, it does not equally impact men and women, being that they have different traveling patterns; for instance, women make more complex trips than men (Maciejewska, 2020). The perception each gender has on public transportation impacts mobility decisions, Soto (2017) mentions that it has been shown that women represent 70% of those who use taxis for their trips, since they usually consider them safer and more efficient.

There is an undeniable gender gap in the experience male and female users have on public transportation. The opinions users have matter, which is why addressing the complexity of urban mobility from a gender perspective is essential for improving the efficiency of public transportation systems. It is not enough to implement some measures that are gender inclusive, women's needs should be represented when planning and evaluating such systems.

Methodology

According to Rodríguez et al., (2005) qualitative data analysis is a process through which the information collected by researchers is organized and manipulated in order to establish relationships and to extract conclusions. In other words, qualitative research seeks to identify the nature of realities and everything that gives reason to the behavior of each individual and of societies. Through qualitative analysis, emphasis is placed on the social construction of reality, as well as on the intimate relationship between the researcher and what he studies, in order to build a context that conditions the research. (Schettini & Cartazzo., s.f)

Within the study of gender equality, qualitative analysis is important in order to understand how social actors, in this case men and women, construct different representations from which they perceive reality and that leads them to define their position and behavior within the public transport. Through qualitative analysis we will be able to collect data that provide us with information on the interactions between the subjects, their activities and the contexts in which each of the situations take place. (Martinez, 2006). This type of methodology will allow us to investigate more about the subject and get to know it in depth, as well as it will allow us to collect information that illustrates what happens in transport, interviewing the people who use it, allowing us to better understand the interests of all those who use transport on a daily basis.

In order to be able to collect the necessary information, surveys were applied to the users of line 2 of the RUTA transportation system in Puebla. This line has 3 routes, which operate from 4:00 a.m. to 11:00 p.m. . We decided to study this line that was implemented in 2015 because it became a fairly important route for the city of Puebla, since it runs from north to south through 11th street south, covering a distance of 13.8 k.m. Also, in 2020 approximately 17 million 473 thousand 158 used this line, becoming the route with the most users within the RUTA system (Cruz; 2022).

The applied survey is based on one previously carried out by the company polymetrix (Godinez; 2018), data science specialists, who carried out a satisfaction study of public transport users in the Guadalajara metropolitan area. The mentioned survey was modified in order to obtain relevant information in the analysis of gender equality. The survey had 37 questions and was divided into 4 sections: user profile, access to transport, route and relationship with transport.

The first section seeks to know a little more about the characteristics of each user, the second section has the purpose of analyzing how accessible the RUTA system is for users, in the route section we find information such as travel time and if people have been victims of harassment, in the final section certain characteristics of the transport system are questioned. This survey was carried out from

October 26 to November 3, 2022, in 3 different stations of the RUTA system that were chosen by the influx of people, among the stations analyzed are the Torrecillas station, the Mercado de Sabores station and Niño Poblano.

The questionnaires were applied to 60 people, through a personal interview, in order to eliminate the influence of third parties and achieve higher response rates. Of the sample obtained, 34 correspond to women and 27 to men, who were volunteers during the field study within the stations. The sample size is not significant, however it was chosen in order to obtain data that help generate certain hypotheses and ideas for future research.

Results

What our research aims to address:

- Is there a contrast between men and women on how they use public transportation?
- Does some gender feel safer than the other when using public transportation?
- Some solutions on how to improve security

This section is divided into three parts, the first one describes the distribution of the sample, then we discuss the differences in traveling experiences between men and women. The third section presents the recommendations that interviewees made to improve the security in the line two of the RUTA. Furthermore, the findings agree with the conclusions arrived by other authors validating the need to approach the issue of public transportation from a gender perspective.

As we previously mentioned, the sample has 61 observations, 34 are female and 27 are male respondents. The surveys were filled voluntarily by users, we explained that we wanted to ask them some questions about the experience they have on line two of the RUTA. Also, if they made some extra comments on some aspects of the security or other problems, we wrote them down. Finally, the answers were all in Spanish which is the official language in Mexico, therefore, we translated the data in order to construct the following graphs.

Section 1. Sample distribution

Figure (1) shows the employment of the interviewees according to their sex. We observe that the people who reported to be housewives are all women. We have more female students in our sample and more female public employees. Furthermore, most men and most women are employed in the private sector. The second employment that

Employment	Women	Men	Total
Independent worker	8	7	15
Public employee	3	1	4
Private employee	11	12	23
Student	6	4	10
Retired	1	3	4
House wife	4		4
Other	1		1
Total	34	27	61

Figure 1. We observe the number of men and women per employment in our sample.

Figure 2

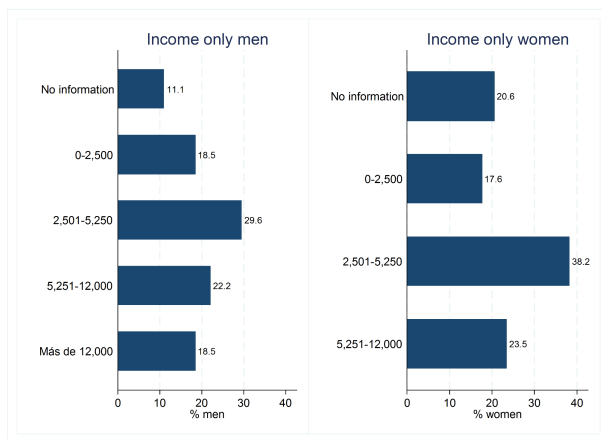
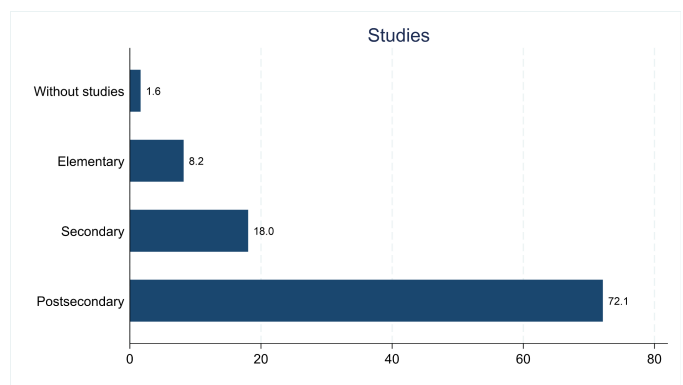


Figure (2) shows the income by sex. We observe that the four individuals in our sample whose income is above twelve hundred Mexican pesos are all men. Also, the most common income range for men and women is between 2,501 and 5,250 Mexican pesos.

Figure 3



In Figure (3), we observe the distribution of grade of studies in our sample; 72.1% of the interviewees had at least a postsecondary education meaning that they attended high school for at least a year, had a technical career or an undergraduate degree. Although there are

some differences between the men and women in our sample, while 85% of men attended at least one year of high school, only 61% of women in our sample had this level of studies and 3% had no studies at all.

Regarding the motive to travel, the most common in our sample was work (50.8%), then other (21.3%) which most of the time referred to entertainment activities such as shopping; 14.8% traveled because they were students, 8.2% of the sample was going home and 4.9% was going to the doctor.

Section 2. Contrast between men and women.

Figure 4

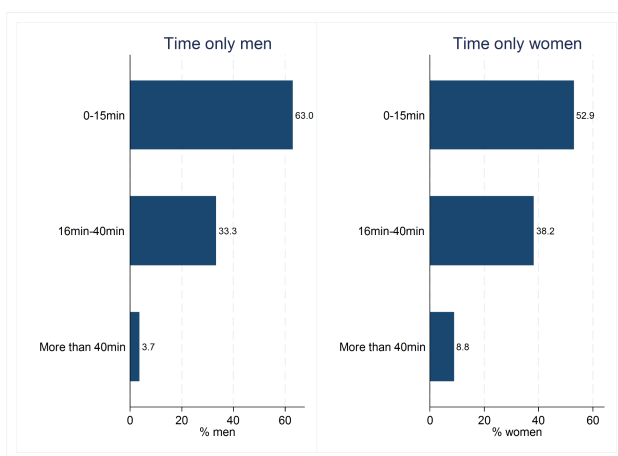


Figure 4. Answers according to the total of men and the total of women in the sample to the question “how long does it take you to get to the station where you take the RUTA?”.

Figure (4) shows that women in our sample take more time than men to get to the station. The results from our surveys stated that 52.9% of the total of women in the sample responded that it took them 15 minutes or less to get to the station whereas 63% of the total of men chose that answer.

There can be many interpretations to this result, the distance between the stations and women’s homes can be a factor, but once we review the addresses of women and men in our sample, we observe that on average men and women live at the same distance from the station. Furthermore, Namgung concludes with a published research paper that the distance women live from the stations is not statistically

significant to explain the probability of women using public transportation (Namgung, M. & Akar, G.; 2014), we can say that women living far and near the stations use the RUTA.

One explanation we find in the literature is the theory claiming that women make more stops when they travel, as they leave their homes they go to many places before arriving at their final destinations. Meanwhile, men travel in a linear way, from their houses to their jobs and back (Heynes et al; 2017). This result is similar to the finding on a study conducted in Jordan, they found that almost half of the women in their sample (47.7%) had to take two routes to arrive at their jobs, 27.2% took only one route and the rest used three or more routes (Aloul et al; 2018). As we conducted the surveys, we had the opportunity to observe that women mentioned other forms of transportation to get to the station, many use *alimentadoras* which are buses that are part of the system RUTA.

Figure 5

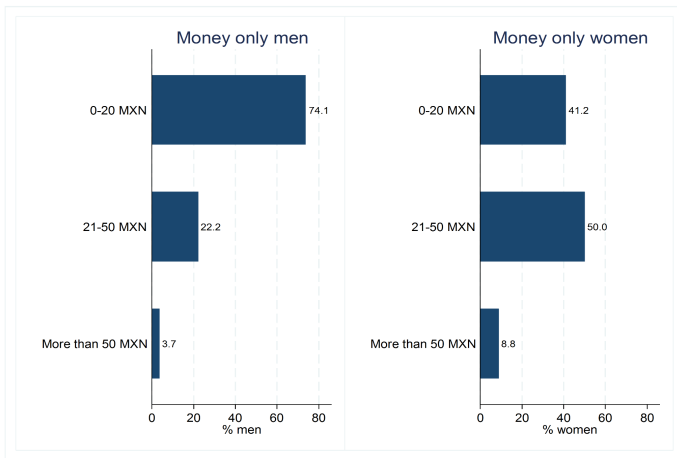


Figure 5. Answers according to the total of men and the total of women in the sample to the question “how much money do you spend on public transportation every day?”.

Figure (5) shows that women tend to spend more money on public transportation than men, this result makes sense when we look at the theory explained in the previous figure. This result is concerning as women in our sample have lower income levels than men, 8 women are in the last two ranges against 11 men. In other words, 23.5% of women have income levels above 5250 Mexican pesos whereas 40.7% of men have income levels above 5250 Mexican pesos. Two other studies have found that women spend more on public transportation than men: Aloul et al. (2018) in Jordan and Abdullah et al. (2022) in

Nigeria.

In this sense, we can question whether public transportation is suited for the traveling patterns of women. The study described in this document, along with others, has found that women tend to take more time and spend more money on public transportation. Although these findings are not representative of the whole population, nonetheless are significant to understand that introducing a gender perspective to urban planification is essential to improve the efficiency of public transportation in cities.

Figure 6

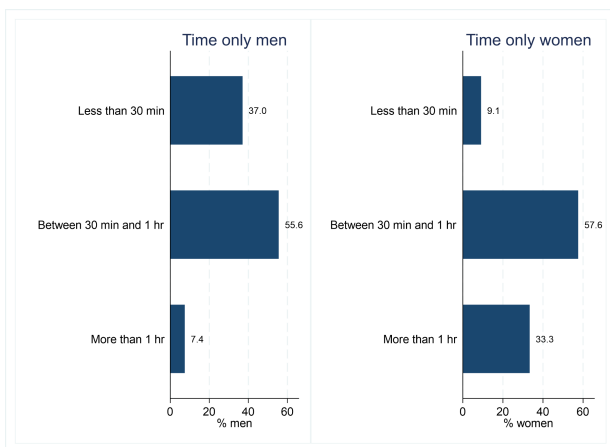


Figure 6. Answers according to the total of men and the total of women in the sample to the question “how long does it take you to arrive to your final destination since you leave your home?”.

Figure 7

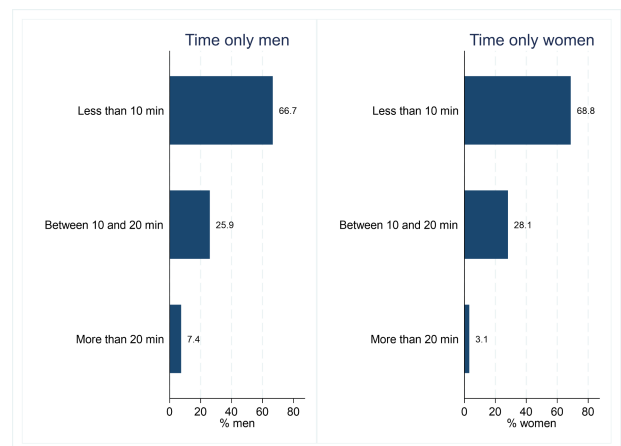


Figure 7. Answers according to the total of men and the total of women in the sample to the question “how long does it take you to walk to your final destination from the RUTA station?”.

Figure (6) and Figure (7) reinforce the contrast between men and women when using public transportation as we observe that women take more time to arrive at their final destination and walk for a longer period of time. Now, it is important to analyze the experience all women have when traveling in the RUTA. The attitudes they have towards the system are a main factor to decide whether they use it or not (Nampung, M; 2014).

Figure 8

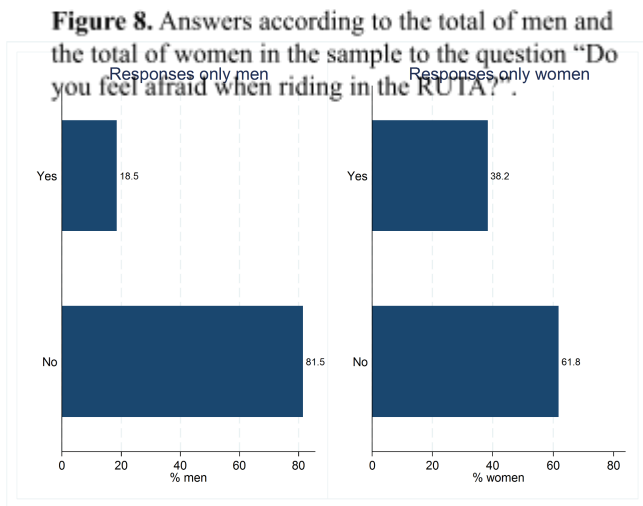
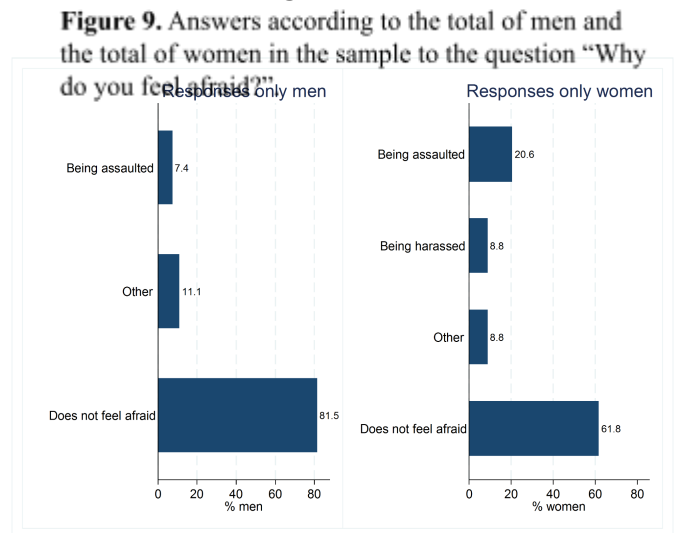


Figure 9



In Figure (8) we observe that 38.2% of the women in the sample answered that they did feel afraid when taking the RUTA compared to 18.5% of men who reported being scared. In Figure (9), when asked about the reasons why they felt afraid, many said that the thought of being assaulted scared them. Also, only women responded that the reason why they felt afraid was because they did not want to be harassed. The comments given by the individuals who chose the option of others, regarded the fact that the bus was too crowded and they were afraid that some accident could happen; such as when the doors opened they feared that anyone could fall off the bus.

Then, we asked them if they have ever been harassed, almost 25% of the interviewees answered yes, 86% were women and the rest were men. Then, we asked them at what moment they had experienced a situation of harassment, and half of them (53.3%) mentioned that it was during the time they were riding the RUTA.

“Frequently, when the bus is overcrowded men take advantage and get closer to women touching them in unnecessary ways. I try to apologize when I have to take someone by the shoulders so I don’t lose balance and fall, but people take advantage.”

- Female respondent

Interviewees mentioned that users of the RUTA, mostly men, when the buses are too crowded take advantage of the situation and harass women by making inappropriate physical contact. In Figure (10), we observe the circumstances of harassment experienced by the individuals in our sample.

Figure 10

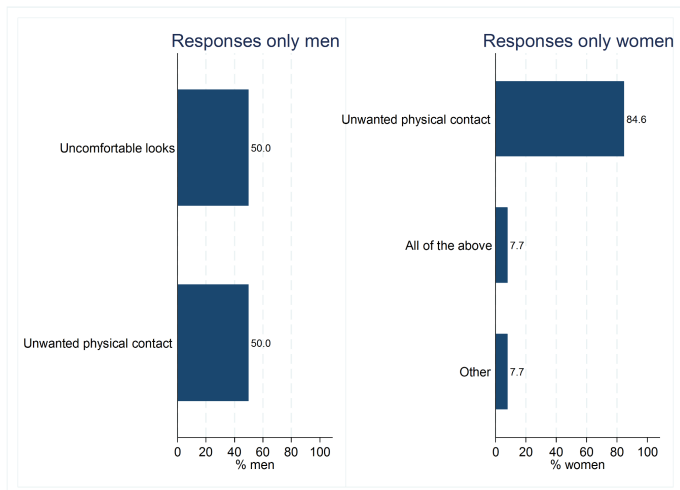


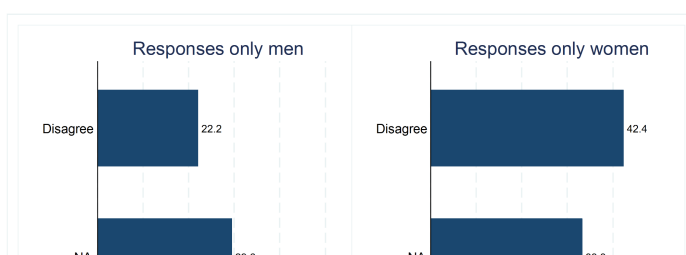
Figure 10. Answers according to the total of men and the total of women in the sample to the question “Which situations have you experienced?”. These responses correspond to the people who had been victims of harassment.

It is important to notice that only two men came forward and declared that they had experienced harassment (the rest reported that they had not been harassed), one said he was a victim of uncomfortable looks and the other experienced unwanted physical contact. On the other hand, one woman said that she had experienced both of those situations (7.7%), another did not specify which kind of harassment she was a victim of (7.7%), and the rest experienced unwanted physical contact (84.6%). However, 92.6% of men and 61.8% of women in our sample declared that they had not been victims of harassment, which means that the results observed in Figure (10) are from the respondents

that previously reported to have experienced harassment. Many who answered that they had not been a victim, talked about many situations where they were witnesses of inappropriate behaviors. For instance, one woman told us that she once saw that a man spanked a woman in front of a security guard and she slapped him, but the guard did not say or do anything.

Finally, we asked them if they considered the public transportation system safe and we observed a clear contrast between women’s responses and men’s responses. Figure (11) shows this contrast, almost one third (35%) of the sample agreed with the statement that public transportation is safe, another third (31.7%) was indifferent because they mentioned that the RUTA was relatively safer than other forms of transportation but had felt unsafe and the last third (33.3%) of the respondents disagreed with the statement. Some even mentioned that they had been mugged once or twice, referring to cases of *bolseo* which is a term used when someone takes your phone or your wallet without you noticing it.

Figure 11



One user reported that there were many situations of violence caused by friction between men because one is disrespectful with someone else's girlfriend. This kind of confrontation makes spectators anxious about their own safety as there are families traveling with children and senior citizens in the buses. Interviewees talked about guards' negligence to handle such matters, and their inability to step in when they are needed.

Women feeling more insecure than men when using public transportation is a result that has been found before on many occasions. Dunckel's study, which is mentioned in the literature section, explains that in Mexico City's Metro system 90% of the reports claiming violence against women are made by women. The paper shows that the systematic exclusion of women from public life leads to an

Figure 11. Answers according to the total of men and the total of women in the sample to the statement "Public transportation is safe".

urban mobility dominated by masculine culture (2013). Another study, recollected international data on harassment reported during the usage of public transportation, mentioned that 28% of women surveyed in Washington DC had

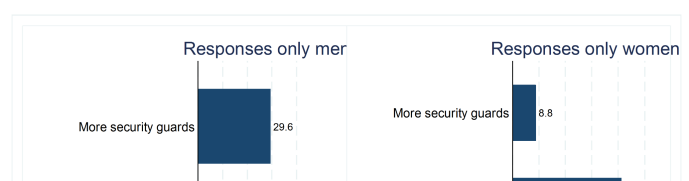
suffered some kind of harassment. Also, it is concerning that the observable data on such issues is considered to be an underestimation of the true numbers because of the ambiguity surrounding the definition of sexual harassment or only harassment. The research mentions that women have talked about the confusion of knowing for sure during peak hour if they are being a victim of harassment as everyone is very close to each other (Gardner et al; 2017).

This specification agrees with our findings as many users that reported harassment situations added that it was during peak hours when the buses are very crowded. Nevertheless, women in our sample talked about the harassment situations on their way back from the station to their homes. One female interviewee shared with us a concerning story, she was walking home from the RUTA station and a group of men started following her. As they came near her she tried to walk faster, but it was during the night and almost all the businesses were closed so she had nowhere to go. One grabbed her and touched her without her permission, she kept walking until an open door and when she turned around they were gone. She felt afraid at the moment, but she mentioned that she was lucky nothing else happened, now she tries not to walk by herself at night.

Finally, the study conducted by Aloul et al. found that only 4 women out of the 311 that were surveyed answered that they had never experienced harassment during their commutes in public transportation (2018). In our sample, 13 out of 34 (38.2%) women reported a situation of harassment which is a concerning number and if we introduce the above-mentioned issue of underreporting, we can probably estimate a higher percentage of women being harassed when using the RUTA in Puebla.

Section 3. Recommendations for improvement

Figure 12



The survey contained questions that addressed the improvement of security and quality. For instance, Figure (12) shows the answers on how to improve the RUTA's security. Men were inclined to recommend the increasing of security guards as a measure to raise confidence in users. Meanwhile, women recommended more buses to ensure the proper space between passengers leading to less cases of harassment. Among the respondents that chose other recommendations to improve security, we found three suggestions that were repeated by some. The first one is the presence of a security guard inside the bus as most of the cases of *bolseo* and harassment happen when people are riding the bus. The second is the installment of security cameras inside the bus, and the third one is that guards in the station should go through a training process in order to have the necessary skills to handle security matters.

Figure 13.

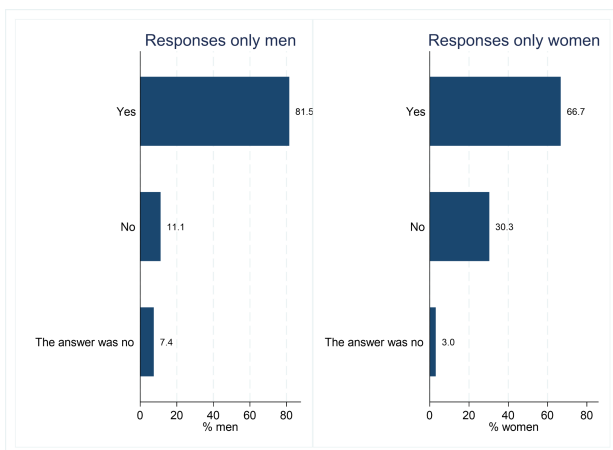


Figure 12. Answers according to the total of men and the total of women in the sample to the question "How can the RUTA be improved?".

In August 2022 the pink bus was introduced to the RUTA's line 2, it is a bus with one wagon meant for women's use only. We asked them if they have heard of its implementation and 93.3% answered yes, some added that sometimes it is a whole bus for women and not just a section.

Figure (12) shows how they responded when we asked them if they considered the pink unit a necessary measure to women's safety. Almost all men answered yes whereas only 66.7% of the female

respondents considered this measure to be essential for women's safety.

However, we would not want to jump to conclusions and explain that men agree more with the introduction of the pink unit as they could have other reasons to answer that it is a necessity for women's safety. When we were conducting the surveys, we were able to observe the hesitations of some men when they answered yes; we discussed it after the period of data collection, we agreed that they might have felt ashamed to say no and look bad.

The reasons given for why the pink unit is not necessary for women's safety varied, two respondents agreed that the pink unit is not respected causing that its introduction has no effect on the discussed issue. Some women explained that it was unfair because men need to travel as much as women do, they explained that you see pink units that are almost empty and men who need to get to work are unable to ride them. Then, one respondent added that the solution to the crowdedness of other units while the pink one is empty, may be that they use smaller buses for the only women vehicles and bigger ones for the rest.

Furthermore, women explained that other women can rob and harass, causing an unsafe environment even when they are only surrounded by women, but one respondent agreed that she felt safer despite these possibilities. Another two female respondents disagreed with the question because they argued that women are vulnerable everywhere they go and having a special wagon for the RUTA's line 2 does not change that. In general, 44 respondents said yes, 13 said no and the rest had never heard of the pink unit; the majority of our sample considers the pink unit necessary for women's safety although some consider that its frequency is not enough to cover the travel necessities of all women.

Dunckel explains that the pink unit is treated as the normal precaution in an environment where women are naturally more vulnerable than men because of the biological differences between men and women. In her sample 66% of women feel safer in this kind of unit and 44% do not. This study finds that public transportation is treated as naturally dangerous and women are expected to adapt to this fact by dressing appropriately and not traveling by themselves at night. Also, they exposed that men are worried about the transportation systems with women-only-vehicles as they put a target on all those women traveling alone (2013). In this aspect, we find the same perception of public transportation in our sample as many have experienced situations of harassment and robbery, but they are resigned to moving in such a male dominant culture.

Conclusion

To summarize the relevance of our findings, the study of public transportation with gender perspective is essential for the empowerment of women, especially in societies where there is a dominant masculine culture. This kind of approach has been neglected through the years, the planning of public transportation systems for the improvement of urban mobility has excluded the fact that in public spaces the interaction of men and women is inevitable, and that such interactions are influenced by the social norms. It is concerning that violence against women may transform their behavior, preventing them from going out into the public life. For instance, women who feel unsafe could decide to reject a job that entails taking the public transport every day, or parents may prevent their daughters from going to school if they have the notion that women are more vulnerable to experience harassment situations.

In our study, we focus on the users of an indispensable public transportation system in the city of Puebla, it consists of a bus that has a designated line which makes trips more efficient. The line two of the RUTA connects the south with the north part of the city, making it an important route for the citizens whose jobs require them to commute across the city on a daily basis. For the people who live in the north and want to travel to the city's downtown, this line is almost the only option.

Furthermore, we conducted a qualitative analysis to collect information on the experience men and women have when using this system. This methodology allowed us to interact with the

interviewees and to listen to their concerns, helping us to make a deeper analysis on public transportation. The results of our analysis concluded in three main findings; the first one is that women in our sample tend to make more complex trips, as it takes them longer to arrive at their final destination and spend more money on public transportation per day. This suggests that the unremunerated work that they have at home leads to making more stops on their way to work and back whereas men make fewer stops.

The second result concerns how safe men and women feel, and we found that the latter feel less secure when traveling on the RUTA. The reason behind this is that they feel afraid of being harassed or assaulted. In general, women in our sample have experienced and witnessed more situations of harassment, some happened inside the bus and others were victims when they were walking home. However, as the answers of the surveys were self reported it may be more accepted for women to come forward when they have been harassed than men.

The final result summarizes the suggestions made by users on how to improve security on line two. Some suggested that more guards are necessary, but women were hopeless to this solution as they have witnessed their inability to deal with violence against women. They showed more preference to the solution of a properly trained guard inside the wagon to look out for cases of inappropriate physical contact which is very common during peak hours. Authorities have implemented measures to deal with the issue of women's security, such as the introduction of a pink bus for women only and the installment of panic buttons on buses, this last measure has little impact on the interviewed users as they never use it or have never observed anyone making use of the panic button.

In our survey we asked how users felt about the pink bus, and we found that men were more inclined to say that it was necessary for women's safety. Meanwhile, women explained that sometimes men do not respect the women only buses or that they may be safe on the bus ride but are afraid of the interactions that could happen in other public spaces, which ends up being the same. Also, they expressed that women are capable of harassing and assaulting others, which makes it pointless to implement such a measure. Moreover, some female users commented that it was not fair for male users to have a pink bus because men also need to travel and there are not enough buses to cover everyone's mobility needs.

Following the literature on the subject and the results from our survey, we can conclude that the steps that have been taken in order to accomplish a public transportation where women are not discriminated against have not been effective. We observe a difference in the traveling patterns between men and women, which results in female users spending more money on public transportation systems. Another reason to question the inclusiveness of the RUTA in Puebla, is how unsafe women feel compared to men, and the situations of harassment that are being experienced without any kind of consequence.

Finally, we call for the attention of policy makers and urban planners to come to a solution for the issue concerning women being excluded from public places, specifically public transportation. We believe that the people in charge of deciding whether to accept a mobility project or not should be constituted by men and women, in this way, the public transportation infrastructure should be able to accommodate both gender needs. They need to address the problem with the proper level of complexity as the proposed solutions should be cautious not to alienate women or normalize the hostility towards them, these concerns are part of the limitation of our work. Future studies would be adequate to find the necessary measures to improve urban mobility and to conduct an analysis where multiple professionals from different disciplines participate to arrive at a solution.

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