

# 9 Women and LGBTI youth as targets

## Assessing transit safety in Rio Claro, Brazil

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### 9.1 Introduction

Violence against women is a phenomenon that occurs in a variety of ways in all parts of the world (Amaral et al., 2013; Sokoloff & Dupont, 2005). Brilhante, Moreira, Viera, and Catrib (2016) conducted a study on 450 articles from the Web of Science database, from 1982 to 2012, to understand the nature of gender violence, which suggests women are more often the target of these crimes. A vast majority of these articles dealt with some type of violence against women. Several initiatives have been implemented aiming at improving local knowledge and sharing information about the conditions under which crime occurs and the best ways to prevent it (Ceccato & Paz, 2017; Gekoski et al., 2015; Loukaitou-Sideris, 2014; Vanier & d'Arbois de Jubainville, 2017). One of these initiatives brought together researchers from 17 cities around the world, who in 2018 started to conduct a survey of university students in these 17 cities. Some preliminary results of this international partnership were presented and discussed at the Conference “Crime and Fear in Public Places: Patterns, Challenges and Actions”, held from 17–18 October 2018 in Stockholm, Sweden.

This chapter presents results from one survey carried out with students from the São Paulo State University (UNESP) at Rio Claro, SP, Brazil. It focuses on the perception of transit safety among students and their victimization regarding sexual assault or harassment. Thus, this chapter contributes to the debate on the safety of urban mobility of university students, especially females, on public transport and, above all, attempts to show the authorities the need to implement effective public policies to mitigate the problem and promotion of the right to free movement in public spaces for the most vulnerable groups.

### 9.2 The context of gender violence

Gender-based violence is a persistent social problem, multiform and articulated by psychological, moral and physical facets, and may occur in a private-family environment, in workplaces, as well as in public spaces. Its manifestations are ways of establishing a relationship of submission or power, always implying

situations of fear, isolation, dependence and intimidation for women (Bandeira, 2014). The root of this problem is related to the position of women's subjugation in patriarchal society (Silva, 2017). This conception of violence is the same that takes gender hierarchy into homo-affective relationships, in which the most masculine performances subjugate the most feminine (Carrara & Heilborn, 2006).

In Brazil, since redemocratization in the 1980s, violence against women has attracted attention and has been raised as one of the priority problems to be tackled by public health and human rights organizations (Silva & Oliveira, 2015). However, the theme only gained greater strength with the creation of Law 11,340/2006, known as Maria da Penha Law (Brasil, 2006).

Among the various types of violence against women, sexual violence stands out as one of the main causes of loss of healthy life years due to disability, as it has a significant negative impact on women's health (Drezett, 2003). This type of violence can cause harmful consequences to the victim in the short and long term, such as: depression, symptoms of dissociation, eating disorders, difficulties in sexual relations, sleep disorders and suicide attempts, among others (Williams, 2014). Among crimes of a sexual nature, sexual harassment is historically the most frequent, but it has been naturally neglected and even regarded with some "naturalness" by society, which considers it a joke (Benedicto, 2017; Silva, 2017).

According to Silva (2017), sexual harassment is offensive conduct of a sexual nature and, although less serious in comparison to rape, it is very common in Brazil. This behavior, whether in its verbal, nonverbal or physical form, has a strong embarrassing and destabilizing effect on the victim and affects their dignity by depriving them of their essential right to come and go.

A survey by Think Olga NGO in 2013 of 7,762 women in Brazil as part of a campaign against sexual harassment in public spaces (No more fiu-fiu campaign) showed that 99.6 percent of respondents said they had suffered harassment (98 percent of them have heard pickup lines in the street and 64 percent in public transport) (Think Olga, 2013).

Sexual harassment occurs most often in public transportation spaces, and in most cases is perpetrated by men against females (Ceccato, 2017; Stringer, 2007). This type of insecurity in urban mobility has serious socioeconomic impact on society and especially on women's lives (Silva, 2017). It may seriously impair women's roles in the economy as a whole, as it limits women's access to study and work, preventing them from breaking the cycles of poverty in which they live (Ceccato, 2017; Feliciano, 2016). Silva (2017) states "there is no awareness of the psychological damage that harassment and sexual violence cause to women using public transport and how much this damage limits their individual freedom and autonomy" (Silva, 2017, p. 4). This type of abuse has been under-reported and barely faced by relevant public authorities, whether in the political or legal-criminal context.

One of the important contributions of scholarly works is to make the consequences of sexual harassment, mistakenly regarded as innocent, more visible and to raise awareness of the negative impacts of these crimes on the prosperity of the whole society. This chapter aims to contribute in this context and is

structured as follows. It first addresses the issues of women's victimization and sexual harassment in public spaces. Then the main hypotheses of this study are presented followed by a description of the case study, data and methods. Results are discussed later followed by some conclusions. The chapter also reveals the places belonging to the urban transportation system where participants feel most unsafe, as well as discusses a set of measures that can be implemented to improve safety among university students.

### *Feeling of insecurity: the fruit of a society in crisis*

Fear of crime, also referred to as "sense of insecurity" has increasingly occupied the agenda of scientists and public safety managers. Warr (2000) defines fear of crime as a sense of alertness or fear caused by a notion or expectation of danger. According to Carvalho & Oliveira (2016) the fear of crime negatively affects people, often more than the crime itself. Thus, both crime and fear of crime would benefit from approaches that treat them as distinct social problems, demanding different policies and actions by public authorities and managers.

In Brazil, there is usually a very high sense of insecurity due to high rates of violence. Violence in Brazil has significantly increased in recent years. According to the Atlas of Violence of 2018 (IPEA & FBSP, 2018), in the 2010 decade, the homicide rate in Brazil grew 14 percent on average. Statistics on violence against women are also very bleak in Brazil. The IPEA reports the national average rates of rape per 100,000 inhabitants in the period from 2012 to 2016 as 30.32 for adult women and 51.4 for girls under 13 (IPEA & FBSP, 2017). Ramos (2017) reports that in a survey conducted in 103 cities in Brazil, 30 percent of the women interviewed declared having suffered some kind of personal and direct violence only in the last year and more than 66 percent of all respondents admitted having witnessed some scene of violence against women in their neighborhood last year.

Violence against the LGBTI<sup>1</sup> population is also a matter of concern since it has been increasing in recent years. According to a survey conducted by the Gay Group of Bahia (Valente, 2018), in 2017 there was an increase of 30 percent in murders of LGBTI people compared to 2016.

According to Silva, Gregoli, and Ribeiro (2017) the rate of violence against women in public places is also high and is inversely proportional to their age. In general, 40 percent of women over the age 16 have experienced some form of aggression in public places. However, among younger women, the aggressions were even more frequent. More than 60 percent of women between the ages of 16 and 24 reported having suffered this type of violence in the last 12 months. Whereas among those aged 25 to 34, 50 percent have suffered some type of violence perpetrated in public places during the same period.

Aggressions and offenses against women in public environments, especially in components of the urban transportation system, spaces shared by a large number of people, illustrate well the cultural and social tolerance of violence against women. Regretfully, this reality is not restricted to Brazil. Different

forms of violence against women and girls in public places occur in different parts of the world, reducing women's freedom of movement (Ceccato & Paz, 2017; Gekoski et al., 2015; Madan & Nalla, 2016; Newton, Partridge & Gill, 2014). Ceccato (2017) analyzes research conducted in different countries, all presenting similar characteristics regarding sexual harassment in public transportation. Sexual violence is concentrated in the busiest central stations and occurs during peak hours in the morning and in the afternoon (Ceccato & Paz, 2017), when a large number of people transit through these spaces.

Statistical data from the Public Security Department of the São Paulo State show a 30 percent increase in sexual offenses from December 2017 to December 2018 in the state of São Paulo, mainly in the countryside of the state (SSP-SP, 2019). A survey conducted in the city of São Paulo by Datafolha (Datafolha, 2014) shows 63 percent of women have been victims of sexual harassment, with young women being among the main victims. In this survey, among the places cited by the victims, public transportation leads with 35 percent. In the case of women, 49 percent reported having suffered sexual harassment on public transportation, and 38 percent of them suffered physical harassment (Datafolha, 2014).

### *Hypotheses of the study*

Based on a preliminary analysis carried out for the Crime and Fear in Public Places Conference held in October 2018 at the Royal Institute of Technology (KTH) in Stockholm, Sweden, it was reported that the LGBTI student group had a higher relative index of sexual victimization. However, based on the literature and a more critical look at statistics, in accordance with the perception and observations of the authors, the following two hypotheses were suggested.

First, the most vulnerable group is women. The high degree of victimization of women in Brazil, and in many other countries, is notorious and results from a cultural heritage of devaluation of women due to the strong gender bias caused by the perpetuation of machismo. Second, in the case of LGBTI women, this prejudice is potentiated by homophobia, producing a higher incidence of aggression against individuals in this group.

It is also expected that, among college students, the proportion of female LGBTI is greater than the proportion of male LGBTI. This fact, of course, leads to a higher rate of victimization of the entire LGBTI student group.

## **9.3 Framing the case study**

### *Rio Claro, São Paulo: youth safety among university studies*

Rio Claro is a medium sized city, with an area of 500 km<sup>2</sup>, a population of about 205,000 inhabitant and a demographic density of about 374 inhabitants/km<sup>2</sup> located in the eastern region of São Paulo State (a southeast region of Brazil), 173km away from its capital (São Paulo city) by highway. The region of Rio

Claro is characterized by a massive presence of diversified and specialized industrial centers.

However, official statistics of the São Paulo State Department of Public Security present high criminality rates for Rio Claro. According to this source (SSP-SP, 2018), the average homicide rate of Rio Claro in the period of 2013–2017 is almost twice the average rate of the state, or of the city of São Paulo, the largest metropole of the country, in the same period.

In Rio Claro there are no metro, train or trolley services. The only public mass transit service is the bus system, which includes 58 buses distributed in 27 routes that serve 600 bus stops from 5 a.m. to midnight. The bus service is characterized by a poor distribution of lines, low frequency, and bus overcrowding during rush hours. Therefore, many residents give up riding the bus and use other transport modes such as bicycles, motorcycles and ride-hailing services.

The survey used in this study was applied to the students of São Paulo State University (UNESP) at Rio Claro Campus. UNESP is a multi-campus university, comprising 34 units in 24 cities in the state of São Paulo. At the Rio Claro Campus there are 3,253 students, from which 48.7 percent are female and 51.3 percent are male.

### *Data and methods*

In this study, a survey was conducted using a structured questionnaire, both online and paper-and-pencil methods. The online survey was applied via Google Form and the paper-and-pencil survey was applied by distribution of the questionnaires to the students in different places on Campus, where the participants themselves completed the questionnaire.

A total of 569 students' responses were collected from May to August 2018. From the total number of questionnaires applied on paper about 19 percent of the responses were discarded due to lack of answers to some mandatory questions. Thus, the sample of this study constitutes 462 validated questionnaires. Subsequently, the answers collected on paper were typed by the CEAPLA team using the same online survey already created on the Google Form platform. The profile of the participants is detailed in section 9.4 of this chapter (Figure 9.1).

The survey consists of 38 questions that address participants' demographics, their sense of transit safety and their victimization in public transportation, as well as its consequences in their urban mobility. Furthermore, participants' views on unsafe places and their suggestions for improving the safety of those places were collected.

These questions address the following issues regarding transit safety: the fear of using public transportation, the main impediments to using the bus service, the impact of fear on students' behavior in transit, their victimization by sexual assault or harassment, and participants' suggestions for intervention to improve the safety of public transportation.

Since this chapter focuses on the perception of transit safety among university students and, more specifically, their victimization regarding sexual assault

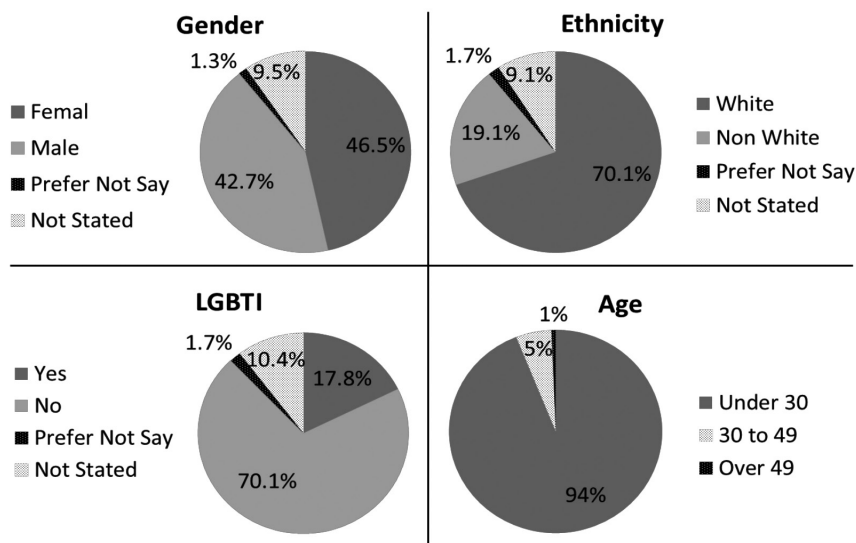


Figure 9.1 Profile of survey participants.

or harassment, the analysis considered predominantly ten questions among all questions in the survey and correlated them with individual aspects of respondents such as gender, ethnicity and their identification as LGBTI, in an attempt to address the intersectionality of the perception of transit safety among students.

The analyses were performed using the corresponding Google Forms data sheet and the features of the Microsoft Excel software. The cross tabulation method was used to understand and explain the correlation between different variables. The concepts of Relative Risk and Odds Ratio were used in some analyses to evaluate the results.

#### 9.4 Results and discussions

There is a balance between female and male students (46.5 percent female and 42.7 percent male) among participants' responses. Figure 9.1 shows the distribution of the respondents in terms of gender, ethnicity and age. Students who claimed to belong to the LGBTI group represent 17.8 percent of the total number of participants. Considering the ethnicity of participants, 70.1 percent declared themselves as white, while 19.1 percent declared themselves belonging to non-white ethnicities. The vast majority of participants (94 percent) are less than 29 years of age.

In this study, only 19 percent of the students identified themselves as belonging to non-white ethnicity relative to the national distribution of about

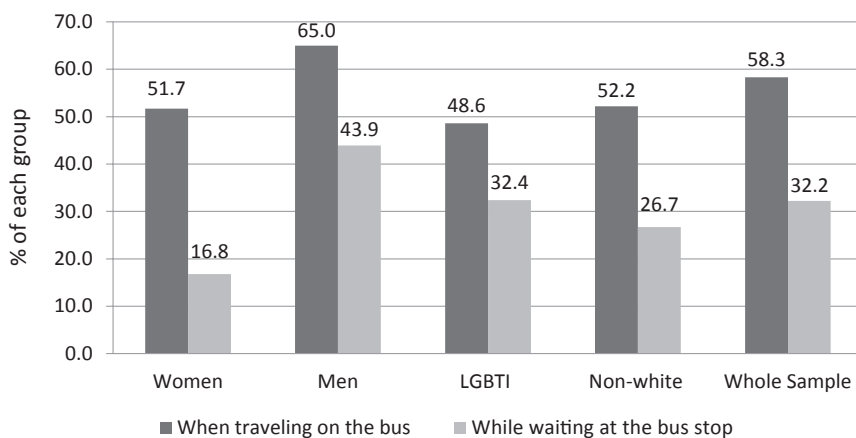
47 percent (IBGE, 2010), and this portion of the population predominantly do not belong to the classes with high purchasing power, made up of a majority of white people. In general, the students at public universities in Brazil, especially in the case of universities who occupy a high position in the ranking of the best universities of the country, such as UNESP, come from a privileged strata of society. Therefore, this sample does not reflect the actual composition of Brazilian society.

### *Nature of victimization/perceived safety*

In order to assess students' safety sense in public transportation, four specific questions were added to the survey. Figures 9.2 and 9.3 show a summary analysis of students' responses to these questions. Approximately 58 percent of the students reported they feel safe when traveling during daytime (Figure 9.2). Nevertheless, this percentage decreases to 22.7 percent among those who traveled at night-time (Figure 9.3).

The problem is even greater when analyzing the sense of safety during waiting time at bus stops. During daytime, on average only 32.2 percent of students feel safe while waiting at the bus stop. The most critical index (16.8 percent) belongs to the women's group. In a more in-depth analysis, even during daytime, worse indices stand out: more than 85.0 percent of non-white women and 88.0 percent of LGBTI women report feeling unsafe while waiting at the bus stop, whereas in respect to non-white LGBTI women the rate reaches 100.0 percent. This sense of insecurity also prevails in 83.3 percent of non-white LGBTI men when waiting for buses during daytime.

After dark, however, the average number of students who feel safe while waiting at the bus stop drops dramatically to only 6.4 percent. Waiting at the



*Figure 9.2* Students' perception of public transportation safety during daytime.

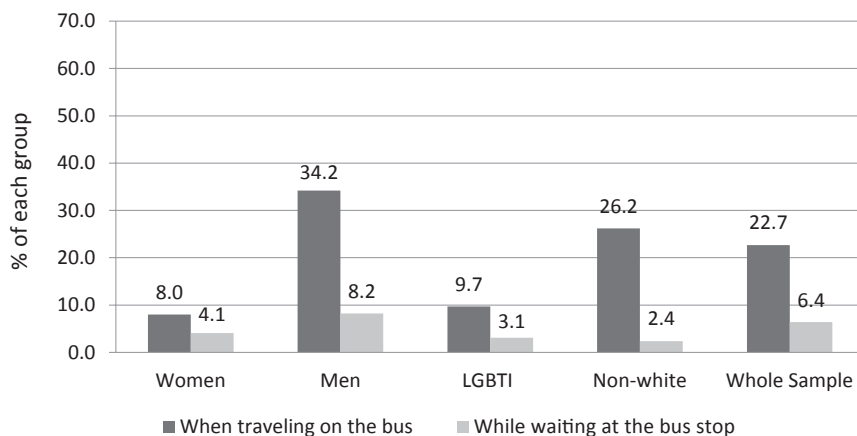


Figure 9.3 Students' perception of public transportation safety after dark.

bus stop after dark becomes a great problem for all groups of students who answered the question regarding this item of analysis, ranging from a minimum of 91.8 percent in the case of the male group to 97.6 percent in the group of non-white students (Figure 9.3).

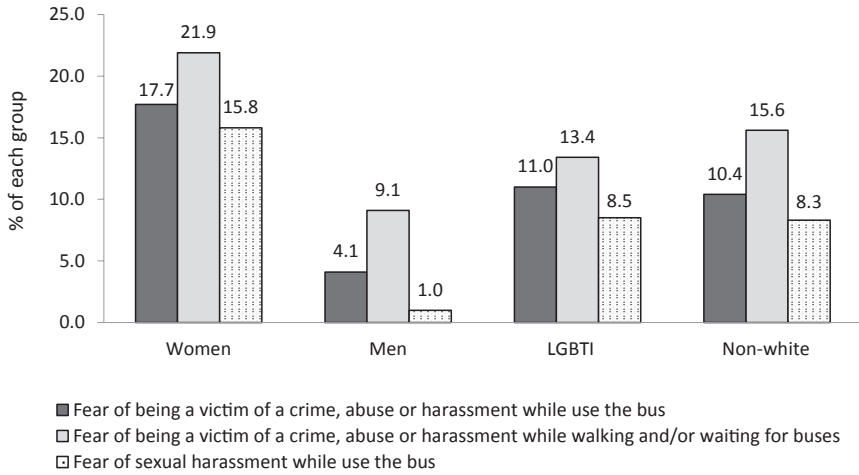
Travel safety on the bus also requires attention. Among students participating in the survey, only 8 percent of women and 9.7 percent of LGBTI group feel safe traveling at night on public transportation. The indices of other group are also very low (Figure 9.3).

Figure 9.4 shows the main impediments for students to use the bus service more frequently. As the graphs in this figure show, on average 18.5 percent of women said that reasons related to some form of victimization prevent them from using the bus more frequently. The fear of being a victim of a crime on the way to the bus stop and/or waiting at the bus stop is indicated by all groups as the greatest impediment to increasing their frequency of using public transportation. In fact, the fear of gender-based violence in public transport proportionally affects more women than any other social group, hindering their freedom of movement in city spaces.

The survey also evaluates students' perceptions about the most significant problems (among a list of 14 options) while using bus transportation, both on the bus and at the bus stop. Analysis of responses indicates the following ranking of most cited problems: *poorly guarded/empty most of the day* (for 95.5 percent of respondents), *poorly illuminated* (for 93.3 percent of respondents), *pickpocketing* (for 80.9 percent of respondents), *robbery* (for 78.1 percent of respondents), *isolated* (for 74.7 percent of respondents), *vandalism/litter* (for 59.0 percent of respondents) and *sexual harassment* (for 51.7 percent of respondents).

Four of these options were selected for further analysis because of their relevance to influencing sexual victimization: *poorly guarded/empty most of the day*,





*Figure 9.4* Main impediments for students to use bus service more frequently.

*poorly illuminated, isolated and sexual harassment.* Except in the case of sexual harassment, for the three other problems the students' concerns about bus stop conditions are approximately six times higher than about conditions of the trips on the bus, regardless of the group they belong to (Table 9.1). There is a slight variation in the case of non-white people, where their concerns about the bus stop conditions are about nine to 12 times higher than the concerns about the conditions of the trips on the bus.

However, in the case of sexual harassment, there is no difference between the students' concerns about bus or bus stop conditions (bold numbers in the Table 9.1). Nevertheless, there is a considerable difference between groups of female and male students. Women's concerns about transit problems are more than double that of men, both on the bus and at the bus stops. The reason for this can be the overcrowding of the bus, a condition that favors the occurrence of sexual harassment.

There are also three explicit questions in the survey that make it possible to obtain the participants' victimization data regarding three types of crime:

- sexual assault or harassment;
- some other serious crimes (aggravated assault, robbery, rape);
- theft/pickpocket, jewelry snatching or robbery.

Table 9.2 shows the intersectionality of the students' responses to these three types of crime analyzed. The first row of each crime type, in this table, shows the percentage of students victimized regarding that type of crime, in the second column, followed by the distribution of victims according to gender,

Table 9.1 Intersectionality of students' concerns about public transportation

Type of concern	% Total Resp.	% of each group					
		Gender		LGBTI		Ethnicity	
		F	M	Υ	N	W	NW
Poorly guarded/ empty most of the day on the bus	95.5	100	82.1	39.0	38.0	38.6	37.5
at the bus stop	16.9	24.0	10.5	4.9	7.1	7.4	3.1
Poorly illuminated on the bus	93.8	96.2	82.1	37.8	37.3	37.7	37.5
at the bus stop	93.3	96.2	83.2	37.8	37.3	38.0	37.5
Isolated on the bus	15.7	17.7	12.6	7.3	6.2	6.8	4.2
at the bus stop	92.7	94.9	83.2	37.8	37.3	37.7	37.5
Sexual harassment on the bus	74.7	84.8	59.0	30.5	29.9	31.8	31.2
at the bus stop	9.6	10.1	8.4	2.4	4.6	4.5	3.1
Sexual harassment on the bus	72.5	83.5	55.8	30.5	28.7	29.0	31.2
at the bus stop	51.7	70.9	31.6	54.5	46.8	49.6	56.8
at the bus stop	<b>43.8</b>	<b>62.0</b>	<b>27.3</b>	<b>48.5</b>	<b>40.3</b>	<b>44.4</b>	<b>43.2</b>
at the bus stop	<b>46.6</b>	<b>62.0</b>	<b>29.5</b>	<b>48.5</b>	<b>42.5</b>	<b>45.2</b>	<b>48.7</b>

Note

Percentage calculated in relation to the total number of individuals in each group who answered the question.

Table 9.2 Intersectionality of victims regarding three types of crime analyzed

Type of crime	% students victimized	% of victims					
		Gender		LGBTI		Ethnicity	
		F	M	Υ	N	W	NW
Sexual assault or harassment	17.3	71.3	18.8	32.5	57.5	66.3	23.8
% of victims in the group itself	–	26.5*	7.6	31.7*	14.2	16.4	21.6*
Other serious crime (aggravated assault, robbery, rape)	9.3	51.2	39.5	21.0	72.1	72.1	21.0
% of victims in the group itself	–	10.2	8.2	11.0	9.6	9.6	10.0
Theft/pickpocket	6.0	46.4	46.4	28.6	67.9	78.6	14.3
% of victims in the group itself	–	6.0	6.6	9.8	5.9	6.8	4.4

Note

\* Percentage values of victims in the most victimized groups.

belonging to the LGBTI group, and ethnicity of the students. The second row of each crime type shows the percentages of victims among the total number of respondents in each subgroup. For example, in the case of sexual assault or harassment, the total number of victims represents 17.3 percent of the participant students, whereas female victims represent 26.5 percent of all women participants and male victims scored 7.6 percent of all male participant students.

Of these three types of victimization (Table 9.2) sexual assault or harassment occurs more frequently than the other two, with a rate of 17.3 percent among all participants versus 9.3 percent and 6.0 percent of the other two types of crime respectively.

In general, the highest percentage among the victims is women, especially in the case of sexual assault or harassment (71.3 percent) considering the fairly balanced distribution of genders in the sample (Figure 9.1). This is 13 percent higher than the rate of sexual victimization of women in the city of São Paulo (Datafolha, 2014), the biggest city of the country.

Another important finding of this study is the high rate of under-reported crime. In the case of sexual harassment victims, the vast majority of 80 percent did not report the criminal offenses. In the case of other serious crimes, 54.5 percent also did not officially report the facts. Between students who were victims of robbery on public transport, almost 60 percent did not seek the authorities to denounce the crime they suffered.

This non-reporting can be attributed to the socio-cultural environment of the country, where there is a high rate of urban violence, together with the skepticism of the population in relation to the police and the judicial system (Dantas, 2015).

Table 9.3 shows the distribution of victims in the case of sexual assault or harassment. When analyzing the data in this table it is observed that the most vulnerable groups are LGBTI with 31.7 percent of victims (120 percent more than non LGBTI), women with 26.5 percent of victims (250 percent more than men) and non-whites with 21.6 percent of victims (30 percent more than whites). This discrepancy is not observed in relation to the other two types of crimes.

Comparing victimization rates between women and men in each group reveals that the victimization rate of women is considerably higher than that of men in all groups. Thus, considering the percentages of victims within each subgroup, a new classification of vulnerable groups stands out: women LGBTI (80.8 percent), non-white women (79.0 percent), white women (77.4 percent) and non-LGBTI women (73.9 percent).

It is worth noting the high ratios of female victims to male victims (Ratio 1) in each group, which, in descending order, are 5.25 in the LGBTI group, 4.1 in the white group, 3.8 in the total sample, 3.75 in the non-white group, and 3.1 in the non-LGBTI group. These ratios confirm that, in this study, women represent the most victimized group, taking into account the fact that the vast majority of victims are female (71.3 percent) and that the ratio of the female

Table 9.3 Intersectionality of victims regarding sexual assault or harassment crime

Groups	Number		% of victims		Ratio 1*	Ratio 2**
	Respondents	Victims	Total respondents	Total victims		
All Students***	462	80	17.3	100.0		
Female	215	57	26.5	71.3	3.8	1.1
Male	197	15	7.6	18.8		
LGBTI	82	26	31.7	32.5		
Female	46	21	45.7	26.3	5.25	1.4
Male	33	4	12.1	5.0		
Non LGBTI	324	46	14.2	57.5	3.1	1.0
Female	159	34	21.4	42.5		
Male	162	11	6.8	13.8		
White	324	53	16.4	66.3		
Female	165	41	24.8	51.3	4.1	1.1
Male	152	10	6.6	12.5		
Non White	88	19	21.6	23.8		
Female	47	15	31.9	18.8	3.75	1.2
Male	40	4	10.0	5.0		

Notes

- \* Ratio 1 = Female victims/male victims.
- \*\* Ratio 2 = Female population/male population.
- \*\*\* All participants answered this question.

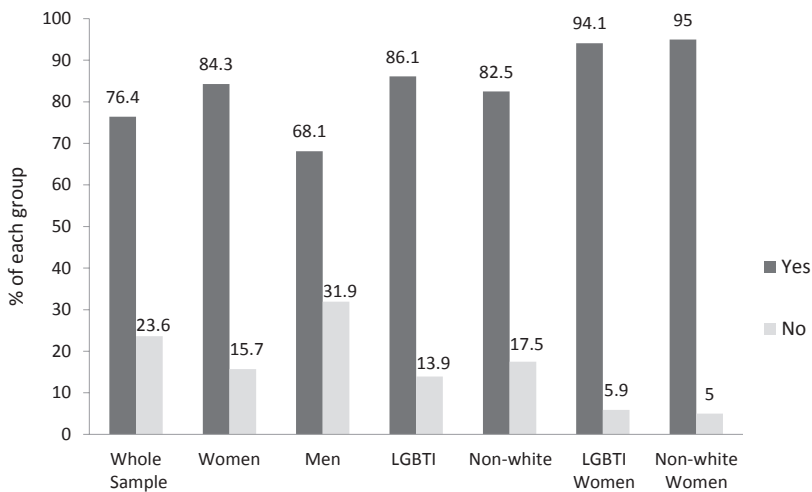
population to the male population (Ratio 2) is always around 1.1, with the exception of the LGBTI group, where it is 1.4 but this group presents the highest proportion of female victims (5.25 times more than male).

Although the LGBTI group had a higher relative victimization rate than women (31.7 percent vs. 26.5 percent—about 20.0 percent higher), a more in-depth analysis reveals another finding. Based on the data in Table 9.3, the ratio of LGBTI individuals to non-LGBTI individuals is 0.25 while the ratio of LGBTI victims to non-LGBTI victims is 0.56. This means that the victimization of the LGBTI group is 2.2 times greater than the non-LGBTI group, while the same analysis in the case of women and men in the whole sample results in a value of 3.5 (3.8/1.1), which is almost 60 percent higher.

### *The impact of poor safety on mobility*

About 42 percent of participants answered the question about the need to take some precautions when using the bus. Figure 9.5 shows the percentages of participants in each group who feel the need to take some precautions or not. As this figure shows, more than 80 percent of all groups, except men, expressed the need to take some precautions.

Overall, 76.4 percent of the students who answered this question say they take some precautions when using public transportation. In other words, more than three-quarters of the students are forced to change their habits in an attempt to avoid becoming another victim in the public transportation system. This is a serious concern for the youth. This means that three in four students are forced to think constantly about strategies to escape the attacks of criminals.



*Figure 9.5* Percentages of students in each group who take some precautions in public transportation.

In this study, the most mentioned precautions by students are: *waiting for bus only at well-lit places* (53.3 percent of respondents), *avoiding particular bus stops* (52.0 percent of respondents), *travelling only during daytime* (41.5 percent of respondents), *not wearing jewelry* (40.1 percent of respondents), *avoiding carrying purses or wallets* (38.8 percent of respondents), *waiting for transit only if other people are around* (38.2 percent of respondents) and *dressing in an appropriate way* (34.2 percent of respondents). It is important to note that the two most mentioned precautions refer to factors that involve some failures of the public transportation service infrastructure.

Analysis on the precautions taken by students from different groups reveal no significant differences. For women, LGBTI and non-white groups, the first two precautions mentioned above are the most important. In the case of men, however, the first precaution taken is to avoid particular bus stops and the second is to avoid carrying bags or wallets.

### *How to improve safety on urban transit*

As previously reported, this study highlights some of the major problems that lead to a reduced sense of safety, especially at night, both at bus stops or on the way to the bus stops, in public transportation users, as pointed out by students. This illustrates some simple failures of the bus transportation infrastructure and is in line with participants' views on measures that could make public transportation safer.

More than 41 percent of the participants expressed their opinion voluntarily on what could make public transport safer. In the opinion of these participants, the five measures that best contribute to improving safety in public bus transportation are: better lighting at bus stops (77.1 percent), police patrols at bus stops (58.3 percent), cameras (CCTV) on the bus (50.0 percent), cameras (CCTV) at bus stops (48.4 percent), and digital timetables at bus stops (46.9 percent). All the different groups of students share the same opinion about these five measures, with a small change in their rank. However, all of them, without exception, indicated the improvement of lighting at bus stops as the best way to improve safety in public transportation.

The sense of safety in public transportation may be improved through a moderate investment of public funds with private sector partnerships, since, most suggested improvements, in line with the most cited problems, represent simple actions to implement or some minor adjustments to public transport policies which normally do not require a significant investment.

It is believed that offenses of less aggressive potential can be more easily reduced by raising awareness of public transportation users, as well as the population at large. Simple educational campaigns, focusing on these less critical issues, can contribute to the reduction of offenses that greatly afflict users and are among the most reported by the students. Aiming at greater effectiveness, these campaigns would need to be done on a large scale and carried out in schools to reach children and adolescents. In addition, other age groups of the

population should also be reached simultaneously by campaigns in traditional communication media such as newspaper, television and radio, as well as the internet and directly on buses and bus stops.

## 9.5 Conclusions and recommendations

Two hypotheses motivated this study about students' perceptions regarding safety in urban public transportation, with a focus on sexual assault victimization. Both hypotheses were confirmed by the results of the research obtained from data analysis considering the intersectionality of the results. In the case of the first hypothesis, the results show that women represent the largest victim group of any type of crime analyzed, representing at least 71.3 percent of all victims in the case of sexual assault or harassment, which corroborates statistics on the high level of victimization of women in Brazil and in many other countries.

A more detailed analysis of some results provided confirmation of the second hypothesis. Although the LGBTI group had the highest relative percentage of victims (31.7 percent), it was possible to observe that the number of female LGBTI victims is 5.25 times greater than male LGBTI victims, while the LGBTI female population in this study is only 40 percent larger than male LGBTI. Thus, one of the conclusions of this study is that the most victimized group is women and among them, the most vulnerable are LGBTI women.

Other astonishing observations stand out from the analyses of the survey results. One is that the percentage of students who are in fear when using the bus service is very high, reaching 94.6 percent at night and 69.4 percent in the daytime. Analysis also showed that at least 17.3 percent of students reported experiencing one of the three types of violence addressed in the survey, where sexual assault or harassment was most frequently mentioned (71.3 percent).

Moreover, 75 percent of all students (three in four) are forced to think constantly about strategies to escape criminal attacks. Would this not be a life full of fear? What consequences does this fear bring to the personal life and professional performance of these young people? Attempting to answer these questions may set up an excellent choice for future research. Another interesting potential research project would be to apply this survey to the generic group of young people in Rio Claro city in order to compare their victimization with that of the UNESP students.

The fear of the vast majority of students in using the public transportation system (about 80.0 percent) is another striking observation. This may be indicative of the student's low frequency of bus use. Problems in the urban transportation system infrastructure fuel this fear, since during daytime about 70 percent of students are afraid while waiting at the bus stop and at night this fear can affect more than 97.0 percent of students. Improvements in street and bus stop lighting, and increased local policing could improve students' sense of safety and thereby increase the frequency of use of public transportation.

Another surprising finding is the high under-reporting rate among the participants of this study, which could be considered as citizens' skepticism towards

the Brazilian legal system and the ineffectiveness of law enforcement. These facts represent one of the weaknesses of criminal justice in Brazil. Under-reporting negatively affects the planning of preventive actions by public security institutions, as it prevents accurate mapping of crime occurrences.

To reduce the likelihood of occurrences of abuse and violence against women in Rio Claro's public transport system, three lines of action seem to be promising and effective. The first concerns research and more detailed studies of the identified problems. The second line of action involves improvements to the public transport system infrastructure and the third corresponds to educational actions and programs.

In terms of research, what can contribute significantly is identifying the most vulnerable bus stops in the city and the most critical time period of these stops, both during the daytime and after dark. Another necessary investigation is to identify, considering Rio Claro's socio-cultural reality, the appropriate approach for an educational program or campaign capable of changing men's view of women and encouraging women to report abuse and violence.

Regarding the improvement of the public transport system infrastructure in Rio Claro, what can bring more appreciable benefits, at least increase the level of users' safety perception, would be the implementation of the following measures: install good lighting at bus stops and surrounding areas; relocate some problematic bus stops to safer places nearby; install CCTV cameras with face recognition software, both on the buses and at bus stops; install digital timetables at bus stops and install geolocation and tracking systems on buses to feed digital timetables; install digital displays on buses to run sexual harassment prevention education campaigns and real-time messaging.

In the educational sphere there are two promising fronts of action: create regular and massive educational anti-harassment campaigns based on the best detected approaches by previous researches and create an educational program for different age groups at schools to change the view of individuals from childhood on equality of gender and reduce the predominant machismo in Brazilian society by modifying men's view of women.

## Note

- 1 LGBTI is a gender status and stands for Lesbian, Gay, Bisexual, Transgender/Transsexual and Intersexed.

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