

# "Travel Patterns and Fear of Crime among university students in Rio de Janeiro, Brazil "

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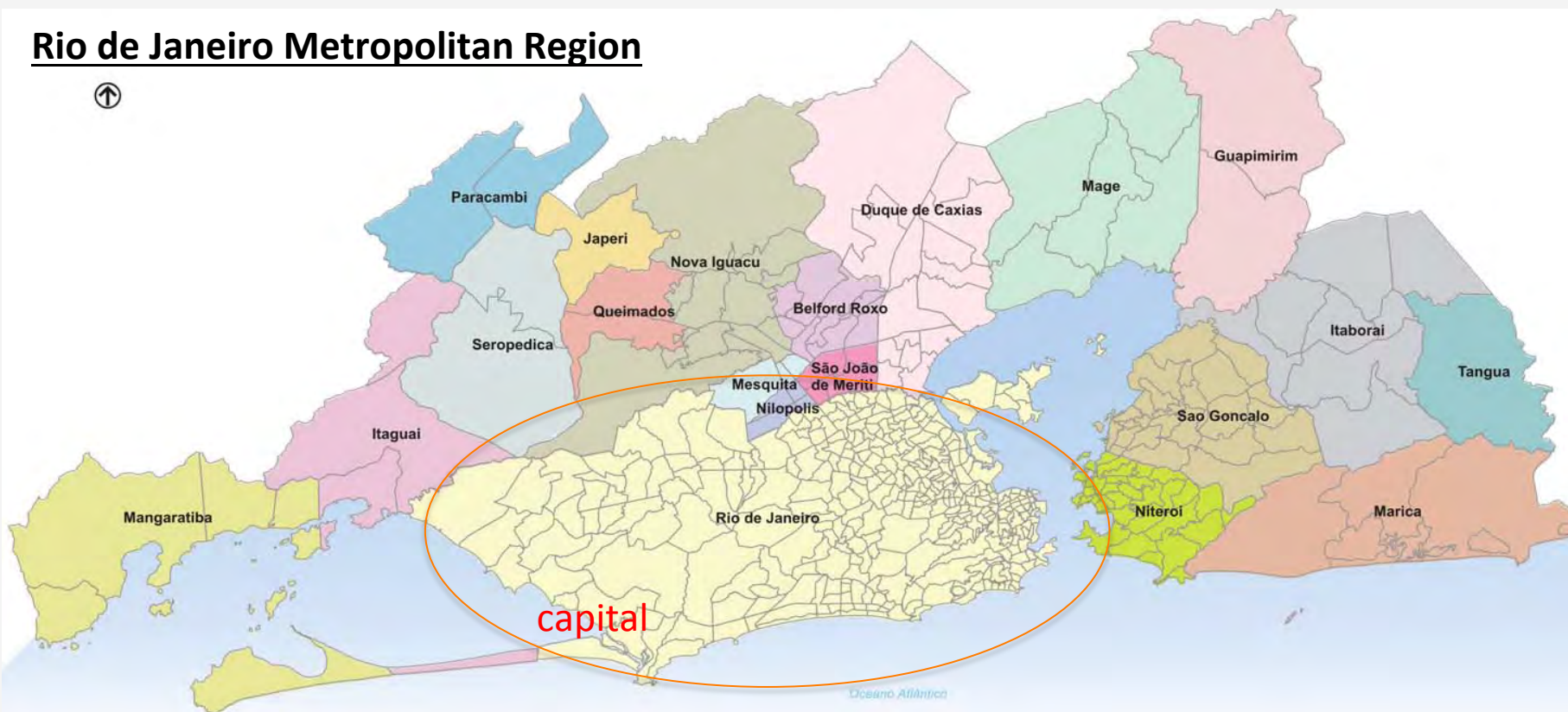
Laboratoire ENeC

# *Introduction*

- A range of international research shows that personal safety concerns act to limit public transport ridership, walkability, bike use, and reduce the quality of travel for a wide range of groups of passengers (Crime Concern, 2002, Booz Allen Hamilton, 2007, Nordfjaern et al., 2014).
- Despite the high crime rates in Latin America cities, only few studies have addressed this issue in these countries.
- This research project aims to understand young people concerns about personal safety to access the main university Campus in Rio Janeiro, Brazil.

# The City Study Context

## Rio de Janeiro Metropolitan Region



Source: CENTRAL, 2002

- Rio de Janeiro Metropolitan Region is the second largest in Brazil with more than 12 million inhabitants, of which around 53,8% are in the capital (IBGE)
- The capital also holds roughly the same percentage of employment in regards to the regions over all employment rate

# Public Transport in Rio de Janeiro

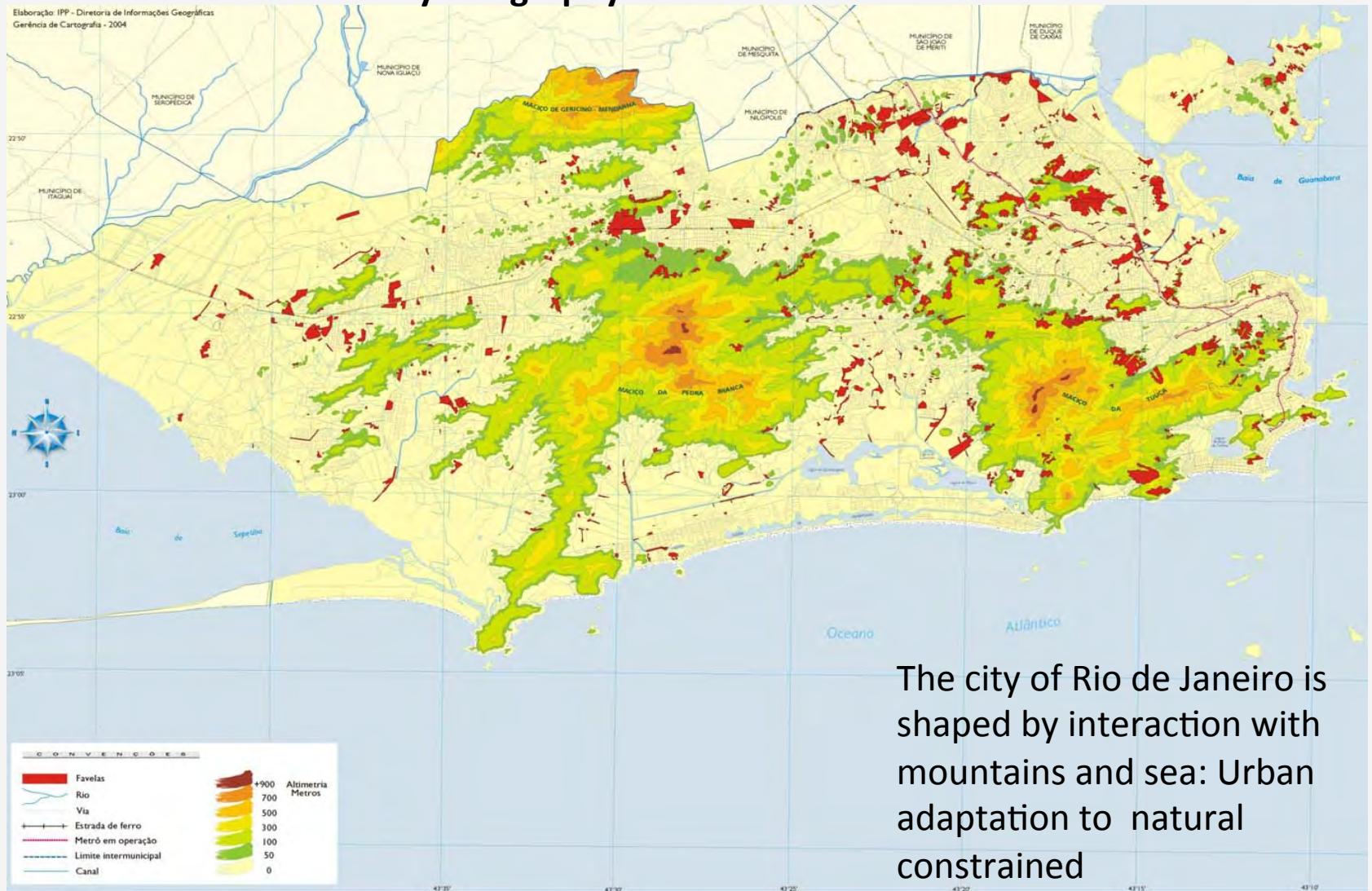




# The City Study Context

## Rio de Janeiro Particular Geography

Elaboração: IPP - Diretoria de Informações Geográficas  
Gerência de Cartografia - 2004



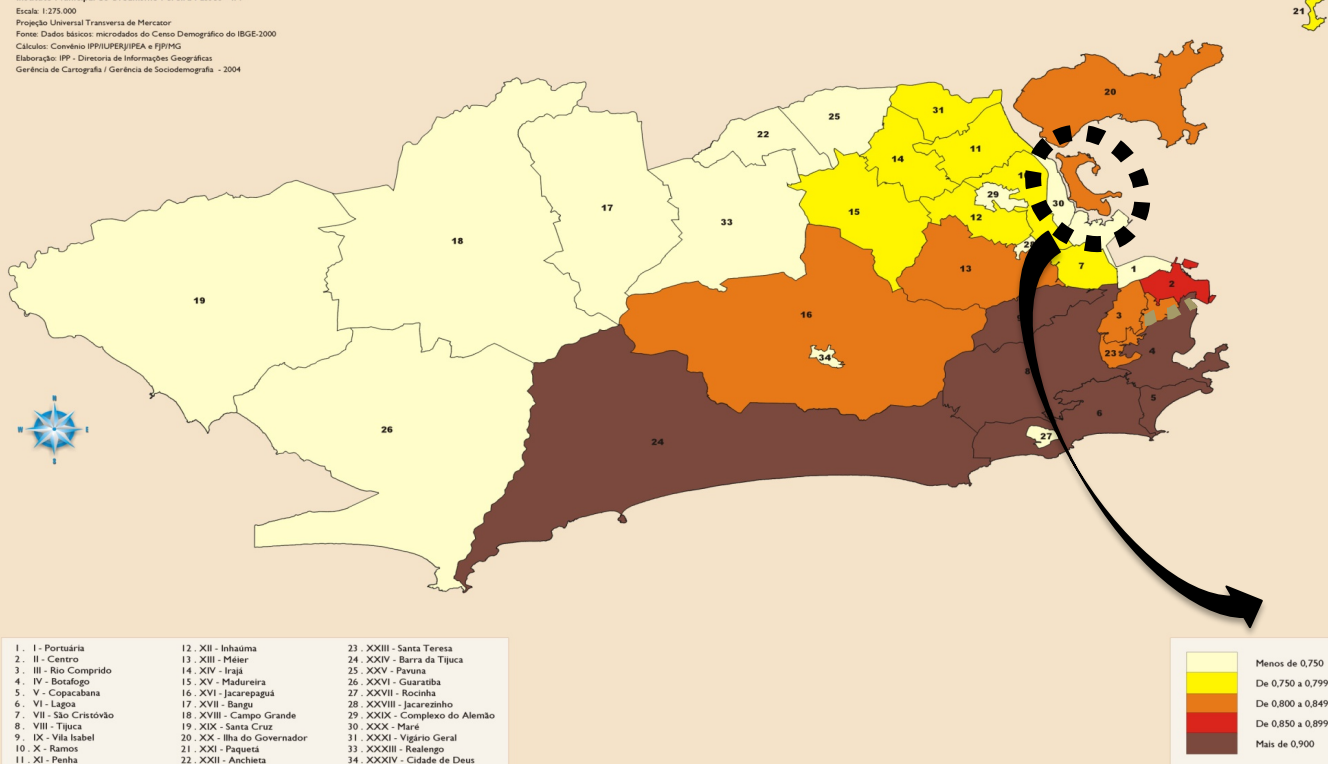
The city of Rio de Janeiro is shaped by interaction with mountains and sea: Urban adaptation to natural constrained

# Case Study: The UFRJ Campus

## Population income in Rio de Janeiro

### Índice de Desenvolvimento Humano/ Renda, por Regiões Administrativas - 2000

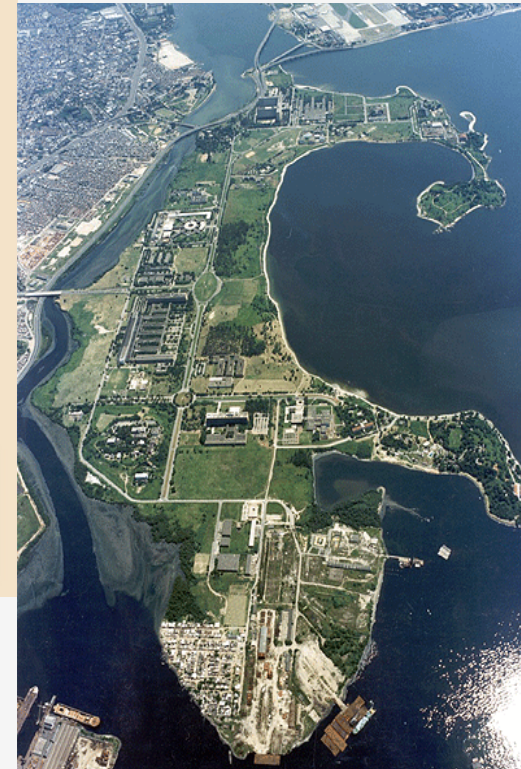
PREFEITURA DA CIDADE DO RIO DE JANEIRO  
Secretaria Municipal de Urbanismo - SMU  
Instituto Municipal de Urbanismo Pereira Passos - IPP  
Escala: 1:275.000  
Projeção Universal Transversa de Mercator  
Fonte: Dados básicos minerados do Censo Demográfico do IBGE-2000  
Cálculo: Convênio IPP/UPERJ/FEA e FJ/PMG  
Elaboração: IPP - Diretoria de Informações Geográficas  
Gerência de Cartografia / Gerência de Sociodemografia - 2004



Source: IPP 2000

The "Cidade Universitária" (College City) houses 181 graduation courses with a total of 48.753 students (2016)

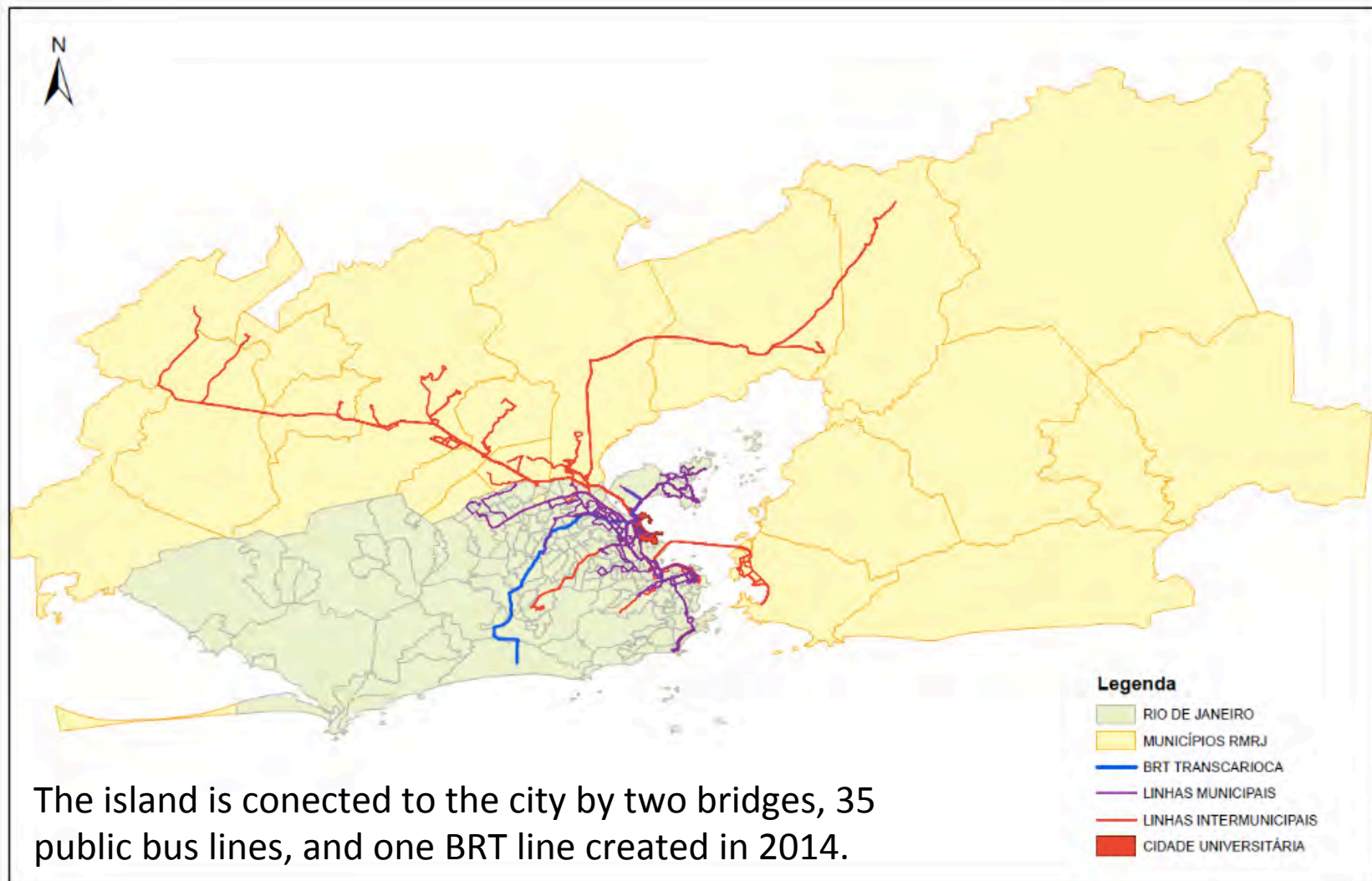
The Campus is located on a island with 523,83 ha in the North of the city.



Wikipedia, 2017



# *Public Transportation to the Campus*



## *The Survey: General Sample Demographics*

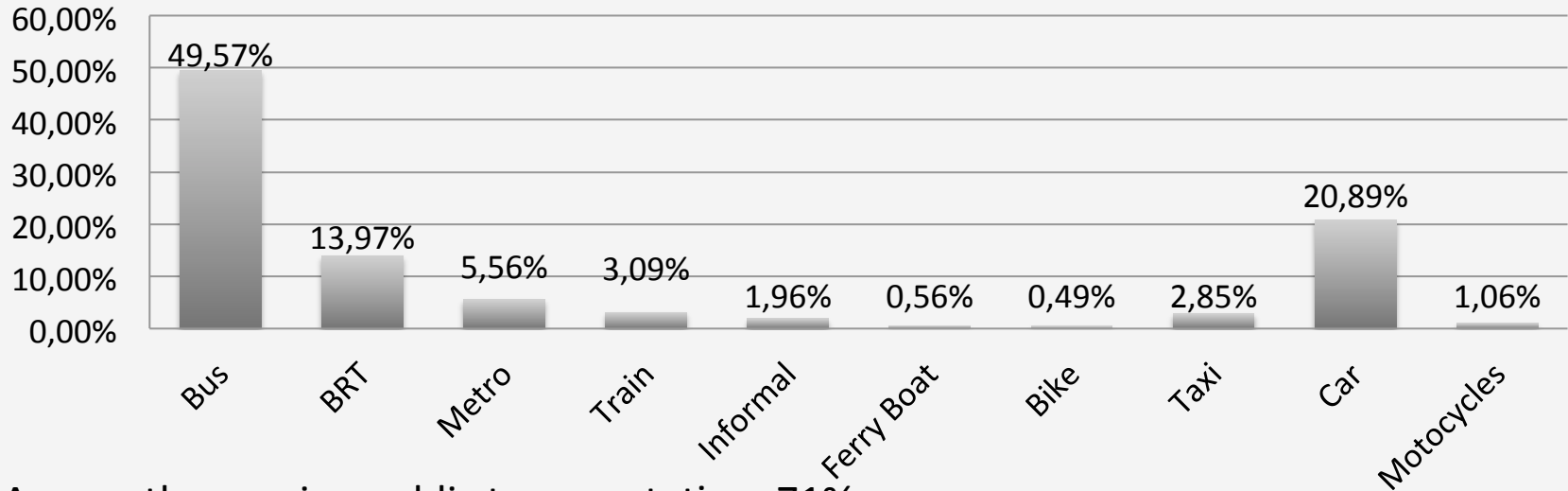
- The survey had 5 216 respondents which represents almost 10% of total students in the Campus;
- The majority (86%) of the sample had between 18 and 30 years old;
- 56% were women and 44% men

<b>Drive License and Car vs Gender</b>			
	Men	Women	Total Students
Yes, with my own car	26%	17%	21%
Yes, car available	8%	8%	8%
Yes, no car available	21%	19%	20%
No	44%	56%	51%
Total	100%	100%	100%



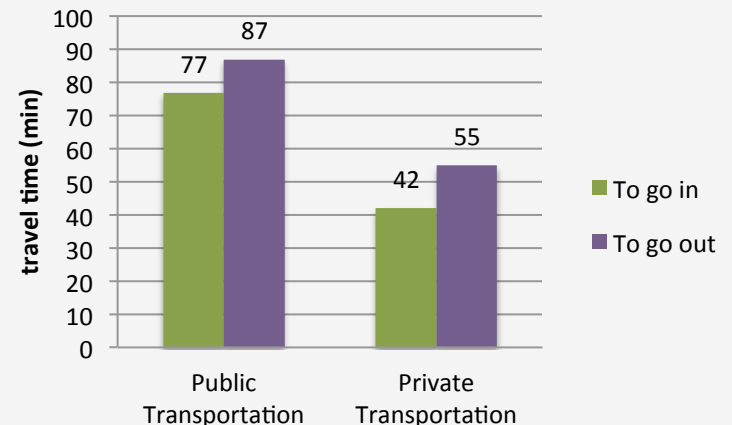
# Traveling to the campus

## Students Modal Shift



- Among those using public transportation, 71% of the users take two or more modes
- A large percentage of the students (59%) arrive in the island between 7 a.m. and 9 a.m. and leave between 3p.m. and 6 p.m.
- 13% of the students leave the campus after 9 p.m. ( evening classes)

## Travel Time Duration

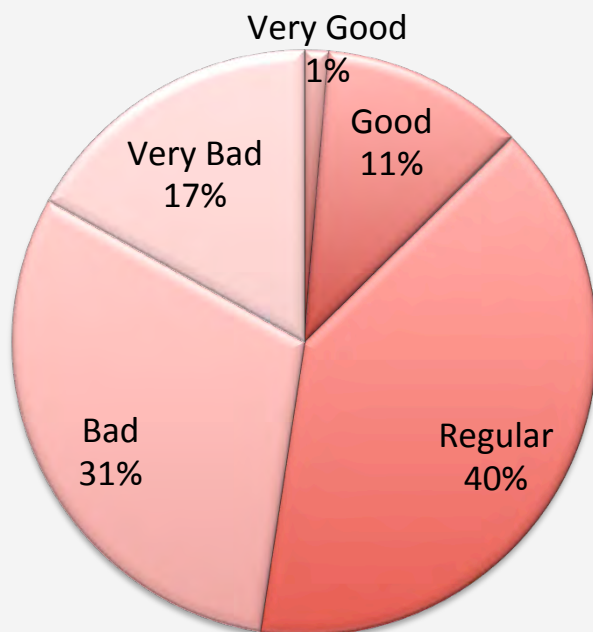


# *Safety*

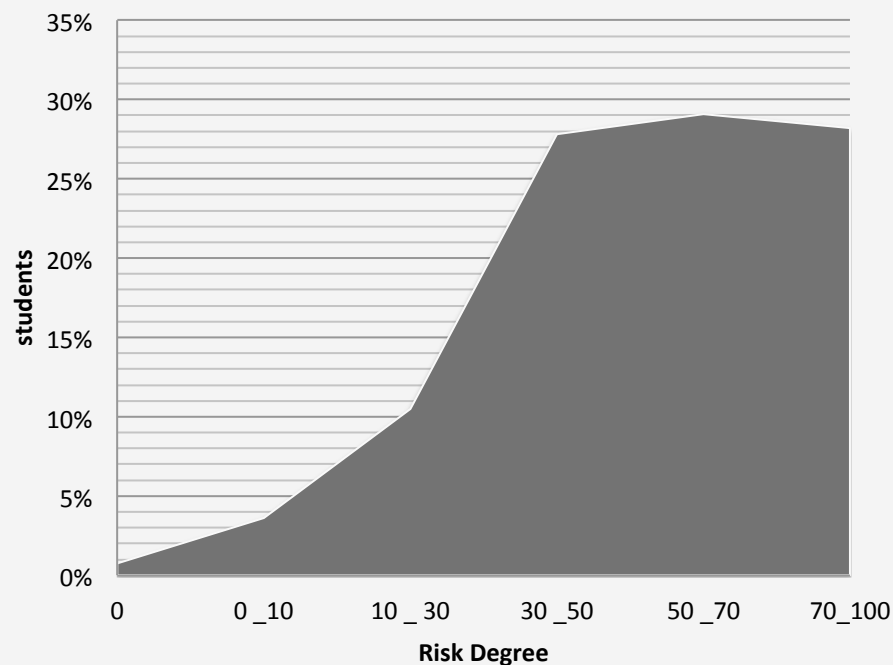
- 14% of the respondents were directly victimized during travel to university
- 15% of the women and 13% of the men were victimized
- The mode of transport used did not influence the rate of victimization ( private vs public transportation)
- Theft or robbery were the most frequent crimes reported in the survey ( 85%)
- The official data from Rio's Police Department present a low crime rate in the campus area compared to the city (below the average of the city)
- Hypothesis: Unreported student victimization?

# *Safety during travel to Campus*

**Safety evaluation during travel to UFRJ Campus**

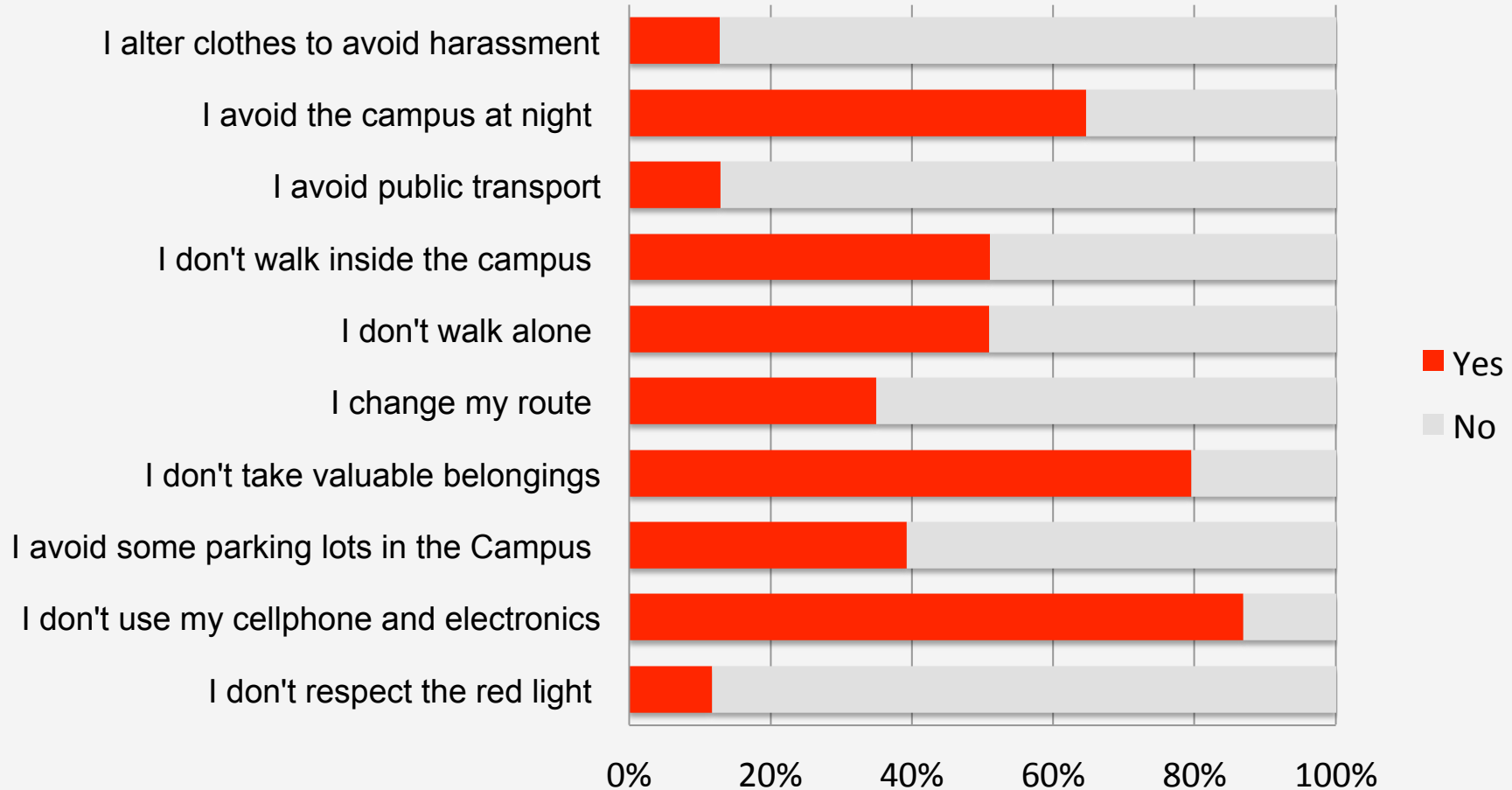


**Victimization Risk during Travel**



# *Safety during travel to Campus*

## **Self-protection behavior during travel**



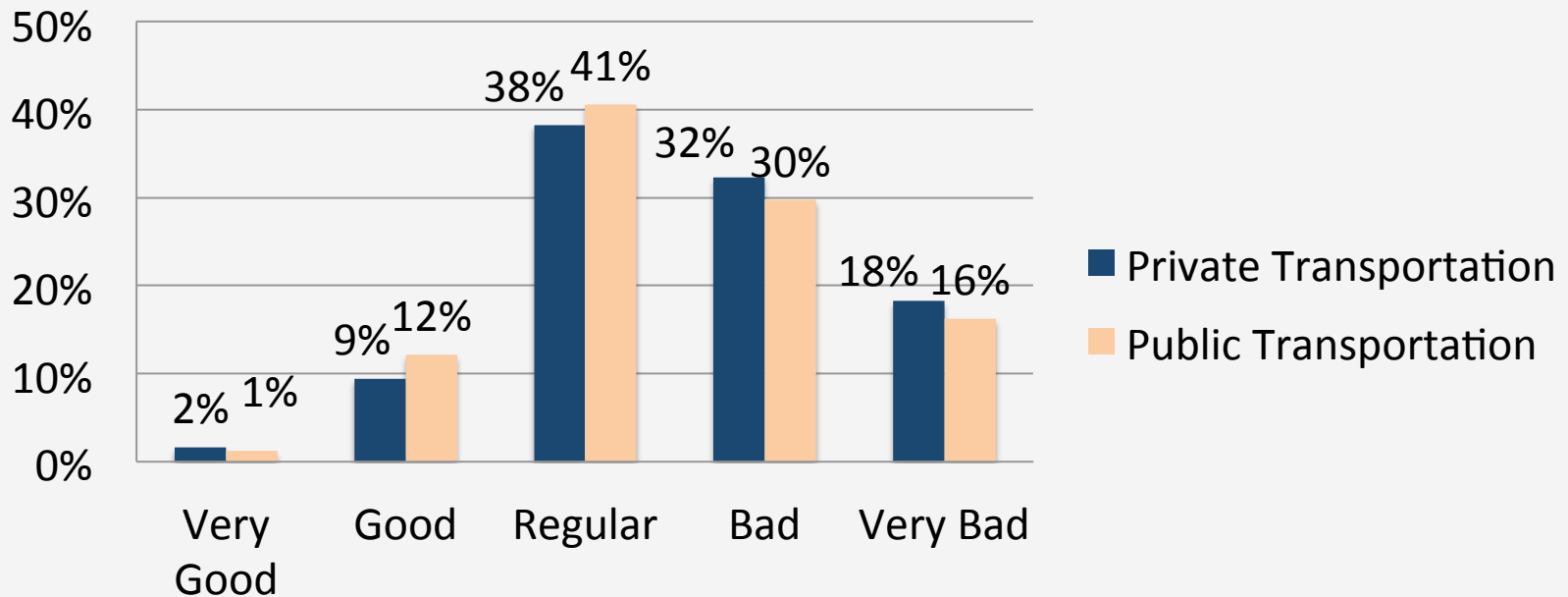
- 51% of the respondents who use cars justify their modal choice because they feel unsafe using public transportation



# Exploring Factors Influencing Safety Perceptions

## Safety vs Private or Public transport

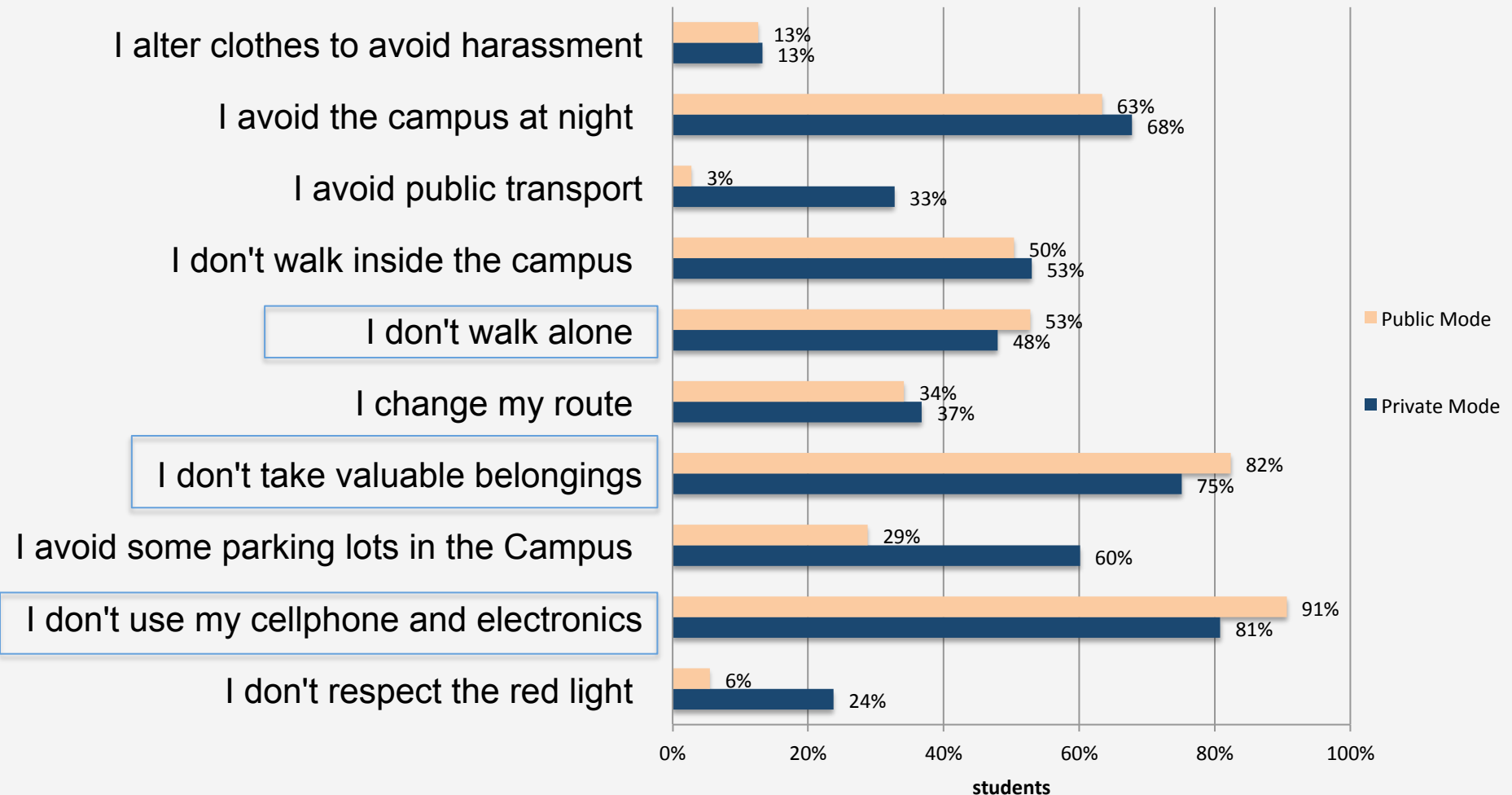
### Safety evaluation during travel on Private or Public Transportation



- There is small difference between the safety perception on private and public transportation modes

# Exploring Factors Influencing Safety Perceptions

## Self-protection behavior during travel on Private or Public Transport

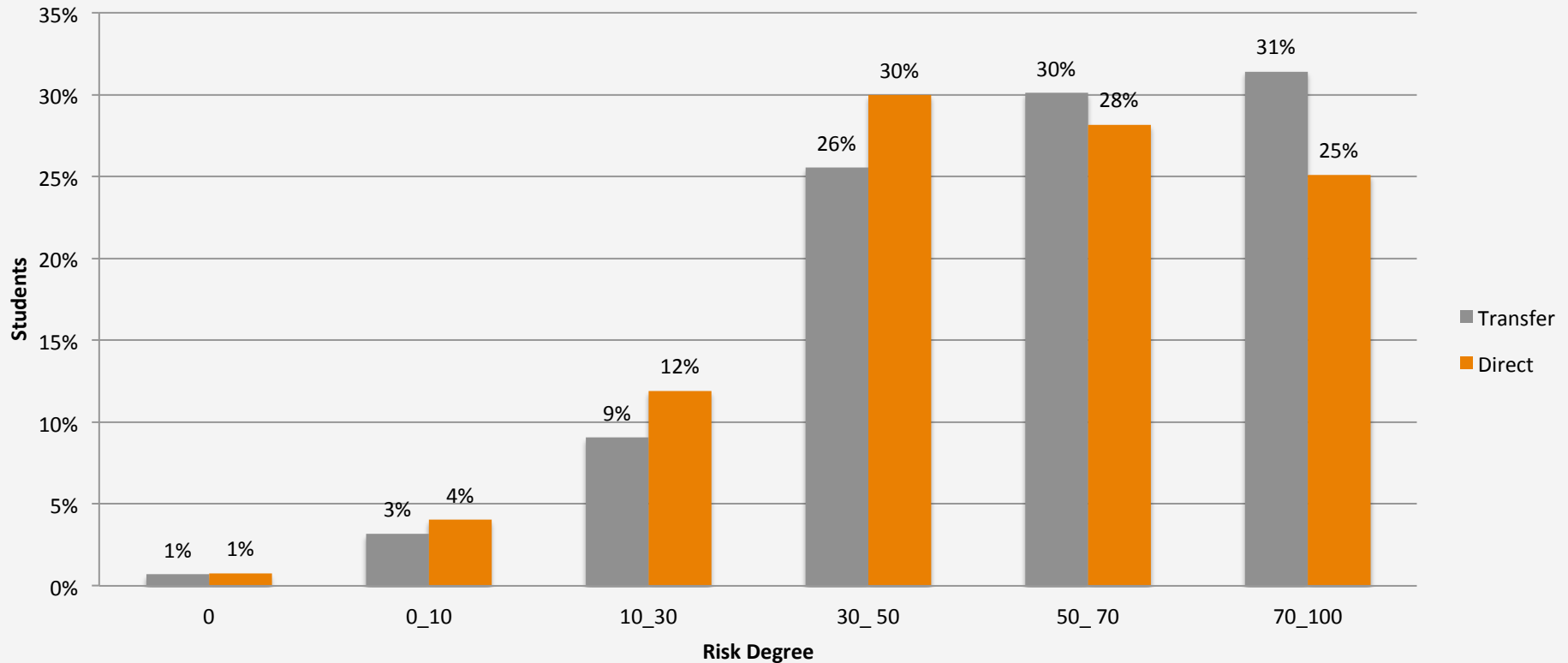


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# Exploring Factors Influencing Safety Perceptions

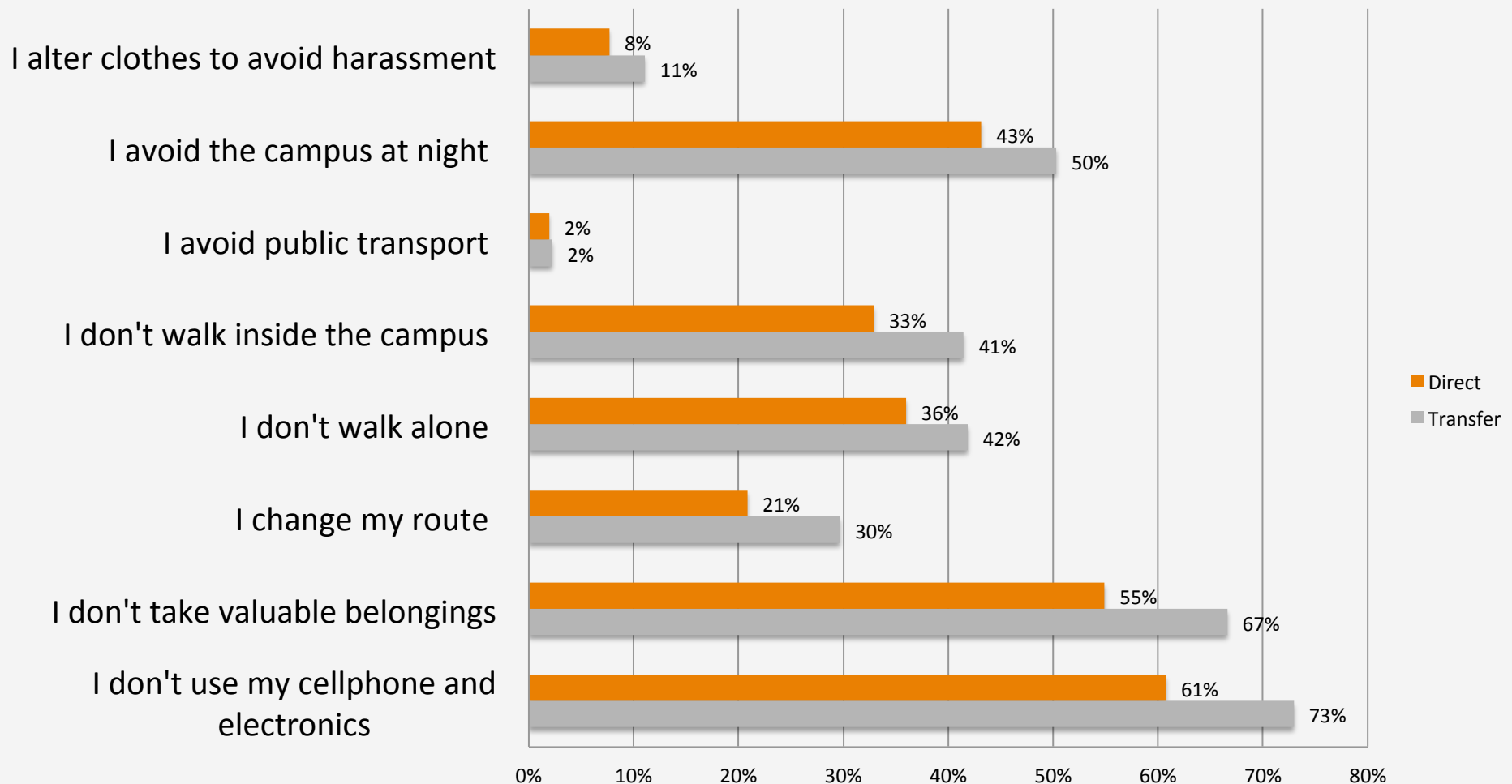
## Safety and Public Transportation

### Victimization Risk during Travel on Public Transportation Direct vs with Transfer



# Exploring Factors Influencing Safety Perceptions

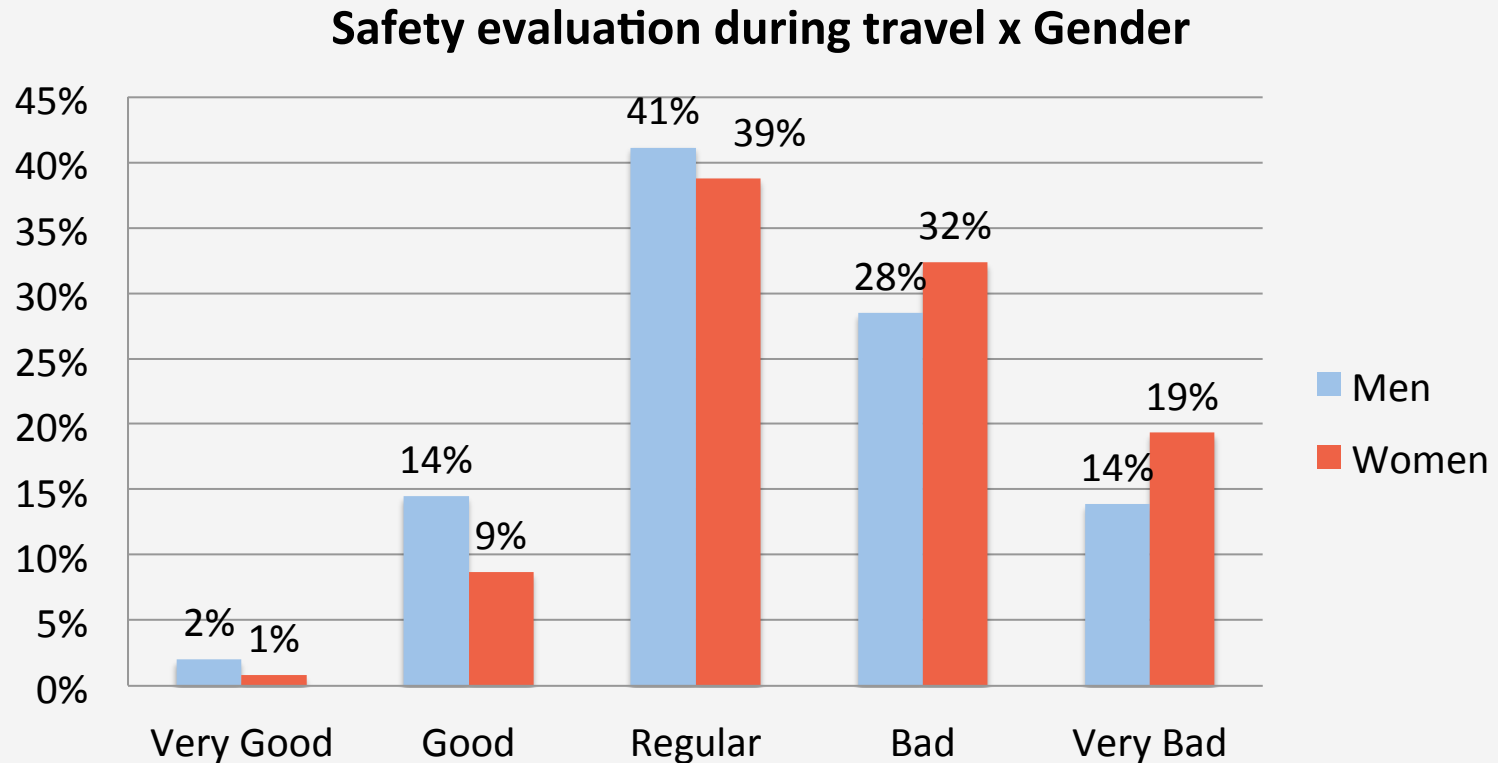
## Self-protection behavior during travel on public transport direct or with transfer





# Exploring Factors Influencing Safety Perceptions

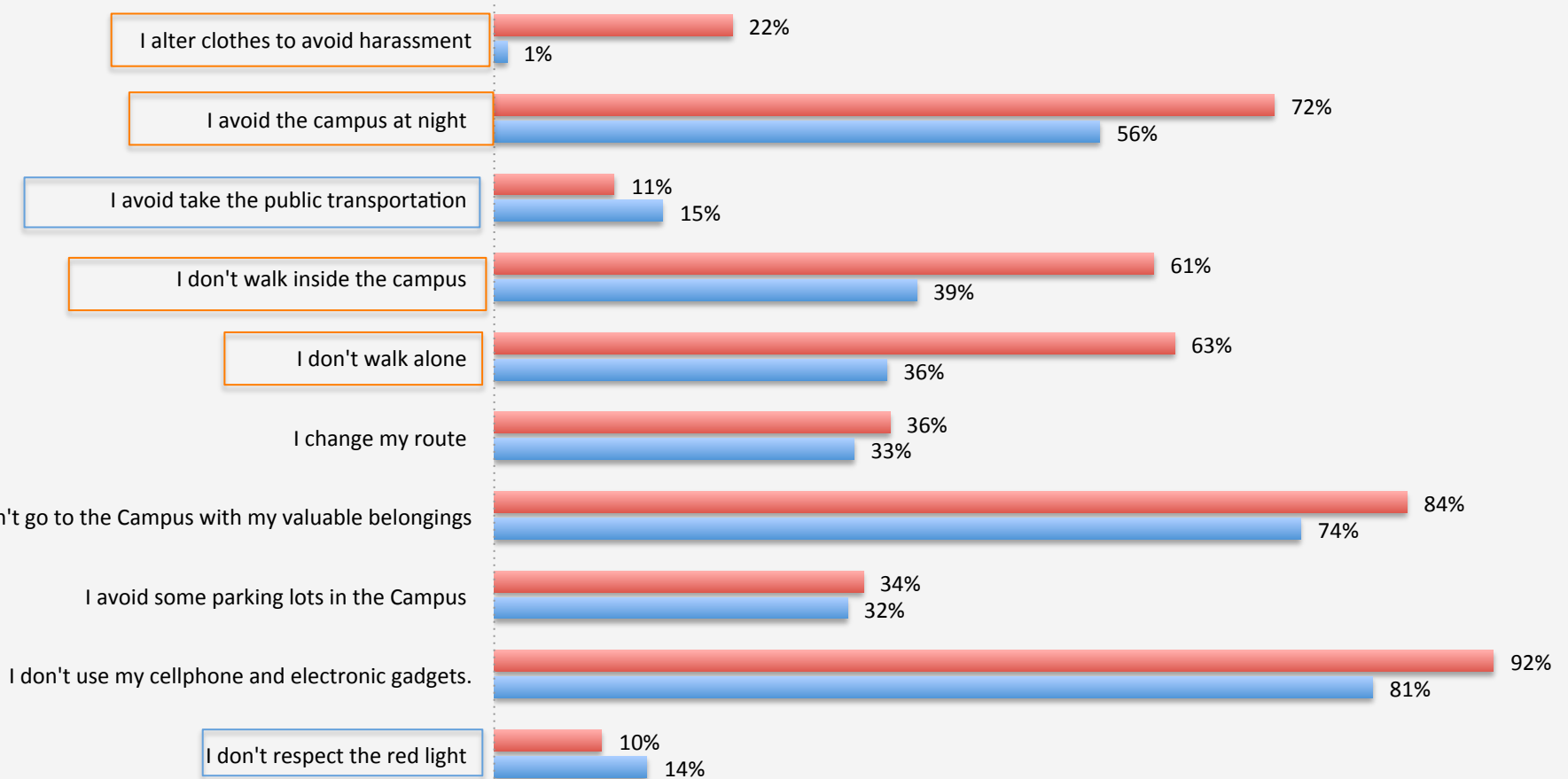
## Safety and Gender



# Exploring Factors Influencing Safety Perceptions

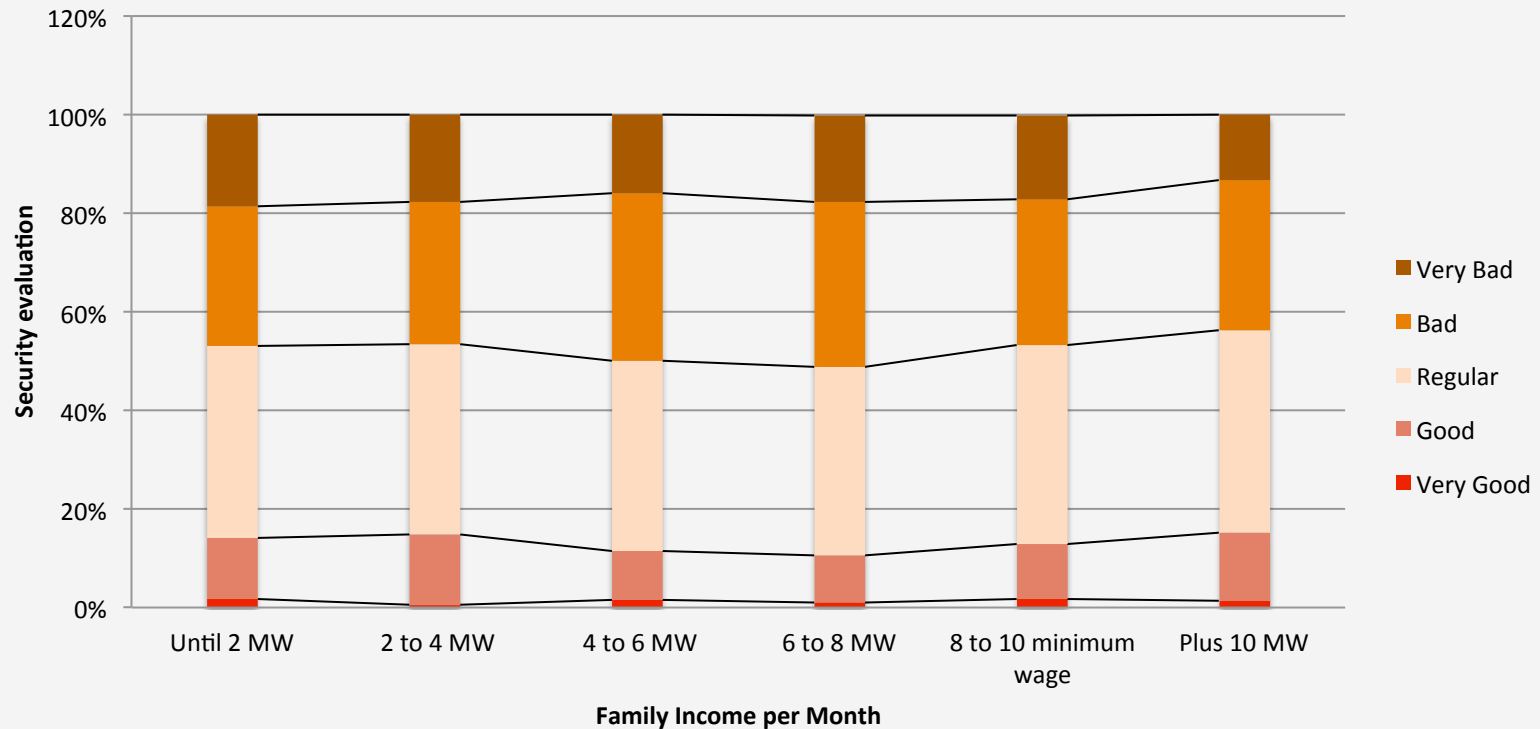
## Self-protection behavior during the trip ( Male vs Female)

Female Male



# Exploring Factors Influencing Safety Perceptions

## Security Evaluation during the travel x Income

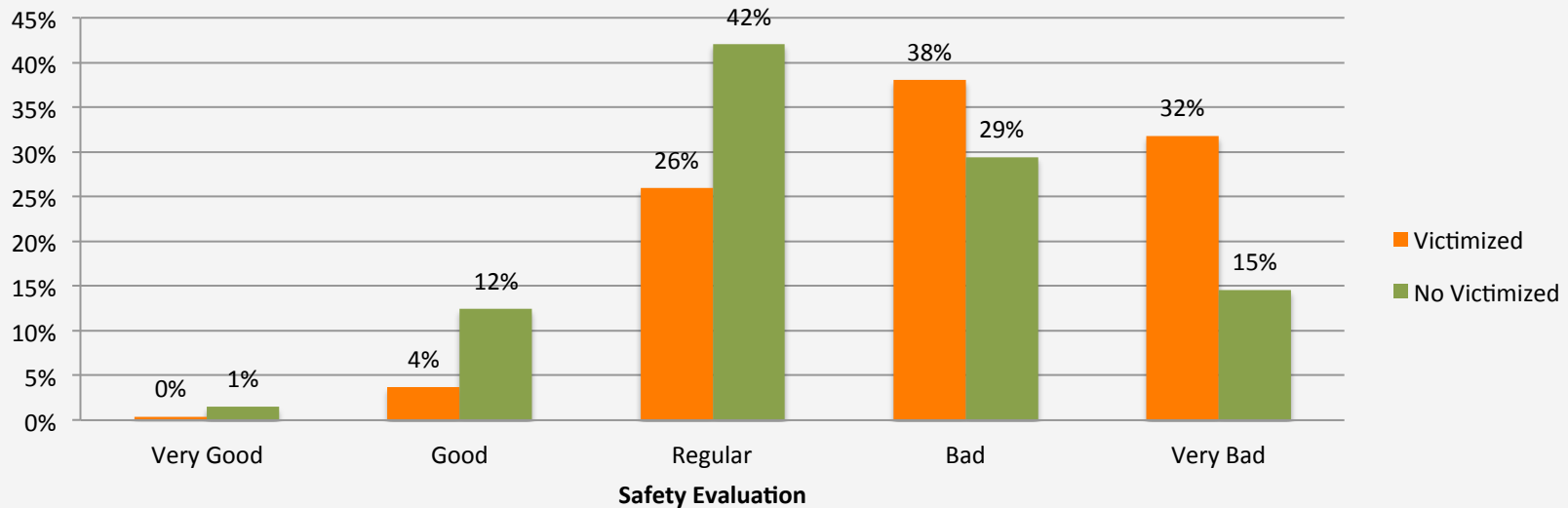


- Income wasn't a main factor influencing the security feeling during the travel.
- There is a slight tendency for the wealthier classes to feel more insecure on their way to the Campus. Most of them take the same security measures as the private mode users.

# Exploring Factors Influencing Safety Perceptions

## Safety vs Previous victimization

**Safety evaluation during travel  
x Previous Victimization**



- Students who were previously victimized during their trip to the Campus tend to take much more precautionary measures than those who were not.



## *Some Conclusions*

- The survey results reinforced many already-established patterns of perceptions of safety from previous research: The students feeling of insecurity during the trip to UFRJ Campus is positively related to previous victimization and gender.
- Students who use only one mode of public transport to reach the Campus feel safer than those who need to make transfers between two different modes.
- Although more than half of the car users do not use public transportation because they believe it can be dangerous, no link was found between the use of public or private transport and perceptions of personal safety.
- There is a slight relation between family income and the students perceptions of personal safety
- Cell phones and electronic device robbery are the main concern of most of the students during their travel. However car users are less concerned about their electronic and valuable belongings than public transportation users.
- Fear of rape and sexual harassment among women students influence them to avoid walking inside the campus.

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# Thank you for your attention

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