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Young Women's Perception of Safety in Public Buses: A Study of Two Indian Cities (Ahmedabad and Bangalore)

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Abstract

Young women's perception of safety can influence their mode choice. This study sets out to understand and quantify the factors that influence young women's perception of safety while commuting in public buses in Bangalore and Ahmedabad in India. To investigate the research question, surveys were done using a structured questionnaire comprising questions about respondents' socio-demographic information, perceptions of safety (at the bus stop, inside the bus and while boarding and alighting), bus usage, and other miscellaneous aspects. A total of 192 and 422 valid responses from Ahmedabad and Bangalore respectively, were used for the investigation. Factor analysis reveals that both cities have *safety at bus stop*, *anxiety while travelling in bus* and *bus stop facilities* as common underlying safety-influential factors, except *trust* (which is extracted for Ahmedabad). The study also attempts to explore the relationship between young women's perception of safety and extracted factors after controlling for socio-demographics attributes of the respondents. The empirical models reveal that in Ahmedabad, respondents with higher educational qualification are more likely to perceive themselves safer while travelling in buses than those with lower educational qualification. In Bangalore, it was found that respondents who perceive bus stops to be safe are more likely to perceive themselves safer while commuting in bus than those who feel unsafe at bus stops. These results imply that travel experience and the condition of physical infrastructures can influence the overall safety perception of women in the study cities.

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1. Introduction

India is encouraging sustainable urban development and thus, is promoting sustainable modes of transport. Mass transit systems like metro rail, sub-urban rail, light rail system etc. are available only in a few Indian cities. Hence, public buses become an important, and in most cities, the only mode of public transport. Moreover, as a developing nation, India has witnessed an increase in the literacy rate of women over the years and a subsequent increase in the female work force participation rate (WFPR). The female WFPR increased from 9.2 percent in 1992 to 11.9 percent in 2001 and even further to 15.6 percent in 2011 (Census of India, 2011). With influx of working women, the demand for safe public transport for enabling them to commute to their work place will continue to rise.

Primarily, the studies on women safety in Indian cities to date have qualitatively addressed and examined safety in either public spaces (Visvwanath and Mehrotra, 2007) or for the entire trip duration (Schulz and Gilbert, 2000). A few studies which have quantitatively analyzed this aspect are not done for Indian cities (Pain, 1997; Hsu, 2011). More specifically, young women's perception of safety while commuting in public buses in Indian cities has not been thoroughly investigated. Also, a study to evaluate the present public bus system using a perception based approach to identify factors which impact the propensity of using public bus as a mode of travel has not been attempted for Indian cities.

This study aims to investigate the safety perception of young female college going students who travel in public buses in rapidly urbanizing cities, namely Ahmedabad and Bangalore. Both cities have numerous educational institutions and thus support a large student population ideal to investigate young women's perception. The cities are also well-known for their public bus service provisions in the country. Therefore, these two cities were selected to examine the public buses from the safety perspective of young women.

Women can choose to use any private and public mode of transport. But, if their perception of safety while travelling in public buses is not ameliorated, then there is a possibility that they might shift from a public mode to a safer (private) mode of transport.

The rest of the article is structured as follows. Next section discusses the literature review followed by the methodology adopted for the study. The subsequent section discusses the model results and afterwards explores the policy implications of the study. The final section summarizes the results and concludes the article.

2. Literature Review

Public transport systems are known to be sustainable modes in terms of space & energy efficiency and environmental & social benefits (Verma, et al., 2014). It has been stated that public buses can be considered as the lifeblood of the state economy as most urban and rural dwellers especially women depend on these to commute for various purposes (Sham, et al., 2012). Women also tend to make complex travel patterns and more number of trips than men (The World Bank, 2010). However, it has been found that within any given urban setting, women have inferior access to both private and public means of transport (Peters, 2013).

Almost every fear-of-crime survey reports that women are much more fearful of crime than men (Gordon and Riger, 1989). Many researchers believe it is due to the perceived vulnerability of women because of lesser physical ability to defend themselves (Junger, 1990). It is also documented that women's greater propensity to transfer past experiences and memories of victimization to present could be another possible reason behind their fearfulness (Warr, 1984). Fear of victimization has some significant consequences for women and leads them to use precautionary measures and strategies that affect their travel patterns (Sideris and Fink, 2008). The notion of fear of victimization is attributed by perception of safety and it influences women's decisions about mode and time of commute. Women feel unsafe and are fearful of becoming a victim of crime while travelling in buses due to lack of trust in people (Delbosc and Currie, 2011). Indian cities have witnessed many crimes against women in past few years. In Delhi 2012, a 23 year old girl was brutally physically abused by six men (including the driver) in a bus during night time (Delhi gang rape: Chronology of events, 2013). In a survey conducted in Chennai about 66 percent women respondents stated that they have been harassed while commuting (Sarkar and Partheeban, 2009). It has been found that women tend to confine their use of public transit to certain hours of the day or use it only if they are accompanied by a boyfriend, spouse, or friend to tackle harassment while commuting (Atkins, 1989).

Past research has shown that transit passengers' fears and concerns about safety influence their travel decisions (Sideris et al., 2009). For instance, in the United Kingdom in the mid 1990's, one in eight women surveyed said that they felt so unsafe on public transport that they avoided using it (Hough, 1995). Also, it has been found that women's fear of sexual harassment on transit changes their transit use and travel behaviour in a negative way (Hsu, 2011). Therefore, a woman's perception of safety while commuting via public transport has a strong influence on her mode choice. Sideris and Fink (2008) found that people avoid specific bus stops, use them only during daytime or do not use transit at all if they fear being harassed or victimized. Moreover, apart from the perception of safety while travelling in the bus, commuter's perception of safety while waiting at the bus stop plays an equally influential role on mode choice. Therefore, it is vital to make sure that women feel safe on board as well as while waiting at bus stop.

Fear and anxiety about personal security are important detractors from using public transit (Sideris, et al., 2009) and can have an important impact on ridership (Delbosc and Currie, 2011). In 2002, a survey conducted by the U.K. Department of Transport revealed that an extra 10.5 percent of journeys would be generated if public felt more secure when travelling (Carter, 2005).

In summary, the literature reveals the importance of safety and security on transit ridership, which includes all public travel modes (local trains, metro rail, mono rail, buses etc.). There is a paucity of studies focusing on women safety in Indian cities. This paper attempts to find and understand factors affecting young women's perception of safety in public buses. Moreover, safety at bus stop and while boarding-alighting of buses and how they influence the safety perception while travelling in buses is not investigated. The results of the study might aid policy makers to understand the safety-influential factors to ensure that women traveler do not choose an unsustainable mode of transport because of their perception of feeling unsafe in public buses. This study also tries to find how socio-demographic attributes and latent factors affect the perception of safety.

3. Methodology

Two cities, Ahmedabad and Bangalore were identified to conduct the study. Ahmedabad is the capital city of the western state Gujarat. Its population is nearly 6 million. The city has an operational BRTS system called 'Janmarg'. Bangalore is a 10 million population city in the southern side of India. Bangalore is known for its extensive bus network and has one of the largest bus fleet in India.

A simple random sampling technique was employed in both cities and the data was collected by using a questionnaire survey. Universities/institutes were selected randomly while ensuring spatial spread. A structured questionnaire comprising of six question sets was used to collect data. Wherein, set 1 comprised questions related to personal socio-demographic attributes like age, occupation, education & work experience followed by set 2, 3 and 4, which contain statements intended to evaluate each respondent's perception of safety in public buses. Set 5 consists of questions related to satisfaction and set 6 comprises of statements regarding infrastructure, safety at bus stops and security measures respectively. A total of 230 and 500 survey forms were collected from young women using public buses from Ahmedabad and Bangalore respectively. Out of which, a total of 192 and 422 questionnaires were selected after examining the missing values and outliers.

A descriptive analysis was conducted to find the characteristics of the data under study, followed by factor analysis with the objective of identifying latent factors which influence young women's perception of safety while travelling in public buses. Subsequently, in order to develop a model to understand young females' perception of safety, a logistic regression analysis was conducted using BIOGEME version 1.8 (Bierlaire, 2003). With perception of safety while riding bus (Yes or No) as the dependent variable, the model was estimated separately for both cities with factor score and socio-demographic characteristics as independent variables. The following sections briefly summarize the data and analysis findings.

4. Results and Discussion

4.1. Descriptive data analysis

A total of 192 and 422 usable samples were analyzed from the total sample collected from Ahmedabad and Bangalore respectively. The average age of the sample collected from Ahmedabad is 21 years and 22 years for

Bangalore. The educational qualification, type of bus the respondents are using, feeling of safety and frequency of bus use are presented in Table 1 separately for both cities.

Table 1. Educational qualification, frequency of travel and type of bus in use for both case cities.

Variable Name		Ahmedabad		Bangalore	
Educational Qualification	Graduation	68.4 %		36.5 %	
	Post-graduation	31.6 %		50.5 %	
	Others	0.0 %		13.0 %	
Frequency of travel	Daily	22.3 %		20.6 %	
	Sometimes	20.7 %		31.8%	
	Once in a while	19.7%		26.5%	
	Rarely	37.3%		20.1%	
Feeling of safety while travelling	Safe	90.7 %		62.3%	
	Unsafe	9.3 %		37.7%	
Type of Bus in Use	Bus Types	AMTS	39.9%	Ordinary	66 %
		BRTS	42.5%	Volvo	59%
		Others	17.6%	Vajra	26%
				Big10	10%
				Suvarna	10%
				Pushpak	15%

The data revealed that 20.7 percent respondents travel sometimes and 37.3 percent travel rarely by public buses in Ahmedabad. By contrast, in Bangalore, 31.8 percent respondents travel sometimes and 20.10 travel rarely.

There are two types of public buses operating within Ahmedabad. Ahmedabad Municipal Transport Service (AMTS) runs the public bus service in the city and a “Special Purpose Vehicle” called Ahmedabad Janmarg Ltd has been incorporated by Ahmedabad Municipal Corporation in order to run and operate Bus Rapid Transport System (BRTS) buses. On the other hand, Bangalore has six types of buses (different bus fare for air conditioned buses, general services and vaju vajra), ordinary Buses, Volvo Buses, Vajra Buses, Big10 Buses, Suvarna Buses and Pushpak Buses, where the differences are based on the bus fare. The respondents were asked to choose all types of buses they use to travel, and hence gave multiple responses. The percentage of respondents using each type of bus is presented in Table 1 separately for both cities. It was observed that, in Ahmedabad, AMTS and BRTS have almost the same percentage of women using each type of bus (AMTS=39.9% and BRTS =42.5%). The remaining 17.6 percent of respondents use buses other than AMTS and BRTS. Whereas, in Bangalore, as many as 66 percent of respondents use the ordinary bus, 59 percent use Volvo bus, 26 percent use Vajra bus, 15 percent use Pushpak bus, 10 percent use Big10 bus and Suvarna bus.

An important finding from the data, as shown in Table 1, is that 90.7 percent and 62.3 percent respondents perceive themselves to be safe while travelling in public buses in Ahmedabad and Bangalore respectively. Ahmedabad is generally perceived to be the safest city for women in the country and the results validate this notion to a large extent. But, for Bangalore, the results are ironic because Bangalore Metropolitan Transport Corporation (BMTC) is considered to be ‘best and the only profit-making public transport system of the country’, and is perceived to be unsafe by 37.7 percent of the respondents.

The data from both the cities reveals that the respondents perceive late night travelling in public buses to be unsafe. In Ahmedabad and Bangalore most of the respondents gave rank 1, i.e. the most unsafe, to travelling during late night. To some extent, this may be because of the number of passengers in the bus and lack of trust on the driver & conductors. During early morning time and late night time, there could be comparatively lesser number of people on board and on the streets as well. Whereas, in the evening, there are a lot of people using the bus and streets, therefore,

none of the respondents from Ahmedabad feel unsafe while travelling in public buses. Furthermore, as shown in Table 2, the respondents in Bangalore feel more unsafe at bus stop when compared to the respondents of Ahmedabad.

Table 2. Perception of safety at the bus stop, while travelling in the bus and while boarding & alighting.

City	Statement	Level of Agreement			
		Always	Sometimes	Rarely	Never
Ahmedabad	At the bus stop	35 %	35 %	7 %	23 %
	While travelling inside the bus	40 %	39 %	5 %	15 %
	While boarding and alighting	39 %	52 %	1 %	8 %
Bangalore	At the bus stop	22 %	63 %	13 %	1%
	While travelling inside the bus	19 %	58 %	17 %	5%
	While boarding and alighting	18 %	54 %	21 %	6 %

In Ahmedabad, out of the women who feel safe in buses, a quarter of the women have experienced at least one issue while commuting in a bus (Table 3). Surprisingly, 72 percent women stated that their friends and relatives have faced an issue while travelling. Out of the women who feel unsafe in buses, 24 percent have experienced an issue while commuting in a bus. Moreover, 83 percent women stated that their friends and relatives have faced an issue while travelling. In Bangalore, 36 percent of the total women feeling safe have faced issues on board and 46 percent have friends/relatives who have faced issues. Furthermore, 24 percent of the total surveyed population feeling ‘unsafe’ have faced issues while travelling and 27 percent have friends/relatives who have faced safety issues. It can be observed from the results that most of the women from both cities have friends/relatives who have faced safety issues. The experience and perception of one’s journey can be passed onto another through word of mouth. Reference group’s experiences could change one’s own perception to some extent, especially when the reference group is of known people. It might result in decline in women ridership of buses. Another result unveils that 47 percent of the respondents who have experienced an issue in the past continue to travel via buses. This could be due to either or both of the following reasons, a) These women are captive riders i.e. an alternative mode of travel is absent, or b) They are financially constrained and continue to use the bus services compromising their safety.

Table 3. Feeling of safety and percentage of people who faced issues while travelling in bus.

	Bangalore		Ahmedabad	
	Issues faced by respondents themselves	Issues faced respondent’s friends or relatives	Issues faced by respondents themselves	Issues faced respondent’s friends or relatives
Respondents who feel safe while travelling in buses	36 %	46 %	22 %	64 %
Respondents who feel unsafe while travelling in buses	24 %	27 %	2 %	8 %

4.2. Factor analysis

The primary purpose of factor analysis is to describe the underlying structure among the variables in a data (Hair, et al., 2010). This method was found appropriate for this study because as many as 30 variables were considered to understand what influences young women’s perception of safety. These variables could have correlation among them and to overcome this issue, factor analysis makes it possible to define sets of highly interrelated variables, called factors, which help to understand the variability in the responses. Thus, in this study an exploratory factor analysis (EFA) was performed to reduce the number of variables under consideration. The factor analysis was conducted for

both cities separately and a different set of factors were obtained. The statements used as indicator variables and were entered into a maximum likelihood extraction with VARIMAX rotation. This rotation method assumes that there is no correlation among the extracted factors. A sample adequacy test, Kaiser- Meyer-Olkin (KMO) statistic was 0.69, i.e. mediocre and 0.78, i.e. middling for Ahmedabad and Bangalore respectively. This implies that the sample is suitable to conduct exploratory factor analysis. The Barlett test of sphericity, which is a statistical test to check for presence of correlations among the variables, was significant (0.00), for both cities, indicating that there are significant correlations among variables.

The correlation between the variables and the factors is measured by the rotated factor loadings which are presented in Table 4 & Table 5 for Ahmedabad and Bangalore respectively. The squared factor loadings of a given variable across all factors is the communality, which is the amount of variance accounted for by the factor solution for each variable. Therefore, if the variables have higher communalities, then factor analysis is justified. Hence, only the variables securing a factor loading higher than 0.40 have been used. Factors with latent roots (eigen-value) greater than 1 were considered significant.

The factors extracted for Ahmedabad and are presented in Table 4 along with their factor loadings. The resulting factors were tested for reliability using Cronbach Alpha value. The four factors attained the values of 0.76, 0.73, 0.67 and 0.54 respectively indicating a good intra-correlation for all the factors because all Cronbach Alpha values are greater than 0.50. The total variance in the responses explained by all the factors is 46.86 %.

Table 4: Factors extracted for Ahmedabad

Name of the Factor	Eigen-value	Cronbach Alpha	Variance explained	Factor Loading
Factor 1: Safety feeling at bus stop	3.304	0.76	18.95 %	
Bus stops are safe for young mothers and elderly ladies				.874
Bus stops are safe for girl child				.757
Bus stops are safe for women				.655
Drivers and conductors are courteous				.472
Factor 2: Trust	2.600	0.73	34.83 %	
Feel unsafe with drivers and conductors				.676
Feel unsafe with co-passengers				.669
Crimes against women are more in empty buses				.586
Crimes against women are more in overcrowded buses				.583
Factor 3: Anxiety while travelling in bus	1.450	0.67	6.44 %	
Many people end up with various sprains while getting off the bus because of non-levelling of bus stop				.702
I fear getting run off by another bus or vehicle if the bus doesn't stop at the bus stop				.686
I don't know with surety if I am getting down at the right bus stop				.462
Feel very unsafe while reaching to the door of bus from the seat				.403
Factor 4: Bus stop facilities	1.224	0.54	5.59 %	
Bus information – schedule & route maps are available & reliable				.753
There is proper light at bus stops in the night				.457

The first factor indicates safety at bus stop. The statements about safety of young mother, elderly ladies, all women in general and girl child are correlated with this factor. Another statement about the behaviour of drivers and conductors is slightly less correlated (as indicated by a comparatively lower factor loading of 0.472) with the factor but it has not been removed because it has a factor loading greater than 0.40. The variance explained by this factor is 18.95 percent.

The second factor indicates trust. The statements about feeling of safety among staff and co-passengers are correlated with this factor. Statements about higher crime rate in empty and overloaded buses are also correlated with

the factor. This factor, thus reflects the trust respondents have upon co-passengers and staff. The variance explained by this factor is 15.87 percent.

The third factor indicates anxiety while travelling in bus. The factor is correlated to statements about injuries experienced by other people and fear of getting run off by other vehicles as buses don't halt at the designated space in the bus stop. Also, statements regarding uncertainty about getting off at the right bus stop and about safety while reaching for the door before getting off, are other statements which are correlated to the factor. This factor explains 6.4 percent variance.

The fourth factor correlates with two statements regarding facilities at the bus stops. Therefore, it has been labelled bus stop facilities. Statements about provision of bus routes maps & schedules and proper lighting are included in this factor and they together explain 5.5 percent variance.

The results of the factor analysis conducted for Bangalore is presented in Table 5. Three significant factors were extracted with Cronbach Alpha values of 0.80, 0.69 and 0.64 respectively indicating a good intra-correlation. The total variance in the responses explained by all the factors is 40.34 %. The factors for Bangalore are almost similar to factors for Ahmedabad. Only the factor regarding trust among fellow passengers and staff (labelled trust for Ahmedabad) is not a factor in Bangalore's case.

Table 5: Factors extracted for Bangalore

Name of the Factor	Eigen-value	Cronbach Alpha	Variance explained	Factor Loading
Factor 1: Safety feeling at bus stop	3.362	0.80	23.08 %	
Bus stops are safe for young mothers and elderly ladies				.776
Bus stops are safe for girl child				.729
Bus stops are safe for women				.691
Factor 2: Anxiety while travelling in bus	1.812	0.69	10.15 %	
Many people end up with various sprains while getting off the bus because of non-levelling of bus stop				.743
I fear getting run off by another bus or vehicle if the bus doesn't stop at the bus stop				.559
I don't know with surety if I am getting down at the right bus stop				.530
Feel very unsafe while reaching to the door of bus from the seat				.432
Feel unsafe about luggage at the time of getting off the Bus				.501
Factor 3: Bus stop facilities	1.358	0.64	7.11 %	
Bus information – schedule & route maps are available & reliable				.651
There is proper light at bus stops in the night				.543
Bus stops are conveniently located				.520
Bus information is easily available through calls, SMS's & on the Internet				.459

The first factor extracted for Bangalore is the same as Ahmedabad, i.e. safety at bus stop. It is correlated to the same statement except the statement regarding behaviour of staff. It explains 23.08 percent of the total variance.

The second factor is the same as the third factor for Ahmedabad, labelled anxiety while travelling in bus. It contains the same statement as the third factor for Ahmedabad. It explains 10.1 percent of the variance.

The third factor indicates convenience and bus stop facility similar to the fourth factor for Ahmedabad. But, this factor comprises of two more statements. The statements about conveniently located bus stops and availability of bus information through calls, SMS' & internet are correlated to this factor. This factor collectively explains 7.1 percent variance.

4.3. Logistic Regression analysis

To model the safety perception, a set of wide-ranging variables was tested for inclusion in the models for both cities. The variables which offered reasonable predictive ability were incorporated in the respective models. The

variables significant (nearing 5% level) for the logistic regression model (feeling safe =1) for Ahmedabad are presented in Table 6.

Table 6. Logistic regression model for safety perception (Ahmedabad)

Variable	Estimate	p-vale	Odds-ratio
Educational Qualification (1 = post-graduate)	1.586	0.05	4.885
Travel Frequency	0.507	0.05	1.660
Use BRTS	-1.115	0.06	0.328
Constant	-0.182	0.87	
Initial log-likelihood	-133.777		
Final log-likelihood	-54.980		
Rho square	0.589		
Sample size	192		

The respondent's travel frequency on public buses was found to be a significant variable associated with perception of safety. The respondents were asked how frequently they travel in public buses, using a 1-4 scale from 'rarely' to 'always'. Each increment towards 'always' increased the odds of perceiving buses safe by 1.6 fold. It is thus understood that in Ahmedabad if the respondents are travelling more frequently then they perceive their travel to be safer.

Educational qualification was found to be a significant variable in the model. This implies that young women with higher level of education are more likely to perceive buses as a safe mode of travel than those with lesser education qualification. For instance, in Ahmedabad, the odds of perceiving buses safe are 4.8 fold greater for postgraduate respondents than undergraduate respondents.

Respondents were asked if they prefer to travel via AMT bus or the BRT bus. Those who preferred BRT bus are more likely to perceive buses as an unsafe mode of travel than those who chose AMT bus. The preference of BRT over AMT bus was found to decrease their odds of perceiving buses safe by 0.3 fold as suggested by the negative parameter estimate (Use BRTS).

A different set of different variables were found significant in the model for Bangalore and are presented in Table 7.

Table 7. Logistic regression model for safety perception (Bangalore)

Variable	Estimate	p-vale	Odds-ratio
Age	0.169	0.01	1.184
Educational qualification	-0.506	0.00	0.603
Safety at bus stop	0.510	0.00	1.304
Constant	-2.57	0.01	
Initial log-likelihood	-251.612		
Final log-likelihood	-223.483		
Rho square	0.112		
Sample size	422		

The age of respondents was found to be a significant parameter of perception of safety in public buses. The positive parameter estimate indicates those who are older are more likely to perceive buses safe than those who are younger. With each increment in age, the odds of perceiving buses as a safe travel mode increased by 1.1 fold.

The 'Safety feeling at bus stop factor' was found to be significant in the model (refer factor 1). The odds of perceiving buses safe will increase (1.3 fold) the safety at bus stop. If bus stop safety is increased for women of all age groups then respondents are more likely to perceive bus stops safer than the otherwise.

4.4. Planning and policy implications

The empirical results of this study have implications for planning and policy in order to improve young women's perception of safety in public buses. It must be noted that the results for both the cities are similar in some respects and different in others. Based on the factor analysis and modelling efforts, certain recommendations are suggested for the government and bus service providers to ameliorate young women's negative perception of safety to increase ridership and move a step closer to sustainability.

- *Safer bus stops*

Providing proper seating at bus stops might help young mothers and elderly women by making their waiting time almost effortless. Women tend to perceive themselves safer when bus stops are under CCTV surveillance. Police patrolling at regular intervals is necessary to reduce crime rate and should be more frequent during the evening & night timings. Women helpline numbers may be displayed properly in at least two languages (local language and English) and should be legible.

- *Trustworthy staff*

A thorough background check before appointing staff (driver & conductors) could become a mandate. Regular staff meetings & workshops could be scheduled to train staff and counsel staff members. Employing female conductors to maintain trust among women passengers. A passenger helpline number may be displayed in at least two languages (local language and English) and should be legible by all.

- *Physical infrastructure*

Buses interiors should be in level with the bus stops, so that passengers do not have to climb any steps to board the bus. This also minimizes fear or possibility of getting injured (or getting sprains) while getting on and off the buses. All buses should have destination display and audio systems to reduce uncertainty about present and next destinations. Overloading of buses should be strictly prohibited to ensure safety and ease of movement while entering, standing and exiting the bus. Buses should be closed whenever the bus is in motion.

- *Obeying rules*

Heavy fines on breaking traffic rules (especially not halting buses at the bus stop and missing bus stops).

5. Results and Discussion

This paper investigates the factors which impact young women's perception of safety in public buses in two Indian cities, i.e. Ahmedabad and Bangalore. It is found that *safety at bus stop, anxiety/injury concerns & uncertainty* and *bus stop facilities* were the common latent factors that have implication for bus travel in Ahmedabad and Bangalore. *Trust* was an additional factor extracted for Ahmedabad only.

Also, the study found which of these factors and socio-demographic attributes impact the perception of safety in public buses for both cities separately. Some of the important findings were:

- For Ahmedabad, it is found that if the *educational qualification* of the respondent was higher, then they were more likely to feel safer in public buses.
- For Bangalore it revealed that older women were more likely to perceive public buses safer.
- For Bangalore revealed that if women *perceive bus stop to be safe*, then they were more likely to perceive public buses safer.

Further research can be done by extending the study area and capturing the perception of women in other cities of India as well. It would help in strengthening and providing a much wider and clearer foundation about perception of women safety in public buses.

The safety issues faced by young women in both the cities are more or less the same and the policy makers and implementing agencies need to address these issues. However, city-specific problems need to be focussed on and hence besides the country's overall policy guidelines to ensure women safety in public buses, more specific guidelines at the state and city level are required to provide safer travel facilities to women in order to promote public buses as a sustainable transport option among women.

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