

Perceived Stress among Young Working Women following Sexual Harassment in Public Transport: A Cross-sectional Study from Northeast India

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Abstract

Sexual harassment on the move is one of the major atrocities against women globally and has consequences on their psychological well-being. This study aimed to scale the perceived stress following sexual harassment of young women in public transport. A structured questionnaire was used for collecting the socio-demographic data and data related to incidents of sexual harassment in public transport from 10 offices and 10 educational institutes from two districts belonging to two different states. Ethical clearance has been obtained from Institutional Ethical Clearance Committee. Perceived stress was scaled and scores were analyzed with socio-demographic components and components to incident proper. Data were entered into SPSS version 23.0. Pearson's correlation was used for analyzing different determinants with perceived stress, keeping confidence interval 95% while P value less than 0.05 was considered statistically significant. Out of 800 study participants, 95% commuted through public transport regularly. 82% were harassed at some time or other. Nearly 58% of participants, perceived severe stress. Perceived stress was higher in those where incidents happened in the past 30 days (48%). Pearson's correlation was found to be -0.706. None informed the police following the incident. 4.5% of participants had been on anti-stress medication. Significant perceived stress was found in the survivors of sexual harassment on road. Perceived stress decreased with time elapsed following the incident(s). However, sensitization of reporting should be done. Counseling of sexual harassment survivors is an important need that should be made available. Public transport should be made safer with the intervention of law enforcement agencies and policymakers.

Keywords: Sexual harassment, perceived stress, young working women, public transport.

I. INTRODUCTION

One of the essential aspects of human rights includes the right to free movement. In comparison with their male counterparts, it is seen that lesser women use private transport or their own vehicles [1]. It has been seen that

women of all incomes and social classes use public transport, private transport, or shared transport for their mundane works. Though sexual violence on women has found a strong place for reforms in society including those from law and policymakers, government and non-government organizations (NGO), investigative

agencies and public leaders, and masses, sexual harassment on road is not yet a recognized entity and is lacking in the dissemination of knowledge and awareness. Hence, sexual harassment on the move though is one of the major atrocities against women globally; it is also one of the most under-reported crimes [2]. Sexual harassment has been categorized by many as a stressor, affecting the physical and mental well-being of an individual. The main objectives of this study were: i) To scale the perceived stress of young women following sexual harassment in public transport in the North-eastern region of India. ii) To find out the factors affecting stress levels in young women following sexual harassment in public transport. No other similar studies had been conducted on the perceived stress of young women following sexual harassment on the road.

2. Materials & Methods

The study design was a cross-sectional study and was conducted for a period of 09 months from April 2021 to December 2021. The study group included young women between the age group of 20-40 years. Two different states of Northeastern India were selected and from them randomly one district each was selected. From each district, 10 offices and 10 educational institutes were selected. The sampling pattern was stratified random sampling. Taking into consideration previous studies done in India on sexual harassment of women on road, with a confidence interval of 95% and an error margin of 5%, the sample size was calculated to be 755. Hence we have adjusted it to 800 participants. 10 offices and 10 educational institutes were randomly selected from each district. From each office/educational institute 20 numbers of young women participants using public transport were randomly selected for the study. Two sets of questionnaires were given. One was a pre-formed pretested structured questionnaire, which had a total of 20 questions and needed recall memory of 6 months to answer regarding socio-demographic profile and data pertaining to sexual harassment incident(s). The data that were collected are age, sex, religion, community, residence (urban/rural), marital status, qualification of the individual, profession of the individual, family income, profession of head of the family, qualification of the head of the family, public transport with which the

individual commuted (bus/auto-rickshaw/tempo/ shared cab/ train), time of the day she commuted (morning/afternoon/evening), frequency of travel (every day, 5-7 days a week, less than 5 days a week), the profile of the perpetrator, the position of the perpetrator, the time elapsed following the incident (≤ 1 month, 1-2 months, 2-6 months), who was alerted following the incident(s) (co-passenger, driver, family/travel buddy, police). For calculation of socio-economic status, we applied the Modified Kuppaswamy scale for the year 2021 [3].

Another questionnaire of perceived stress was given to each participant, which was formulated by Cohen and is globally recognized for assessing the perception of one's stress level [4]. It consisted of 10 questions. It is a proportion of how much circumstances in one's day-to-day existence are evaluated as stressful. Things were intended to tap how erratic and over-burdened the respondents felt in their life. The scale likewise incorporates various direct questions about degrees of experienced pressure. The questions are effortless to understand. The inquiries in the PSS pose about sentiments and feelings during the most recent months. For each situation, respondents are asked how regularly they felt a specific way. Each item was scored from 0 (never), 1(almost never), 2(sometimes), 3 (fairly often) & 4(very often). Based on the scores, perceived stress was determined. For scoring first, we have reversed the scores for questions 4, 5, 7, & 8. On these 4 questions, the scores were like these: 0= 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0. After adding the scores for all the 10 questions, scores of 0-13 were considered normal, 14-26 as moderate, 27-40 as severe. All the data were entered in SPSS version 23.0 (Released 2015, IBM Corp, Armonk, NY) [5]. The correlation between perceived stress and its determinants was analyzed using Pearson's correlation. The confidence interval was kept at 95% and P value less than 0.05 was considered statistically significant.

3. Results

Out of study participants (N=800), 95% commuted through public transport regularly. The age group distribution of the study participants is depicted in Figure 1.

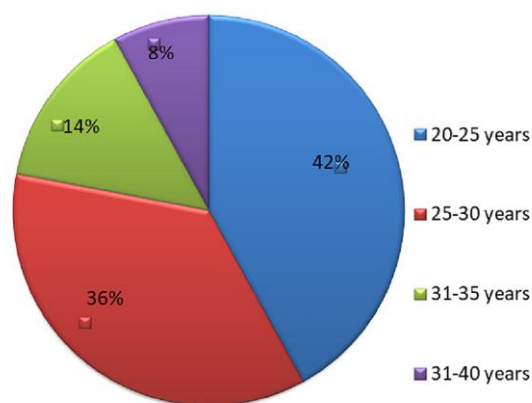


Figure 1: *Distribution of participants on basis of age group*

The majority of the study participants were Bengali (46%), followed by Assamese (32%), Tribal (20%), and others (2%). The distribution of the study participants based on their marital status is depicted in Figure 2.

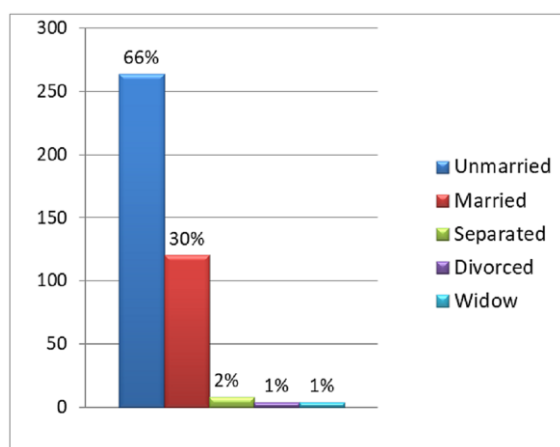


Figure 2: *Distribution of participants on basis of marital status*

We used the modified Kuppaswamy scale for the year 2021 and analyzed the socio-economic profile of the participants. The majority of the participants fell into a lower socio-economic group (74%), followed by upper-lower (21%) and lower-middle (5%). Based on their frequency of travel, 64% traveled every day in public transport, 33% traveled 5-7 days in a week and 3% traveled less than 5 days in a week. About 63% traveled by bus followed by 22% in auto/tempo, 14% in a shared cab, and 1% in train. Out of the 800 participants, 656 were harassed at some time or other on the road with a prevalence of 82%. Out of them, 46% were verbally harassed using sexually made comments and/or obscene language. About 54% had experienced a non-verbal form of sexual

harassment like inappropriate touching, indecent exposure, and/or stalking. In about 8% of them, there was more than one incident that happened in the last 06 months. The time of travel when the incident(s) took place can be found in Figure 3.

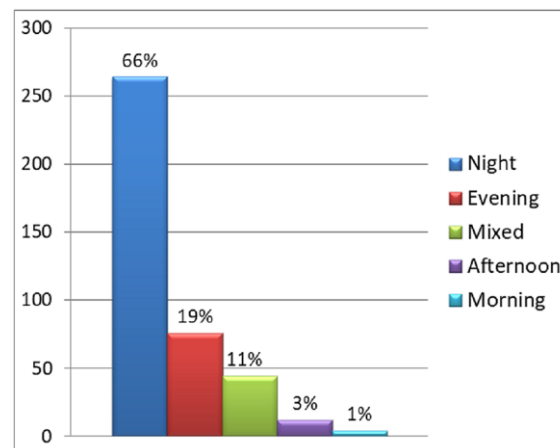


Figure 3: *Distribution of regular time of travel of participants when the incident(s) took place.*

Around 73% of the incidents occurred in festive seasons and were perpetrated by co-passengers (98%), followed by the driver (1%) and handyman (1%). Many of them could not remember whether the perpetrator was under the influence of alcohol or not. Time elapsed following the incident(s) was analyzed and it was found that about 25% of the incident occurred within the last month. The participants after the incident(s) alerted the co-passengers in 25% of cases, travel buddy in 5% of cases, and the driver in 5% of cases but none lodged a complaint or went to the police. The perceived stress scales of the participants were analyzed and it was found that 58% of them perceived severe stress, followed by moderate stress in 30% and normal or minimal stress in 12% of participants. Perceived stress was correlated with socio-demographic variables and those pertaining to the incident(s). A minimal correlation was found in each analysis, however, a significant correlation was found between time elapsed and the perceived stress score as depicted in Table 1.

Table 1: *Pearson's correlation between perceived stress score and time elapsed following the incident(s).*

Correlation		Perceived Stress Score (PSS)	Time Elapsed
Perceived Stress Score (PSS)	Pearson Correlation	1	-.706**
	Sig. (2-tailed)		.000
	N	656	656
Time Elapsed	Pearson Correlation	-.706**	1
	Sig. (2-tailed)	.000	
	N	656	656
**. Correlation is kept significant at the 0.05 level			

About 4.5% of the respondents committed that they have been taking anti-stress medications following the incident(s). 2% disclosed that they are anxious about traveling alone and have been asking a family member or friend to escort them. About 22% stated that the sexual

harassment incident(s) that they have faced, have brought significant change in their personality and they have become over-cautious about their safety on road and are intimidated by their male counterparts in public transport.

4. Discussion

Albeit the most recent many years have seen a development in uniformity and strengthening for women in the community and society, there are as yet, various difficulties in the basket of reformers for accomplishing gender equality and women empowerment. A portion of these challenges is especially gender-based violence against women. Among the numerous incidences of Gender-based violence (GBV), women face each day in public places, is the issue of lewd behavior from the other gender. Women during transit face sexually colored remarks to unwanted physical contacts and their safety as such are compromised. An essential aspect of human rights includes the "right to free movement or safe mobility". This has a strong connection with public transport systems and their planning. According to the Indian Penal

Code under section 354 A amended in Criminal Law of 2013, Sexual Harassment is when a man involves in physical contact and advances unwelcome and explicit sexual precedence, demands/requests for sexual favors, shows pornographic contents against the will of a woman, makes sexual remarks [6]. This Criminal Law Amendment 2013 also describes the punishment of rigorous imprisonment for a term which may extend to three years, or with a fine, or with both [7]. The public transport system is an integral part of the Indian transport sector, especially in the seven sisters developing states of Northeast India, public transport system plays a substantial role in human outdoor activities. Because of the difficult terrain and unique topography of Northeast India, public transport systems have fixed routes with affordable fares so that everyone can avail such facilities. However, the major concerns in this regard are lack of proper regulation, regular vigilance for controlling passenger load in public vehicles, carelessness of passengers, absence of nudge factors, and of course reckless attitude of public vehicle owners, drivers, and syndicates. All these factors invite many silent but annoying situations for the female passengers and bystanders every day. In our study group prevalence of sexual harassment is alarming (82%) in public transport and studies around the globe show similar results. It indicates females are not at all safe and hence raises serious woman's safety concerns in the public transport system which is similar to a survey conducted by Hindustan Times [8]. In the present study majority of females (95%) travel by public transport regularly and they are between the age group of 20-25 years (42%) which is similar to studies conducted in Nepal and previous studies in India [9-10]. These observations indicate there may be a high chance of young female absenteeism from educational institutions and workplaces which will ultimately become a hindrance in the psycho-socio-economic development of this age group. So, prompt action in this regard is necessary by the combined efforts of different stakeholders. This may include installing women safety measures in public vehicles like attaching 'Harassment Alarm' with each seat, compulsory separate sitting arrangements for ladies, regular inspection of passenger load in public vehicles and imposing fines on the violations etc. A comparatively higher percentage of harassment has been observed among unmarried women

(66%) which can be correlated with male domination, the perceptiveness of non-reporting / under-reporting by female survivors, and poor knowledge on sexual overtures, as has been indicated by previous researchers [9-10]. Furthermore, this study result shows females of the lower socioeconomic group (74%) were affected more, which can be validated as low-income constraints are cost-effective for commuting public transport or maybe due to lack of confidence, similar to the study conducted by Valan [11]. Government, law enforcement agencies, national and multinational organizations, and institutions should come forward to formulate stringent measures and woman's safety protocols as also stated by former researchers [12]. Post-trauma, any individual might perceive stress and exhibit symptoms like disruption in their daily routine, lesser sleep, eating disorders, detachment, etc. Post Traumatic Stress Disorder is a recognized entity globally and following sexual harassment, many show features of it [13-14]. Furthermore, this post-traumatic stress increases anxiety level which not only hampers her mental well-being but also reminds many childhood similar bitter experiences or aggravates premorbid mental health problems. Altogether it becomes a 'generalized stress' compromising the physiological functioning of different systems in the human body thus making them susceptible to diseases. In our study, a majority of the respondents (58%) perceived severe stress following sexual harassment in public transport. There is no similar study on perceived stress following sexual harassment on road and this is an eye-opener. Minimal correlation has been found with socio-demographic profile and incident profile which signifies that irrespective of one's age, marital status, ethnicity, socioeconomic status, frequency of travel, vehicle opted for travel, survivors of sexual harassment on public transport perceive stress following the incident(s). However strong correlation was found between time elapsed after the incident(s) and perceived stress score/severity, which signifies that with increasing time perception of stress decreases. Following the incident(s) 4.5% needed medications to be relieved of stress and for 22% there has been a significant change in their personality and behavior which is alike studies conducted by other researchers on post-traumatic stress disorder [15-16]. However, official reporting to police was not done which

indicates the need for sensitization and awareness generation about sexual harassment in public transport and the protocols to be followed in such cases. Special police patrols, during the night and festive seasons, gender sensitization, CCTV installation, recruitment of women drivers and conductors, and formation of "Women safety committees" and "Safe mobility helpline number" by the government is the need of the hour. Novelty like anti-harassment mobile applications for single button reporting which can be tracked by Global Positioning System (GPS) can be a future modality to combat such incidents.

5. Conclusions

The perceived stress scale plays a vital role in a complete evaluation of psychological trauma and its further progression following sexual harassment among young women in public transport. This study will certainly help different stakeholders formulate necessary measures to stop this menace. Stringent laws must be made against the perpetrator and awareness amongst female commuters about the necessity of reporting should be emphasized, so that stressors like sexual harassment on road can be minimized. The psychological component of health should be prioritized based on discussion-counseling model, by gaining confidence and maintaining confidentiality of the survivors of sexual harassment. This can help them perceive lesser stress and make their lives better.

Abbreviations

SPSS: Statistical Package for the Social Sciences, NGO: Non-Governmental Organization, PSS: Perceived Stress Scale, GBV: Gender Based Violence, CCTV: Closed-Circuit Television, GPS; Global Positioning System.

Ethical approval

Institutional Ethical clearance obtained for this research study.

Written Informed Consent

Written informed consent taken from the study participants.

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