

Women's Perception on Safety Devices

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ABSTRACT

Smart cities have the potential to improve people's quality of life. There is a wealth of literature on the application of intelligent technology to different urban sectors, including economy, mobility, security, education, living, the environment, and personal safety for city dwellers. Several smart gadgets have been developed and applied to various sectors. Smart safety equipment equipped with information and Communication Technology (ICT), such as smart surveillance cameras, sensors in transportation, and smart lamps, might, for example, safeguard people in an emergency. As has been widely documented in the media, female urban inhabitants are more likely than their male counterparts to experience incidents, and a city cannot be considered smart until women feel safe. Many researchers have investigated the impact of Closed Circuit Television (CCTV) designed for use in public settings on discouraging criminality and boosting public safety. Despite this, there has been inadequate study regarding women's views of smart surveillance cameras and other smart safety gadgets. It is hard to increase women's safety without more thorough information on their perceptions of safety and smart safety equipment. As a result, a study on how safe women feel and their attitudes toward smart safety gadgets is required. What is important in this study is that the socio-spatial context of urban settings, including land uses and crime patterns, is taken into account, primarily because smart safety devices cannot function in isolation to improve or change people's perceptions of safety, but have the potential to co-influence their perceptions of safety. The purpose of this study is to investigate the impact of smart safety devices on women's perceptions of safety in various public spaces in India while taking into account crime hotspots and land uses.

Keywords: women, public space, violence, safety device, perceptions

I. INTRODUCTION

In India, women's safety is a serious problem. Occasionally, an event regarding their safety happens. Every citizen in the country is aware of it, yet no one is willing to assist. Women all throughout the world are subjected to a great deal of unethical physical harassment. Sexual violence against women and girls in public places ranges from sexual harassment to sexual assault, including rape and femicide. It occurs on streets, public transportation, and parks, as well as in and around schools and offices, public sanitation facilities, water, and food delivery locations, and in their own communities. All sites owned or used by the government that is open to the public and free to use are considered public spaces. Public venues are the most hazardous locations in society. India has the world's youngest economy. Women in India make significant contributions to the country's thriving economy and development. For women in India, navigating public areas to get to their destinations is a daily struggle. On public transit, women are vulnerable to physical attacks, sexual harassment, and other sorts of unsavory conduct. According to studies, women on public transit face issues such as catcalling, eve teasing, stalking, and other forms of harassment. Data reveal that crime against women is on the rise in India, which is emerging as one of the fastest-rising countries in terms of infrastructure and economics. Every day, more than 30 women are murdered in India, and many are suffering from severe mental and physical trauma. Because of the societal stigma associated with the nature of the crime, rape and violence against women are among the most under-reported crimes globally. The most recent NCRB report indicates that more than 4 lakh incidences of crime against women were registered in 2019. A total of 32,033 rape cases, or nearly 88 incidents each day, were recorded by NCRB. More than 93 percent of recorded rape incidents in 2018 included a known perpetrator. Women describe being sexually assaulted both inside and outside of their homes. This is supported by statistics from the

National Crime Records Bureau (NCRB) that was only just made public, according to which Bengaluru is the second and Mumbai is the third-most dangerous metropolis in India for women.

OBJECTIVES:

- To explore women's perceptions on safety and smart safety devices.
- The impact of smart surveillance devices on women's feeling of safety.
- To perform an analysis of women's perceptions towards safety in public spaces.

II. LITERATURE REVIEW

Women safety perceptions and smart safety devices

The sense of safety in a certain location is directly related to the actual crime situation in that area. However, the relationship between crime and a sense of safety is far from apparent. The sense of safety they had in a certain place was revealed to be highly fragile and might alter instantaneously owing to a small number of criminal incidents occurring in that area. Furthermore, literature has emphasized that a sensation of security is closely related to real crime locations.

It shows that people's feelings of safety are not always aligned with documented victimization rates or crime-hot areas. Furthermore, a previous study found that diversified land uses have the ability to increase perceived safety. For example, communities with better access to stores, parks, and public transportation may reduce their fear of crime. It has also been observed that dense mixed-use zones are safer than conventional residential regions. Furthermore, it was shown that land use was a strong predictor of street crime trends. Furthermore, in numerous hotspot urban crime regions, females were especially targeted more by criminals than males, causing women to have poor views of safety.

Female safety is universally seen as a significant concern. "35% of women have been victims of physical or sexual violence." Public space is open and accessible to all types of individuals. Passing through public venues such as a market or a crowded street may cause a lot of fear in many women and girls, which is due to the fact that accidents are more likely to happen in these types of settings. Smart gadgets occur as a result of this sort of phenomenon. According to some studies, smart safety devices are effective in making females feel safe to some extent. Furthermore, while many studies have focused on assessing the effectiveness of CCTV and the mechanism for CCTV to deter crime and safeguard

women from risk, there is still a lack of focus on women's perceptions of safety and smart safety devices. However, the ability of CCTV systems to improve people's feelings of safety is fairly limited because it plays a role only after the occurrence of incidents rather than before or when they occur. Furthermore, as discovered by other researchers, the number of CCTV cameras had a negative association with men's fear of crime and even no relation to women's fear of crime. Furthermore, there was no discernible influence on the perceived danger of crime. Overall, the conclusions on whether or not CCTV may have a good impact on increasing public safety remain questionable.

Women's Safety in India

A study on Women Safety in public transport in Indore by Mayank Chowdary, Sudhanshu Dube and Rakesh Verma. This study focuses on the safety of women using public transit and at bus stops. The authors designed a survey and analysed it using factor analysis. Factor analysis is the most essential way for reducing multiple variables to components.

A research study based on Women's safety in public places: Vineetha Chettri's perception, experience, occurrence, and impact of sexual harassment in public areas in Patna, Bihar's state capital. This study focuses on women's views of their safety in public places. Furthermore, the study's primary focus is on sexual harassment that women face in public places, the impacts and solutions for reducing sexual harassment in public places, and how to remove sexual harassment and improve public awareness about it. This study also looked at the age groups most vulnerable to a lack of safety.

An article based on Street Violence against Women in India: Mapping Prevention Strategies by Rituparna Bhattacharya. This article is about female street violence in North-East India. Attention was focused in Agartala, Kohima, Imphal, Shillong, and Guwahati, among other areas. This page attempts to educate readers on preventative techniques for increasing women's safety in India, particularly in North-East India (Focused area).

A study on Safe in the City? Negotiating safety, public space and the male gaze in Kolkata, India. This research aimed to better understand how individuals behave in public areas and how women take precautions to prevent such behaviour.

The preceding literature assessment focuses mostly on women's safety in various sections of India, as well as women's safety in public transportation in various parts of India.

There has been relatively little study on women's perspectives on safety devices.

Research questions

Following our review of a number of research papers and articles, we must address the following questions:

- Are women safe in public places in India?
- Which public place do women feel unsafe the most and for what reason?
- What do you think about a safety device?
- Your perception of buying a safety device?
- Do you think women need safety devices?
- Will you buy it if it's affordable?

III. METHODOLOGY

Data for this study were gathered from the following sources:

- Review of scientific research, professional reports, and media stories on women's public safety issues and concerns, as well as their views on safety equipment, public transit, and nocturnal travel.
- A survey with six distinct questions on the specific research.

The data acquired from academic papers and press articles is all relevant to this investigation. The survey form was designed using questions relating to the study subject. These questions will help the authors conduct the research questions-based analysis.

IV. RESULT & ANALYSIS

The Questionnaire gathered for data collection will be utilized to conduct the question-based analysis for this study.

According to the survey results, (56.6%) of the women were under the age of 20, (34%) were between the ages of 20 and 30, and (9.4%) were above the age of 30.

➤ Are women safe in public places in India?

This section investigates whether Indian women are actually safe in public. According to the results, the majority of individuals responded neutral (39.6%), disagree (32.1%), and agree (11.3%) indicating that "women are safe in certain public locations in India, but not in every place." This might be owing to different safety precautions in different parts of the city.

➤ Which public place do women feel unsafe the most and for what reason?

This part will discuss the second study issue, which is the most unsafe public areas for women, as seen by women, and what worries women have when in public. Respondents were asked to provide the location of each instance of sexual harassment or assault that they had witnessed.

Where do women feel insecure in public?

Here, various public spaces such as bus stops, train stations, retail malls, marketplaces, underpasses, and flyovers have been included, and their safety concerns in statistics have been underlined. Underpasses and flyovers, bus stands/bus stations, and train stations are the three most popular venues.

Railway stations and trains are vulnerable environments for women due to congested spaces or, alternatively, secluded regions where no one is available to act and aid in an emergency.

Women are more susceptible in these public places due to their worries.

The graph depicts things women dread in public settings, such as theft, sexual assault, unwanted sexual remarks, murder, and kidnapping. Theft received the most responses, followed by fear of sexual harassment and unwelcoming sexual words and gestures, stalking, and murder.

➤ What do you think about a safety device?

This part responds to the third question, "How do you feel about a safety device?"

There were a variety of responses. Some thought it would be useful, make them feel comfortable, and be necessary; some even stated they would buy one because they were moving out of state for their studies; others claimed it was pricey.

➤ Your perception of buying a safety device?

For this, (92.5%) said they'd want to have one, (3.8%) said they don't want one, and (3.8%) said they currently have one.

➤ Do you think women need safety devices?

For this, 83% said yes, 17% said maybe, and 0% said no.

➤ Will you buy it if it's affordable?

For this, 90.6% said yes, 9.4% said maybe, and none said no.

V. DISCUSSION

According to what the participants characterised as their expectations of smart safety devices, several proposals have been made to improve the functionality of safety devices: automatically alert, video and voice record, GPS positioning, aid signal such flashlight, electric shock, and so on. Furthermore, these expectations were divided into three categories: assault function, defence function, and assistant function. In truth, smart safety gadgets with helper functions outnumber those with attack and defence features, especially those with GPS locating. Due of the inability of humans to respond quickly to emergencies, several researchers advocated wearable gadgets such as "smart bands," which integrate numerous tasks and connect smart phones to the internet. More specifically, it is capable of accessing GPS and messaging services, as well as sending a request for help and the location coordinates to the nearest Police station, relatives, and people nearby. Personally, when people encounter safety incidents, devices with assistant functions are hardly capable of providing aid, because a lot can happen while waiting for others to offer help. Some respondents mentioned assault functions like as electric shock and spray with liquid chemical, which are more beneficial in an emergency to save time. However, it is possible that it will inadvertently harm the sufferer. Some of the participants' suggestions for self-defense with superpowers were outstanding, such as running quickly, taking them away, and turning users invisible in an emergency. Despite the fact that a variety of smart features are being put in cities to promote security and safety, the hazards of smart safety devices remain controversial. As an example, Making users invisible appears to be a viable solution to both the monitoring and safety issues. However, a new difficulty may occur as a result of this function: if these solutions are used by criminals, there is no way to determine who is murdering or stealing, let alone how to secure individuals.

VI. CONCLUSIONS

This chapter contains a brief description of the research findings, followed by a discussion of the research limitations. It also provides some appropriate ideas for urban planning.

According to the findings, practically all crime hotspots are surrounded by business and residential territory. And women feel safer even in crime hotspots, which are mostly bordered by commercial land. Furthermore, smart surveillance

systems may have an impact on female emotions of safety. This discovery can help improve women's safety in urban planning. It is feasible that implementing intelligent traffic environment planning and keeping traffic order on time, as well as increasing the number of patrol officers, might be an effective solution to increase women's feelings of safety. With these gadgets being used to monitor our status and enhance our quality of life, the question of how to safeguard this data to ensure privacy must be taken seriously. As a result, when researching ways to develop smart technology to increase quality of life, researchers must consider new difficulties in order to offer the greatest potential benefit.

As this is a big issue in our society that demands immediate attention to regulate and bring about change, women will find it simpler to travel without fear. However, genuine transformation in people's mindsets may be purchased. This will continue until and until people's mindsets change, but if people's mindsets change gradually, there will be a tremendous and huge shift in society, and women will feel secure at all times.

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