



Factors Influencing the Adoption of Safety Devices Among Women

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ABSTRACT

The adoption of safety devices among women has become a pressing concern in contemporary society. This research paper aims to systematically analyze the multifaceted factors that influence women's decisions to embrace safety devices as a means to enhance personal security. Safety devices encompass a range of tools, including personal alarms, mobile applications, and self-defense equipment, all of which contribute to mitigating risks associated with violence, harassment, and personal safety. Employing a comprehensive mixed-methods approach, this study integrates surveys, interviews, and case studies to explore the various determinants shaping women's attitudes and behaviors regarding the utilization of safety devices. Drawing from a diverse demographic and geographic sample, the research delves into socio-cultural, economic, technological, and psychological factors that impact women's adoption choices. Key findings of this investigation underscore the substantial influence of cultural norms, individual perceptions of threat levels, financial constraints, technological literacy, and past experiences on women's readiness to embrace safety devices. Moreover, the study highlights the significance of peer and familial support networks, community-driven awareness initiatives, and government policies in fostering the acceptance and widespread usage of safety devices among women. This research not only contributes valuable insights to the discourse on gender equality and personal safety but also offers practical implications for policymakers, advocacy groups, and manufacturers in developing tailored interventions and products that empower women to take control of their security. In an era where safety and empowerment are paramount, understanding the factors that influence women's adoption of safety devices is of paramount importance.

KEYWORDS: Women, Public space, Violence, Safety devices, perceptions, Community awareness, empowerment.

1. INTRODUCTION

Women's safety is a major issue in India. Now and then something happens that affects their safety. All the people in the nation know it, yet nobody wants to help. Physical harassment of women is pervasive and unethical everywhere in the world. Sexual harassment and assault, including rape and femicide, are examples of sexual violence against women and girls in public spaces. It happens in their neighborhoods, on public transit, in parks, on streets, in and around workplaces and schools, in public restrooms, on water, and at food delivery locations. Public spaces are any locations that are owned or operated by the government and are accessible to everyone at no cost. The places in society that pose the greatest risk are public spaces. India's economy is the youngest in the world. India's booming economy and progress are greatly aided by the contributions of its women. It is a daily challenge for Indian women to find their way around public spaces and get to their destinations. Women are more susceptible to physical assaults, sexual harassment, and other odious behavior when they ride public transportation.

Studies show that women experience harassment on public transportation in the form of stalking, eve teasing, catcalling, and other incidents. According to data, India—which is quickly becoming one of the nations with the fastest-rising economies and infrastructure—is witnessing an increase in crime against women. In India, about thirty women are murdered every day, and many of them have experienced serious physical and psychological torture. Rape and violence against women rank among the most underreported crimes worldwide due to the social stigma attached to the nature of the offense. According to the most recent NCRB report, there were over 4 lakh recorded cases of crime against women in 2019. In 2018, almost 93% of rape occurrences that were reported had a known perpetrator. Women report experiencing sexual assault both within and without their households. This is corroborated by recently released figures from the National Crime Records Bureau (NCRB), which rank Bengaluru as the second and Mumbai as the third most hazardous city in India for women.

The focus of this research study is on the important subject of "Factors Influencing the Adoption of Safety Devices Among Women." This study's main goal is to disentangle the complex network of factors influencing women's choices to include safety devices in their safety measures. With the growing prevalence of these devices, it is critical to comprehend the underlying causes influencing these decisions.

2. OBJECTIVES:

- Understanding women's views of safety and smart safety gadgets.

- The effects of smart surveillance gadgets on women's sense of safety.
- To identify the factors that influence the adoption of safety devices among women.

3. LITERATURE REVIEW

Perceptions of women's safety and smart safety devices

The real crime rate in a given place has a direct impact on how safe people feel there. It is unclear, therefore, how crime and a feeling of security are related. It was discovered that their perception of security in a particular location was extremely brittle and might change at any time due to a tiny number of criminal acts taking place there. Additionally, scholarly works have underscored the correlation between actual crime scenes and a person's sense of security.

It demonstrates how people's perceptions of safety are not necessarily congruent with reported victimization rates or high-crime regions. Additionally, a prior study discovered that varied land uses can raise perceived safety. Communities that have easier access to parks, shops, and public transportation, for instance, might have less fear of crime. Additionally, it has been shown that densely populated mixed-use areas are safer than traditional residential areas. It was also demonstrated that trends in street crime may be accurately predicted by land use. In addition, women's perceptions of safety were negatively impacted by the fact that women were specifically targeted by criminals more often than men in many high-crime urban areas.

Everyone agrees that women's safety is a serious concern. "35% of women have been victims of physical or sexual violence." All kinds of people can access and use public spaces. Because accidents are more likely to occur in public places like markets and busy streets, many women and girls may experience intense terror when passing through them. Something like this gives rise to smart devices. Some research indicates that smart safety devices can help women feel somewhat safer. Furthermore, women's perceptions of safety and smart safety systems remain largely unexplored in the literature, even though numerous research has evaluated the efficacy of CCTV and the mechanisms by which it deters crime and protects women from risk. However, because CCTV only comes into play after accidents happen rather than before or at the time of the incident, its ability to increase people's perceptions of safety is quite restricted. Moreover, other researchers found that the quantity of CCTV cameras was negatively correlated with men's fear of crime and had no correlation at all with women's fear of crime. Moreover, no appreciable impact was observed on the perceived threat of criminal activity. Conclusions about the potential positive effects of CCTV on public safety are still debatable overall.

The Safety of Women in India

Research by Mayank Chowdary, Sudhanshu Dube, and Rakesh Verma examines women's safety in Indore's public transportation system. The safety of women utilizing public transportation and at bus stops is the main emphasis of this study. The authors created a survey and used factor analysis to analyze it. The most important method for breaking down several variables into their parts is factor analysis.

A research on women's safety in public places: Vineetha Chettri's views, experiences, events, and consequences of sexual harassment in Patna, Bihar. The perceptions of women's safety in public spaces are the main subject of this study. Moreover, the study's main focus is on the sexual harassment that women experience in public settings, its effects, and potential solutions, as well as ways to eliminate it and raise public awareness of it. The age groups that are most susceptible to a lack of safety were also examined in this study.

An article based on Rituparna Bhattacharya's Street Violence Against Women in India: Mapping Prevention Strategies. This article discusses street violence against women in northeastern India. Among other places, Agartala, Kohima, Imphal, Shillong, and Guwahati received a lot of attention. The goal of this page is to inform readers on ways to improve women's safety in India, with a focus on North-East India (Focused area).

A Safe in the City study? In Kolkata, India, managing public space, safety, and the male gaze. The purpose of this study was to gain a better understanding of public behavior patterns and the preventative measures taken by women.

Women's safety in different parts of India and women's safety in public transportation are the main topics of the previous literature review. The opinions of women about safety gadgets have not been extensively researched.

Research questions

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

- Are women safe in public places in India?
- Which of the following safety devices have you ever used?
- How often do you carry a safety device?
- What are the main reasons you do or don't use safety devices?
- How effective do you think safety devices are in preventing harm?
- Would you be more likely to use a safety device if it were: more discreet/ fashionable, easier to use, and more affordable?
- Have you ever received safety tips or information about available devices?

- Do you have any additional comments or suggestions regarding safety devices and their use by women?

4. METHODOLOGY

The sources of data used in this research were as follows:

- Reviewing professional reports, academic studies, and news articles on women's public safety concerns and issues, including their opinions about safety gear, public transportation, and nighttime travel.
- A survey about the particular topic that has eight different questions.

All of the information gathered from academic articles and news stories is pertinent to this inquiry. Questions on the study subject were used in the design of the survey form. The answers to these queries will aid the writers in their study of the research questions.

5. RESEARCH GAP:

The study does not examine several demographic variables that can affect women's opinions about safety equipment, such as age, socioeconomic level, and geography. Knowing how these factors interact with attitudes may help to clarify adoption rates and guide the development of more focused interventions. To provide a more comprehensive picture of the requirements and preferences of consumers, the poll also ought to have gone deeper into the preferred categories of safety equipment among various demographic groups.

6. STATEMENT OF THE PROBLEM:

Women's adoption of safety equipment is crucial, as violence and harassment against women remain widespread. Nonetheless, a multitude of circumstances have a complex role in the decisions made by women to employ safety gear. The objective of this study is to fill the knowledge gap by methodically examining the various aspects that affect women's adoption of safety gadgets.

7. RESULT & ANALYSIS

This study's question-based analysis will be carried out using the questionnaire that was collected as data.

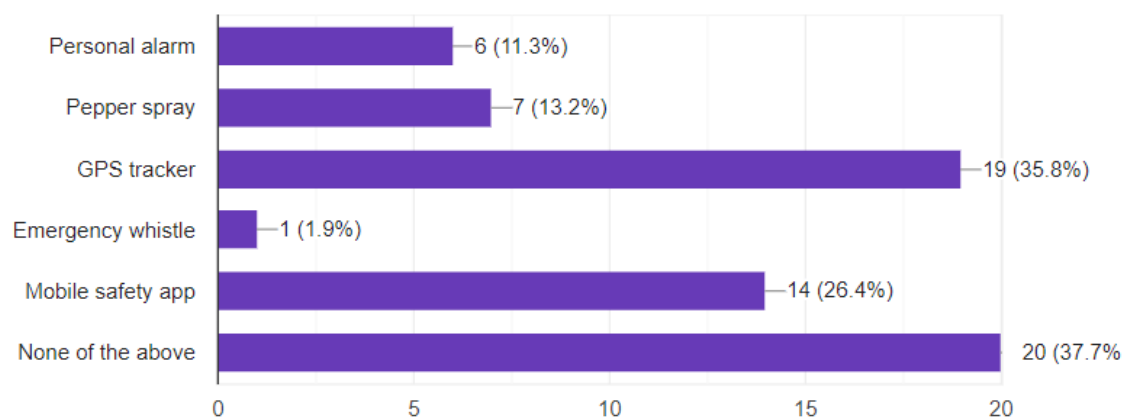
According to the survey findings, 56.6 % of the women were under the age of 20, 34% were between the ages of 20 and 30, and 9.4% were above the age of 30.

➤ Are women safe in public places in India?

This section analyzes whether Indian women are truly safe in public. According to the findings, the majority of people replied neutrally (39.6%), disagreed (32.1%), and agreed (11.3%), indicating that "women are safe in some public places in India, but not everywhere." This could be due to varying safety precautions in different areas of the city.

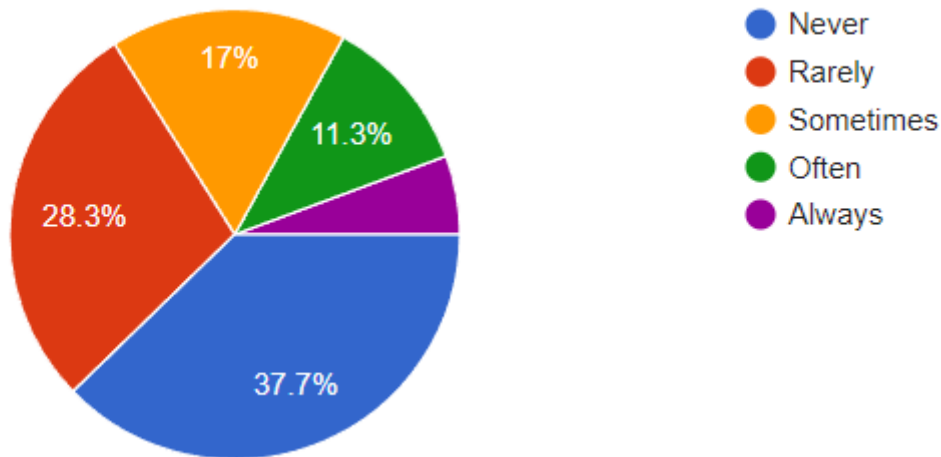
➤ Which of the following safety devices have you ever used?

In a recent survey assessing the usage of safety devices, respondents indicated a variety of tools they have utilized for personal safety. Among the options provided, GPS trackers were the most commonly used (35.8%), followed by mobile safety apps (26.4%) and pepper spray (13.2%). A smaller percentage reported using personal alarms (11.3%) or emergency whistles (1.9%). Notably, a significant portion (37.7%) indicated that they had not utilized any of the listed safety devices.



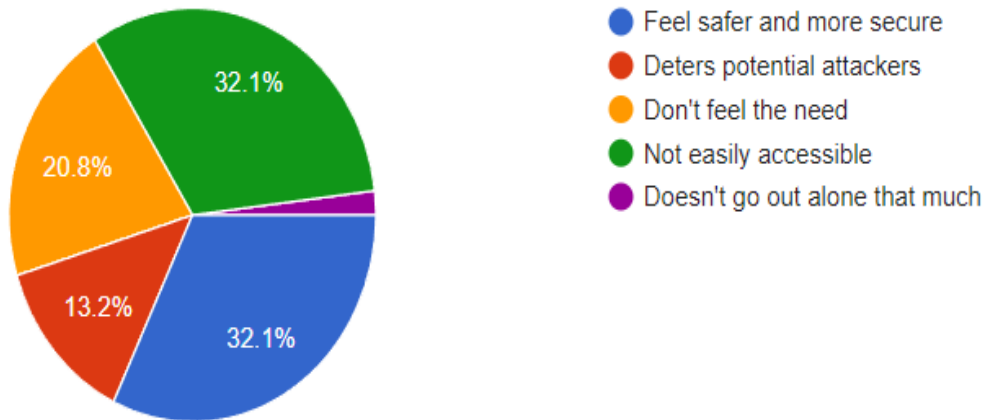
➤ **How often do you carry a safety device?**

When asked about the frequency of carrying a safety device, responses varied widely. A notable portion (37.7%) stated they never carry one, while 28.3% reported carrying one rarely. For some, it's occasional, with 17% responding "sometimes." A smaller percentage indicated more consistent use, with 11.3% stating "often" and 5.7% claiming they always carry a safety device.



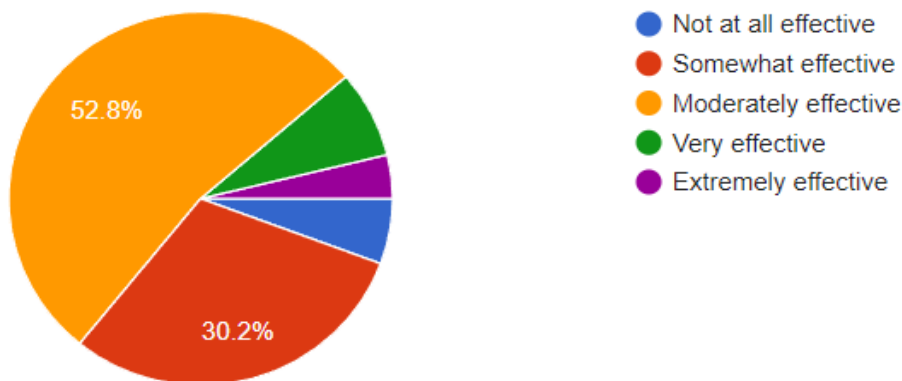
➤ **What are the main reasons you do or don't use safety devices?**

A significant portion (32.1%) emphasized accessibility issues, while an equal percentage (32.1%) cited feeling safer and more secure as a primary reason. Some (20.8%) indicated a lack of perceived necessity, while others (13.2%) saw the potential to deter attackers as a motivating factor. Additionally, a minority (1.9%) mentioned reduced solo outings as a reason for limited device usage.



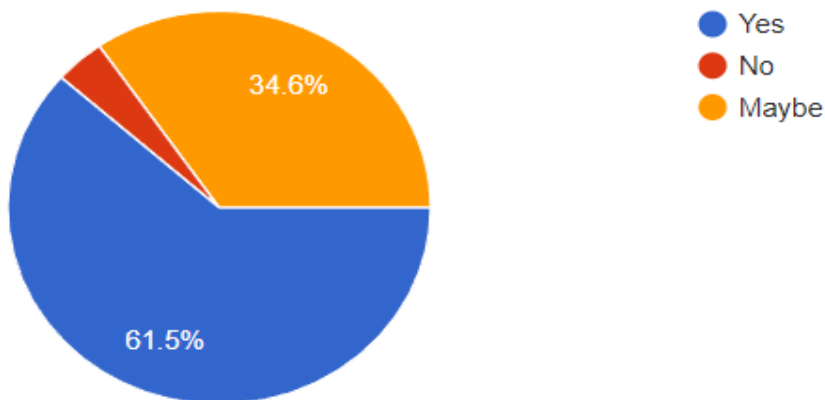
➤ **How effective do you think safety devices are in preventing harm?**

When assessing the perceived effectiveness of safety devices in preventing harm, responses varied. A majority (52.8%) considered them to be moderately effective, while a significant portion (30.2%) viewed them as somewhat effective. A smaller yet notable percentage (7.5%) regarded safety devices as very effective, while a minority (5.7%) expressed skepticism, stating they were not at all effective. Conversely, a fraction (3.8%) held a high level of confidence in safety devices, deeming them extremely effective.



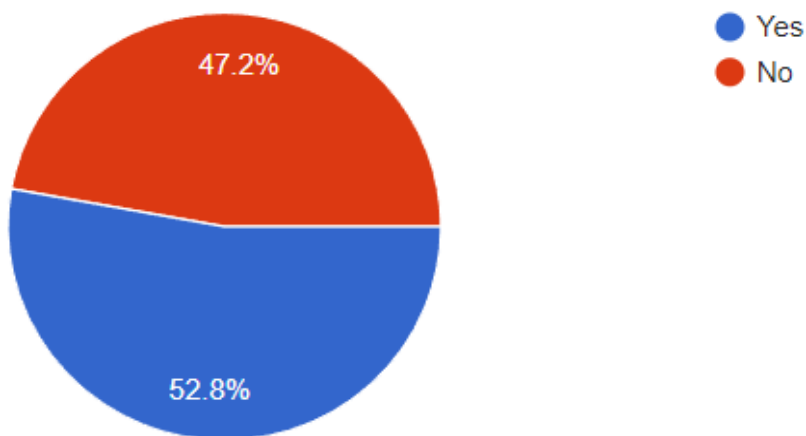
➤ **Would you be more likely to use a safety device if it were: more discreet/ fashionable, easier to use, and more affordable?**

Most respondents (61.5%) showed a strong preference for using safety devices if they were more discreet, fashionable, easier to use, or more affordable. Another sizable group (34.6%) indicated potential interest, while only a small minority (3.8%) felt these factors wouldn't affect their decision.



➤ **Have you ever received safety tips or information about available devices?**

When asked about receiving safety tips or information regarding available devices, responses were split. A slight majority (52.8%) indicated they had received such information, while a significant portion (47.2%) reported not having received any.



➤ **Do you have any additional comments or suggestions regarding safety devices and their use by women?**

The responses reflect varied opinions and suggestions regarding safety devices for women. Some respondents emphasize the importance of raising public awareness about these devices and making them affordable for all. Others highlight the need for convenience and accessibility of safety tools. Suggestions

include integrating safety features into mobile phones, promoting self-defense training, and increasing awareness about the available options. Overall, the responses underscore the significance of educating and empowering women to use safety devices effectively in various situations.

8. DISCUSSION

Several suggestions have been made to enhance the functioning of smart safety devices, based on what the participants described as their expectations: automated alarm, audio and video recording, GPS tracking, aid signals such as flashlight, electric shock, and so forth. In addition, these expectations were separated into three groups: assistant, defense, and assault functions. In actuality, there are more smart safety devices with assistant features than those with attack and defense capabilities, particularly those with GPS locations. The incapacity of people to react promptly to catastrophes led to the promotion of wearable technology, such as "smart bands," by several researchers. These devices integrate several functions and link smartphones to the internet. More precisely, it can transmit a plea for assistance along with its position coordinates to the closest police station, family members, and neighbors. It can also access messaging and GPS services. In my opinion, gadgets with assistant features are rarely able to help people in times of need because a lot can go wrong in the interim between situations where assistance is needed. A few responders brought up assault features like liquid chemical spray and electric shock, which are better in an emergency since they save time. It's possible, nevertheless, that the victim will unintentionally incur injury. Among the brilliant ideas offered by the participants for superpower self-defense were sprinting swiftly, moving them away, and making users invisible in an emergency. The risks associated with smart safety devices are still debatable, even though cities are implementing a range of smart features to increase security and safety. Making users invisible, for instance, seems like a workable answer to safety and monitoring problems. This feature could, however, also present a new challenge: if criminals utilize these solutions, it will be impossible to identify the perpetrators of theft or murder, let alone figure out how to protect specific people.

9. CONCLUSIONS

The results of the study show that although residential and commercial zones are frequently around crime hotspots in urban regions, women nevertheless feel safer there, especially if commercial land borders the area. Furthermore, women's perceptions of safety may be enhanced by intelligent surveillance systems.

These findings point to methods for enhancing women's safety, including putting sensible traffic planning into practice and stepping up the presence of patrol officers. The survey results do, however, also show that there are a variety of context-dependent and multidimensional elements that affect women's adoption of safety gadgets. These choices are influenced by a variety of factors, including past violent experiences and social standards, but technology is also changing. Therefore, to guarantee that safety measures adequately fulfill women's requirements, academics, and urban planners must continue to pay attention to changing settings and obstacles.

Several strategies can be implemented to encourage women to use safety gadgets more often, even in the face of obstacles. These include:

- Educating women on the dangers of violence and the efficacy of safety measures. Education projects, community involvement programs, and public awareness campaigns can help achieve this.
- Making safety equipment more affordable and accessible. This could include subsidizing safety equipment or making them more widely available, such as in schools and community centers.
- Disrupting cultural practices that condone violence against women. This could include increasing awareness about the problem and lobbying for changes in laws and practices.
- Supporting women who have been victims of violence. This can involve offering therapy and other services, as well as aiming to avoid future violence.

Women will find it easier to travel fearlessly because this is a significant issue in our culture that needs to be addressed right now to control and bring about change. However, true shifts in people's perspectives can be purchased. This will continue until people's thoughts change; but, if people's ideas change gradually, society will undergo a vast and massive shift, and women will feel secure at all times.

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