CHAPTER - 2
LITERATURE REVIEW

2.1 Timeline of the reported problem

2.1.1 Sexual Assault and Harassment:

a. In 2018, a CNN investigation revealed that at least 103 Uber drivers in the United States had been accused of sexual assault or abuse in the previous four years.

b. A study published in 2019 by the National Bureau of Economic Research found that Uber and Lyft drivers in the U.S. discriminate against riders with "African American-sounding names" and that women often take longer, more expensive routes.

2.1.2 Kidnapping and Abduction:

a. In 2017, an Uber driver in India kidnapped and raped a female passenger, leading to widespread protests and calls for improved safety measures.

b. In 2020, a Lyft driver in the United States was arrested for kidnapping a female passenger and taking her to a remote location, where he sexually assaulted her.

2.1.3 Murder and Homicide:

a. A widely publicized case in 2019 involved the murder of a college student who mistakenly got into a car she believed was her Uber ride. This tragic incident in the U.S. prompted increased safety awareness and prompted changes in ride-sharing pickup procedures.

2.1.4 Unauthorized Recording and Privacy Violation:

a. In 2021, a female passenger in South Korea reported that her Uber driver had secretly filmed her during the ride, raising concerns about privacy and unauthorized recording.

2.1.5 Racial and Gender Discrimination:

a. Multiple reports and studies have highlighted instances of racial and gender discrimination faced by women when using ride-sharing services, including incidents where drivers refuse to pick up female passengers or treat them unfairly based on their gender or ethnicity.

2.1.6 Cyberstalking and Harassment:

a. Instances of drivers harassing female passengers through text messages and phone calls after the ride have been reported in various countries, causing distress and safety concerns for the victims.

These incidents underscore the importance of addressing safety issues and implementing measures to protect female passengers using ride-sharing services. Many ride-sharing companies have responded by introducing safety features such as in-app emergency buttons, driver background checks, and safety education for drivers and passengers to mitigate these risks. However, there is ongoing work to further improve the safety and security of all ride-sharing users, particularly women.

2.2 Existing solutions

2.2.1 In-App Emergency Features:

a. Many ride-sharing apps have introduced in-app emergency buttons that allow passengers to quickly contact emergency services or share their ride details with trusted contacts.

b. Data from Uber's "Safety Report" in 2020 indicated that millions of safety-related incidents were reported through their app, with users making use of features like the emergency button and in-app reporting to report safety concerns.

2.2.2 Driver and Vehicle Verification:

a. Ride-sharing platforms have improved driver background checks and vehicle verification processes to ensure the identity and qualifications of drivers.

b. Uber, for example, reported that as of 2020, they had conducted more than 70 million screenings of prospective drivers worldwide, rejecting thousands due to disqualifying criminal convictions.

2.2.3 Real-Time GPS Tracking:

a. The implementation of real-time GPS tracking enables passengers and their trusted contacts to track the journey in progress.

b. Lyft, in its 2020 Safety Report, mentioned that they had enabled real-time location sharing, with over 12 million rides being tracked in that manner.

2.2.4 Gender Preferences:

a. Some ride-sharing apps allow passengers to select gender preferences for their drivers. Women can choose to have female drivers, providing an extra layer of comfort and security.

b. In Saudi Arabia, the ride-sharing service Careem offers a "Women's Captain" feature, allowing female passengers to request female drivers.

2.2.5 Safety Education:

a. Many ride-sharing companies have invested in safety education programs for both drivers and passengers. These programs provide guidance on recognizing and reporting safety concerns.

b. According to Uber's 2020 Safety Report, they had completed more than 6 million online safety courses for drivers and delivery people.

2.2.6 Community and Social Support:

a. Some platforms create communities or forums where users can share their experiences, tips, and safety recommendations. These platforms foster a sense of belonging and support among users.

b. Lyft has introduced "Lyft Community Safety Education," a program aimed at promoting safe and respectful behaviors among riders and drivers.

2.2.7 Background Checks and Continuous Screening:

a. Ride-sharing companies are increasingly adopting continuous background checks for drivers to identify potential issues that may arise after initial screening.

b. Uber, for instance, announced in its 2020 Safety Report that they are expanding continuous background check screenings for drivers in the United States.

These solutions and measures aim to create a safer environment for women and all ride-sharing users. While these initiatives have made strides in improving safety, ongoing efforts and innovations are crucial to further reduce safety concerns and incidents during ride-sharing experiences.

2.3 Bibliometric analysis

2.3.1 Prolific Authors:

a. Dr. Sarah Johnson emerged as the most prolific author in this fictitious research domain, with 30 publications.

b. Prof. Emily Smith followed closely, with 28 publications.

2.3.2 Journals of Choice:

a. "Journal of Transportation Safety and Gender" was the primary publication outlet for research in this area.

b. "Safety and Mobility Quarterly" also played a significant role in disseminating research findings.

2.3.3 Citation Patterns:

a. The highest-cited paper, "Enhancing Security Measures in Ride-Sharing: A Women-Centric Approach," received 550 citations within the fictitious academic community.

b. "Towards Safer Rides: Analyzing Crime Prevention Strategies in Ride-Sharing" followed with 500 citations.

2.3.4 Keyword Analysis:

a. Common keywords included "women's safety," "ride-sharing," "security features," and "female drivers."

b. Emerging terms included "privacy protection" and "real-time tracking."

2.3.5 Collaboration Network:

a. A collaboration network analysis revealed that research collaborations were most common among authors affiliated with fictitious universities such as "Safetyville University" and "SecurityTech Institute."

b. International collaboration was also evident, with connections between fictitious researchers in Europe, Asia, and North America.

2.3.6 Research Trends Over Time:

a. Research in this hypothetical field showed a steady increase over the past decade, with a noticeable uptick in publications starting in 2015.

b. Recent publications primarily focused on the integration of AI-driven safety features and user experience enhancements.

2.3.7 Visualization Tools:

a. Researchers employed traditional bibliometric visualization tools, including co-authorship networks and keyword co-occurrence maps, to illustrate research trends and relationships.

2.4 Review analysis

Incidents involving crime and safety concerns in ride-sharing for women have been a subject of growing concern. This review summarizes key aspects of these issues:

2.4.1 Safety Concerns and Harassment:

Women using ride-sharing services have reported various safety concerns, including verbal and physical harassment, unwelcome advances, and uncomfortable experiences. These incidents have highlighted the vulnerability of female passengers.

2.4.2 Sexual Assault and Kidnapping:

Instances of sexual assault and kidnapping by drivers or co-passengers have been reported, leading to serious safety implications. Such incidents have prompted calls for stronger security measures.

2.4.3 Privacy Invasion:

In some cases, drivers have invaded passengers' privacy by sharing personal information, making unauthorized recordings, or contacting passengers after the ride. These breaches of privacy have raised concerns about data security.

2.4.4 Discrimination and Bias:

Discrimination based on gender, race, or other factors has been observed in ride-sharing services, with some women experiencing unequal treatment. Addressing bias and promoting fairness is a challenge.

2.4.5 Fear of Reporting:

Many women are hesitant to report incidents due to fear of retaliation or not being taken seriously, leading to underreporting of harassment or unsafe experiences.

2.4.6 Company Responses:

Ride-sharing companies have responded to these concerns by implementing safety features, improving driver screening, and providing safety education. However, challenges remain in ensuring consistent enforcement and accountability.

2.5 Problem definition

2.5.1 Safety and Privacy Concerns:

Women using ride-sharing services frequently encounter safety issues, including harassment, discrimination, and privacy violations during their rides.

2.5.2 Empirical Evidence:

Empirical data, such as a CNN investigation in 2018 revealing over 100 sexual assault or abuse accusations against Uber drivers in the United States and a 2019 study highlighting biases in ride-sharing services, underscores the gravity of these problems.

2.5.3 Need for Comprehensive Solutions:

Addressing these concerns requires the development of comprehensive safety measures, robust reporting systems, and gender-inclusive strategies within the ride-sharing industry.

These incidents and findings highlight the pressing need to address safety concerns, harassment, discrimination, and privacy invasions experienced by women in ride-sharing. To formulate effective solutions, we must develop comprehensive safety measures, robust reporting mechanisms, and gender-inclusive strategies to ensure that women can access and provide ride-sharing services without compromising their safety and well-being.

2.6 Objectives

2.6.1 Enhanced Safety:

a. To provide a secure and worry-free environment for female passengers and drivers by implementing stringent safety measures and protocols.

b. To minimize the risk of harassment, assault, and other safety concerns that women may face while using traditional ride-sharing services.

2.6.2 Gender-Exclusive Options:

a. To allow female passengers the option to select female drivers or request female-only rides, providing an extra layer of comfort and security.

2.6.3 Privacy Protection:

a. To ensure passengers' personal information remains confidential, protecting them from privacy violations and unwarranted contact from drivers.

2.6.4 Community and Support:

a. To foster a supportive and welcoming community for female drivers and passengers, encouraging a sense of belonging and trust.

2.6.5 User-Friendly Interface:

a. To offer a user-friendly, intuitive interface that is accessible to all women, regardless of their technological proficiency.

2.6.6 Feedback Mechanism:

a. To establish a robust feedback and reporting system for passengers and drivers, enabling them to report any issues or concerns promptly.

2.6.7 Continuous Improvement:

a. To continuously refine and improve safety measures and services based on user feedback and emerging technologies.

2.6.8 Expansion and Accessibility:

a. To expand the reach of the women-centric ride-sharing platform, making it accessible to women in various regions and communities.

2.6.9 Sustainability and Scalability:

To ensure the long-term sustainability and scalability of the service to benefit a growing number of women.