Safety Interventions for Women in Urban Public Transport of South Asia: A Systematic Review and Synthesis

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Abstract

Literature has documented how women's mobility in the global South is limited by affordability concerns, sociocultural restrictions, and fear of sexual violence in public transport. Violence against women (VAW) and gender-based violence (GBV) are not only key public health challenges but also constitute human rights violations, impacting women's access to healthcare, education, and employment

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opportunities. Growing recognition of this challenge has led to a plethora of interventions and measures to make women feel safer. This chapter presents a systematic review, examining interventions that have shaped women's safety in urban mobility across six South Asian countries. A three-stage screening process of online, English language academic, and gray literature yielded 57 articles that met the inclusion criteria for this review. Results were classified into five categories (technological solutions, women-only services, built-environment design, social activism & legislative changes, and mixed approaches), and the evidence around their impact on women's safety was analyzed. Overall, there is a strong rationale for integrated interventions that complement and reinforce each other. By utilizing the insights provided in this chapter, policymakers and urban planners can effectively design gender-responsive transport in South Asia and beyond, serving as a means to reduce GBV and minimize the significant negative health impact experienced by women and girls.

Keywords

Women · Safety · Mobility · Public transport · South Asia · Sexual harassment

Introduction: Gendered Mobilities, Safety, and Health—The Missing Link

With women's increased participation in the labor market and their undeniable contribution to the economy, the need to ensure their safe mobility has garnered the attention of policymakers and governments, civil society organizations (CSOs), and feminist activists. Across the world (Moser, 2012; Gekoski et al., 2015; Fulu et al., 2014; Ding et al., 2020). One of the major barriers to women's mobility, globally, is their concern for sexual safety in public spaces. Previous research has established that women harbor anxiety and a 'geography of fear' while traveling in public transport (Valentine, 1989; Koskela & Pain, 2000). An international survey by Cornell University (2015) across 42 cities around the world confirms about 80–90% of women experience harassment in public spaces, including transport. Women commuters remain at constant risk of sexual harassment and/or violence during their commutes, including when waiting at bus stops, boarding and inside the bus, and walking to and from their homes (Anand & Tiwari, 2006; Tripathi et al., 2017). Notably, three cities in South Asia (namely, Karachi, Delhi, and Dhaka in order of ranking) are among the top ten most dangerous cities for women (Thomson Reuters Foundation, 2017) owing to high prevalence of VAW and GBV (WHO, 2021).

Research suggests that harassment in public spaces stems from men's refusal to accept the change in power dynamics, within the household and society (Banks, 2013). As women increasingly participate in the public domain (in pursuit of education or livelihoods), there is a higher likelihood of experiencing harassment and victimization due to transgressions of conservative prescriptions around gendered mobility. Moreover, sexual harassment in transport is commonly normalized

and trivialized by social power holders in South Asian geographies (Uteng, 2012; Mowri & Bailey, 2022), owing to harmful male gender norms. This, coupled with practices of victim-blaming (Phadke et al., 2013), deter most women from reporting their experiences of harassment. Additionally, overcrowded vehicles and/or desolate settings, ambiguity surrounding the criminalization of harassment (Ding et al., 2020), and fleeting interactions with anonymous aggressors (Lewis et al., 2020) further aid in concealing harassment.

By recognizing the impact of VAW and GBV on women's mobility, the goal of ensuring safe and inclusive public spaces goes beyond mere accessibility. When women experience sexual violence or harassment as a daily occurrence, it limits their mobility and freedom of movement. They adopt changes in lifestyle and mobility such as not going out after dark, always traveling in pairs or with male partners, underplaying their appearance and sexuality, and wearing markers of 'respectability' (e.g., *sindoor* worn by Hindu married women along the parting of their hairline), among other strategies (Viswanath, 2013; Bhattacharyya, 2016; Phadke et al., 2013). The long-term implications are also significant. By foregoing opportunities that require extensive travel, women drop out of the labor market or settle for lower-ranked colleges (Borker, 2020) leading to an overall decline in human capital attainment. Sexual violence and harassment can have severe psychological and physical repercussions, causing trauma, anxiety, and stress among survivors. Furthermore, the fear and anticipation of unsafe public spaces can further hinder their access to essential health services, including services related to abuse, rape, sexually transmitted infections, unwanted pregnancies, and reduce overall well-being (Glazener et al., 2021). Acknowledging this, stakeholders have come up with numerous interventions that range from physical solutions and design interventions to technological solutions, to social activism and awareness-raising campaigns, and even gender-segregated transit options. However, there has been no systematic research to understand which interventions have proved effective (or ineffective) in the South Asian context, and for what reasons.

This chapter aims to systematically review and synthesize approaches that have been used to address women's safety in urban public transport infrastructures in six South Asian countries (i.e., Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka), and assess whether they have been effective or not in addressing women's safety on public transport and why. Finally, based on the assessment of existing approaches and interventions it provides recommendations for policy and practice.

Methodological Blueprint

The review adhered to the PRISMA guidelines (Moher et al., 2009), and the PICO keywords and search terms used for the review can be found in Table 2 of Appendix A. It is important to note that search terms specifically related to gender-diverse people were not included. The review focused on evaluating the effectiveness of interventions designed to enhance safety for women in urban settings. After an initial search covering all low- and middle-income countries (LMICs), the selection was

Table 2 PICO keywords and search terms for Systematic Review

PICO elements	Keywords	Search terms
Population	Women in South Asia	"Wom?n" OR "Working wom?n" OR "Informal lab$r" OR "girl$"
Interventions	Safety Interventions in mobility	"Gender-responsive" OR "gender-neutral" OR "Gender- Sensitive" OR "Inclusive mobility*" OR "inclusive Cit*" OR "Infrastructur* improvement $" OR "Transport" OR "Bystander intervention$" OR "community mobilization" OR "curfews" OR "women*only" OR "women-only spaces", OR "communication campaign$" OR "Training$ for perpetrator$" OR "surveillance" OR "neighbor* watch" OR "collaborat* with police" OR "local government" OR" gender-sensitive program*" OR "Safety intervention$"
Outcome	Effectiveness of interventions in increasing safety (and perception of safety), reducing VAW, reducing fear	"perception$ of safety" OR "Sexual Offense" OR "Violence against Women" OR "VAWG" OR "Eve-teasing" OR "Rape" OR "Harassment" OR "Sexual assault" OR "mobility" OR "right$"
Context Region	Lower middle-income countries in South Asia	"LMIC" OR "Low* Middle Income" OR "Bangladesh" OR "India" OR "Pakistan" OR "Nepal" OR "Srilanka" OR "Bhutan"
Context Location	Public Transport	"public mobility" OR "public space" OR "transport infrastructure" OR "public domain" OR "public*" OR "bus*" OR "walk*" OR "Street$"

subsequently filtered to those that focused on public transport in six SA countries. Studies examining road safety, rural infrastructures, and other types of violence in public transportation, such as graffiti, theft, and vandalism, were excluded from the analysis. The literature search encompassed baseline and end-of-project reports, critical commentary, empirical studies, and desk reviews. Both peer-reviewed literature and gray literature were considered. Additionally, the bibliographies of included studies were examined to identify additional relevant articles. No restrictions were imposed on the publication dates of the studies or the age of the participants.

A systematic search of electronic databases namely SCOPUS, Web of Science, PUBMED, Transport Research International Documentation (TRID), OECD Library, PROQUEST, Mobility of Cities, and Sustainable Urban Transport Project (SUTP) was conducted between September 2020 and November 2020. This

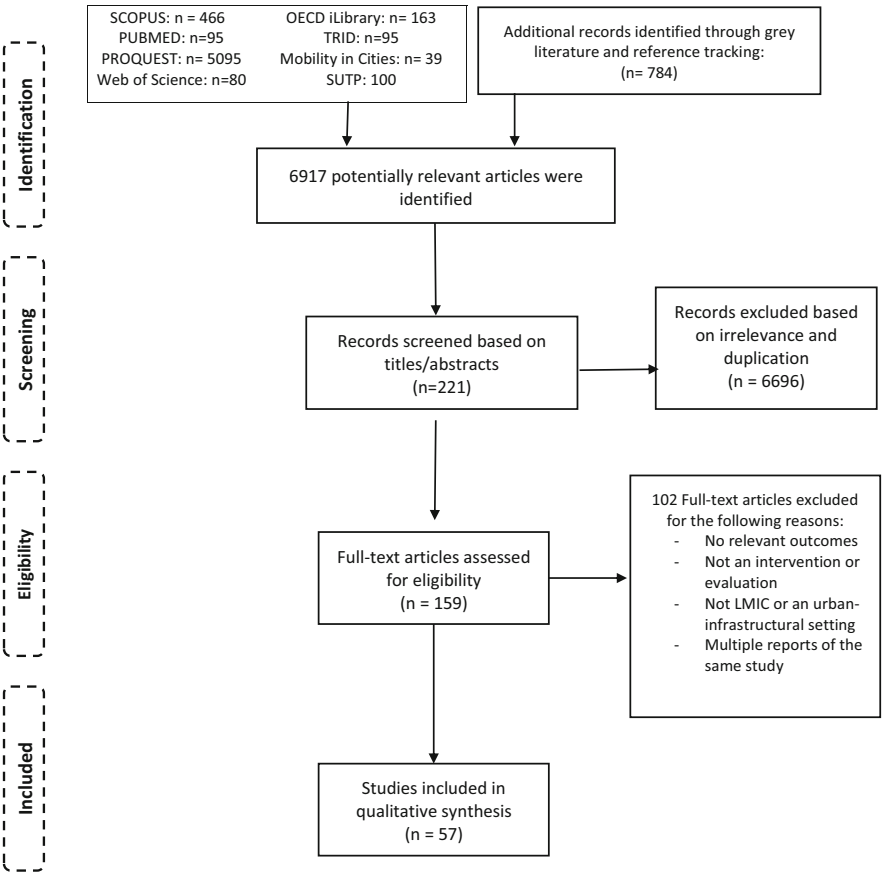

Fig. 1 PRISMA Flowchart

identified 6133 studies, that were screened based on title, abstract, and full text. A search of gray literature on Google Scholar yielded 91 references. This was further supplemented by a scan of organizational websites of programs that work on women's safety such as ActionAid, Oxfam, Women in Cities International, Jagori, and UN Women.

Screening was undertaken based on title and abstract by the first author using Covidence software, and dilemmas were resolved through discussions with two project researchers. This was followed by a full-text screening based on inclusion/exclusion criteria (interventions focusing on women in an urban context), with an outcome of improving safety in the six South Asian countries. This yielded 57 papers, as shown in the PRISMA Flowchart (see Fig. 1). The data extraction form was adapted from the Cochrane Handbook for Systematic Reviews of Interventions (Green & Higgins, 2009), and key information from each article (e.g., author(s), title, date of publication, type of source, country, method, and summary)

was extracted and summarized. Critical Appraisal Skills Programme (CASP) checklist (2018) was used to assess the quality of studies, with the synthesis weighing in favor of findings from studies determined to be of a higher and moderate quality. The Gender Responsiveness Assessment Scale (GRAS) (WHO, 2010) was used to categorize the interventions in terms of their gender-responsiveness. Common threads emerged across the multidisciplinary body of work reviewed (encompassing gender studies, criminology, transport planning, psychology, architecture, sociology, geography, etc.)., which were further synthesized in a narrative review.

Harvesting Insights

Although no exclusionary time limits were applied, the results showed that interventions for women's safety in public transport are a rather new field of research. Since 2009, there has been an increase in the number of studies on South Asia. A possible explanation for this can be the Delhi Declaration, an international conference on women's safety, held in New Delhi in 2010 which encouraged renewed attention and commitment to inclusive cities. Regionally, most studies were from India (n = 36), followed by Bangladesh (n = 8), Nepal (n = 7), Pakistan (n = 4), and Sri Lanka (n = 1). A few studies encompassed more than one South Asian country (n = 7).

The interventions identified in the review were grouped into five categories based on their commonalities of approach and purpose: Technology (16), Environmental-design (5), Women-only transport (9), Activism cues for legal reforms (16), and Mixed-approaches (that span the micro, meso, and macro levels of the ecological model, targeting individuals, households, and communities simultaneously) (12). Important to note, the categorizations are not rigid, and the review recognizes that interventions could cut across these categories, or even evolve over time from one approach to another. For each category narrated below, existing evidence and current debates rendering its effectiveness have been synthesized. A sample of interventions, year, and country of implementation is included for a quick reference in separate boxes. The section concludes by assessing the limitations of this inquiry and how this review paves the way for future research directions.

Technology-Based Solutions

The utilization of mobile apps or online platforms for reporting incidents of violence creates a crucial safe space for women to document their experiences, connect with other survivors, and access support services. The availability of technological solutions that facilitate such engagement is expanding, particularly among younger populations, as the evaluations note (refer to Box 1).

Box 1: Technology-based solutions

- Web and mobile apps
  - [*Protibadi, Bhai Thamen*) [*Bangladesh*]
  - *My Safetipin* (2013) [*India*]
  - Panic button on smartphones [*India*]
  - *'Ting'*: application for sharing personal and device information amongst social circles [*India*]
  - Fightvaw.org [*Nepal*]
  - *Circle of 6* (2013) [*Pakistan*]
- GIS-based location tracking apps
  - *Safe Path Recommender* [*India*]
  - *On the Spot*: Location-based Alarms and Location-based Reminders [*India*]
  - *Sachetan:* A Crowdsource-Based Personal Safety Application [*India*]
- Smart device/wearables
  - *Ring:* Smart Device for stalker detection [*India*]
  - *Suraksha* Women Safety Device and Application [*India*]
  - *ProTecht*—Implementation of an IoT based 3—Way Women Safety Device [*India*]
  - *Electronic Jacket*-GSM, GPS, memory card, shock circuit, buzzer, camera(2018) [*India*]

Globally, there has been an eightfold increase in digital app development rates between 2010 and 2018; 45 out of 171 (26%) apps designed to prevent VAW had their location of initiation in South Asia (Eisenhut et al., 2020). Most articles on digital apps designed to increase women's safety originate from India, signifying renewed attention to women's safety since the much-publicized brutal rape case of a woman in a public bus in 2012 (Taneja, 2019). A systematic review of these apps by Eisenhut et al. (2020) found that the majority were developed by the private sector (77%) and 47% of them were designed to respond to emergency situations. Experimentations with wearable technological products such as smart jackets, equipped with various sensors (GPS tracking, built-in alarms, and connectivity to mobile devices or emergency services) also demonstrate an emerging consumer market catering to women's safety concerns (Hebbar et al., 2017; Jain et al., 2019, Table 1).

A feminist analysis by Marathe and Condliffe (2019) suggests that apps can be empowering or paternalistic depending on the method of engagement and participation. See Table 1 for a categorization of applications. Some of the apps with reporting and supporting functions seek to empower women by connecting them to local authorities, whilst taking stock of user accounts for retrospective data collection and relying less on real-time GPS monitoring. In contrast, emergency apps and panic button features reflect a paternalistic approach through constant monitoring and surveillance (Whitzman, 2012; Phadke et al., 2009). Soni (2016) suggests that this implies that women must embody a state of hyper-alertness at all

Table 1 Women's safety app categorization. (Derived from Eisenhut et al., 2020, Viswanath & Basu, 2015)

Emergency apps (47%)	Enables the user to inform contacts, including the police, if they are in distress
Education apps (21%)	Raises awareness on rights, unacceptability of violence, and gender equality
Reporting and evidence-building apps (14%)	Collects geospatial data on infrastructure conditions of public spaces through digital audits submitted by users. Produces safety reports and interactive maps of the city
Supporting apps (12%)	Connects the user with relevant organizations for redressal, grievance
Avoidance apps (6%)	Predicts safe routes by clustering crime-prone areas using crime event historical data

times, and not traverse the city without their safety apparatus. Both Marathe and Condliffe (2019) and Soni (2016) argue that while some users may interpret safe/unsafe spaces on a map as useful information, others disapprove of the surveillance and control by friends and family as 'digital chaperones' (Kalms & Korsmeyer, 2017).

Taking an intersectional lens, studies highlighted that many of these apps did not cater beyond the educated middle-class population in big cities. Affordability concerns over SMS charges and in-app purchases were cited as being exclusionary for low-income women. This is significant since countries in South Asia, as in other parts of the world, still grapple with significant economic and gender gaps in ownership, access, and use of mobile technology (LeFevre et al., 2020). Moreover, with over 26 languages spoken in India, an emergency app was found to only be operational in Hindi and English, limiting usability across the wider population (Manazir et al., 2019).

While some apps allow anonymous reporting, apps that require users to provide personal details when filing complaints make reporting difficult, uncomfortable, and ineffective since it rarely leads to the prosecution of offenders. Moreover, penalties for street harassment in South Asia are minor, which further discourages victims from reporting (Williams et al., 2020).

The very design of interventions like the panic button and emergency helplines (Jagori & MARG, 2013) rely on the effective coordination of multiple stakeholders (police, infrastructural support, transport, and health authorities). The evaluation of a safety app in Pakistan showed that the number of active users declined dramatically within three years of its launch due to users' lack of trust in complaints being followed up. Similarly, ActionAid's (2014) survey in Bangladesh depicts that around 60% to 80% of women commuters believed that the police would trivialize their complaint of harassment and/or blame the victim. Other than distrust, Karusala & Kumar (2017) using a feminist human-computer interaction (HCI) framework) point out that the panic button is flawed in design and misaligned with women's values because it presumes how and where sexual assault *generally happens* which can be ignorant of women's experiences of (un)safety:

> Participants explained that a phone is not always easily accessible in an emergency because it could be hidden in their handbag or out of their reach. . .From when a women [sic] starts to feel unsafe and is then confronted with an actual threat, the panic button intervenes too late in the timeline, making it little more than a reactionary tool. . . However, other participants were more concerned that using the panic button any earlier in the stages of escalation would be problematic because the situation might not escalate, resulting in embarrassment if the police were to arrive for no reason.

In summary, practitioners emphasize the importance of ensuring that the reporting pathway is both clear and accessible to women (Williams et al., 2020), so that technology-based solutions can be used to gather micro-level data, hold authorities accountable, and drive long-term macro-level policy change. The analysis finds that, without addressing external factors that influence women's safety, technology as a standalone gender-blind intervention has a limited impact in ensuring the sexual safety of women in public transport.

Built-Environment and Design Interventions

According to the theory of Crime Prevention through Environmental Design (CPTED), the very design and management of the physical environment has the potential to encourage or discourage opportunities for crime (Cozens et al., 2003). Majority of the literature on design and planning interventions (see Box 2 for a list of relevant interventions) focuses on big cities, that have a record of being particularly unsafe for women, such as Karachi, Lahore, Dhaka, Kathmandu, Delhi, and Mumbai. Dimly lit bus stops, inadequate pedestrian infrastructure, the absence of safe sanitation facilities and rest areas for older women, women with disabilities, children, and pregnant women indicate the lack of gender-sensitivity in designing urban public spaces. This oversight can have negative repercussions on women's sexual safety and overall well-being (Ahmad et al., 2019; Louikatou-Sideris, 2006).

To identify improvements in urban planning and design, safety audits are a popular diagnostic tool that work by allowing participants to identify safe and unsafe spaces (Jagori, 2010; Whitzman et al., 2009; Viswanath & Basu, 2015; ActionAid 2011; Bhattacharya, 2016). As one of the earliest advocates for this intervention, Whitzman et al. (2009, p. 215) claimed that safety audits offered 'piecemeal transformation of both urban space and public participatory practices' by enabling participants to translate their situated knowledge of navigating insecurity into specific recommendations for tangible actions.

Box 2: Built-environment and design interventions

- Infrastructural design
  - Streetlights
  - Pedestrian walkways

(continued)

Box 2 (continued)
- Rest areas
- Public toilets
- Cleanliness and good maintenance of transit stop/platform

• Visibility/ eyes on the street
- CCTV surveillance
- Well-lit bus stops and streets

For instance, UN Women's (2017) report on safety audit of transport services in Pakistan found that women consistently ranked the lack of proper toilet facilities as a major risk factor while traveling since they would be forced to plead with roadside restaurants and shopkeepers to let them use their toilets, putting them at heightened risk of victimization or assault. Studies have shown the connection between open defecation and the risk of sexual violence, "[non-partner sexual violence] is twice as common among women using open defecation than it is among women using toilets" (Jadhav et al., 2016, p. 4). On that note, infrastructural improvements such as public toilets can potentially lower the risk of VAW and allow women to travel without 'holding it in' for long commutes, which can have adverse health consequences.

Another built-environment measure that this review explores is 'visibility': seeing others and being seen. An often-cited recommendation for increasing visibility is to improve lighting at bus stops and train stations, and reconfigure public spaces to promote mixed usage (targeting families, couples, shops, street food vendors, etc. to dilute 'dominant men spaces') (Mahadevia et al., 2017; Mahadevia & Lathia, 2019; Grover, 2016). Several studies also emphasize the importance of having 'eyes on the street' at all times to deter crime and ward off potential perpetrators (Phadke et al., 2013; Verma et al., 2017), making the case for surveillance cameras placed on street corners, arterial roads, at bus stops and inside buses. However, empirical research points to concerns over the maintenance of cameras and the extent to which they remain operational over time (Jagori, 2010; Jagori & UN Women, 2011). To further nuance, Soni (2016) criticizes ♥e to limit, track, and monitor women's movement and freedom since CCTV cameras are mostly used to investigate crimes than prevent them.

Overall, interventions that temper with the built environment design, such as the safety audit, can be transformational as it empowers women to be at the center of decision-making "by co-creating or leading the design and implementation of data collection" (ActionAid, 2011, p. 14). Moreover, infrastructural improvements are often macro-level changes, that have spill over benefits at scale. By improving walkability, sanitation, and visibility, these interventions have the potential to significantly boost the confidence, comfort, and safety of women in urban public spaces.

Segregated Transport Provision

Existing literature on women's safety consistently highlights the widespread popularity of women-only transport services in South Asian countries (Harrison, 2012). These services include designated seats on public buses, women-only compartments in metro systems, and ride-sharing services specifically provided by women for women (see Box 3).

Box 3: Women-only transport services

- Reserved seats/compartments
  - Ladies compartment [Delhi Metro] [*India*]
  - Reserved seats in public buses [*India, Pakistan, Bangladesh, Nepal*]
- *Women friendly rides*
  - *Ride-sharing motorbikes:* Lily Bikes (2018), Shohoz Bikes (2018) [*Bangladesh*]
  - *The Pink Auto Service* (a partnership between the Surat Municipal Corporation (SMC) in Gujarat and Bank of Baroda [2017]) [*India*]
  - '*Tejaswini*' (Maharashtra) Bus Service driven and conducted by women; reserved for women passengers [2018] [*India*]
  - Pink Rickshaws (2013) [*Pakistan, India*]
  - ForShe Taxis (2013) and Sakha Cabs/Women with Wheels (2008) [*India, Pakistan*]
  - Women-only public transport between Islamabad and Rawalpindi (2017) [*Pakistan*]

Several studies investigate experience with the 'ladies' compartments' of the Delhi Metro in India using participatory observation and qualitative interviews with women passengers (Khurana, 2020; Gopal & Shin, 2019). They note that these compartments afforded commuters a sense of relief from the otherwise hyper-alert state of mind, and encouraged a shift in travel behavior: from dependence (on male chaperones) to individual autonomy, enhancing their confidence and ownership of space. Some of the instances observed were commuters sharing a mobile screen to watch television shows and intergenerational conversations between older and younger women, reflecting a friendly ambiance. In India and Pakistan, several services targeting female commuters with female operators (ForShe Taxis and Sakha Cabs, Pink Rickshaws) were launched, which not only provided women with income-generating options but also safer mobility passages for commuters (GIZ, 2018). However, there exists almost no academic documentation of their successes or challenges, other than a few newspaper articles.

Despite the popularity of segregation interventions, Gekoski et al. (2015) argue that segregation is only a temporary solution to a bigger problem since it continues to place the responsibility on women to avoid being abused rather than triggering behavioral change among perpetrators. Peters (2013) claimed that although

segregating may be appropriate in certain contexts, it only serves to spatially delay the occurrence of violence, and not necessarily prevent it. The underlying principle of women-only spaces assumes (an otherwise) implicit maleness of the rest of the space. Khurana (2020) notes that many of the participants in his study mistakenly referred to the general coach as the 'men's coach' in several interviews, only to correct themselves later. Similar thoughts were echoed in studies from Bangladesh and Nepal (Rahman, 2010; The World Bank, 2013). Empirical studies quote considerable backlash from men over the allocation of designated seats in buses giving women 'preferential treatment', further marginalizing women within the bus (BRAC, 2017; The World Bank, 2013).

Given that segregated space provisions are often macro-level interventions, they remain plagued with implementation challenges related to unavailability, high operational costs, poor maintenance, and petty theft (Haider, 2017). A study on Bangladesh's women-only buses points out the insufficient buses on limited routes that remain inactive for most parts of the day, inadequate space within the vehicles, poor seating conditions, water leakage through the roofs during rainfall, jammed windows, and insufficient ventilation (Rahman, 2010). According to a GIZ study conducted in 2018 in Bangladesh, India, and Pakistan, women-only services are not economically viable due to insufficient ridership throughout the day, and with services covering limited timings and commercial routes only, it left out working-class commuters working in informal sectors (Rahman, 2010; Uteng, 2012; Absar, 2000). Additionally, women-only solutions tend to marginalize transgender and other non-binary groups in the name of safety (Shah et al., 2017). As Phadke et al. (2009) highlighted, bodies that challenge the hegemonic expressions of femininity or the normative social order (referring to sex workers and lesbians who dressed in "butch attire" (p. 194)) encountered hostility in women-only spaces. In summary, although sex-segregated solutions provide some women with a safe mode of travel, it can also lead to contestations over their right to occupy general spaces on the train/bus, further reinforcing the patriarchal mindset of confining women within figurative and literal compartments of space.

Social Activism Cues Instigating Policy Interventions

This section discusses how social activism for women's rights in public spaces can bring about meaningful macro reforms for women's safety, manifesting in legal recourse, action plans, and commitments. See Box 4 for a relevant sample of interventions in the region that is telling of how women's safety and inclusion has always been a struggle against institutionalized patriarchal systems (Lochan, 2019; Tanuja, 2019; Zahan, 2020; Liddell, 2015). The literature reveals a repertoire of strategies (awareness campaigns, protests, alliance building) that activists deploy to amplify their voice and influence. The first group of interventions this section examines are street protests and demonstrations. Many of these protests involve women lingering, marching, or dancing on the streets during a protest, which is in itself disruptive and a flagrant reminder of how societies have normalized the

otherwise 'male-ness' of public spaces. An innovative campaign in Dhaka, that started off as a marketing tactic by a female entrepreneur wearing T-shirts in buses with printed statements like '*Ga gheshe daraben na'* (don't stand so close), invoked furious debates (and rape threats) on social media and offline (Mowri & Bailey, 2022). Hinging on the concept of being a 'body out of place' (Madison 2010) and challenging the tacit acceptance of VAW, these campaigns contradict the everyday scenarios of women moving about quietly, quickly, and purposefully, thereby rendering such interventions gender-transformative.

Box 4: Activism cues for legal reforms

- *Bottom-up activism*
  - T-shirt Campaigns on Public Bus (2019) [*Bangladesh*]
  - Feminists across Generations Coalition 10-point demand for rape law reform (2020) [*Bangladesh*]
  - Night-Vigil (2008) [*India*]
  - Nirbhaya agitations (2012) [*India*]
  - Pinjda Tod: Break the cage (2015) [India]
  - Slutwalk/Besharmi Mocha/Pink Chaddi [*India*]
  - Rage against Rape [*Nepal*]
  - Girls in Dhabas (2015) [*Pakistan*]
- *Awareness campaigns*
  - Breakthrough [*Global*] #BoardtheBus [*India*] #Shareyourstory [*Global*]
  - The Everyday Sexism Project and Stop Street Harassment [*Global*]
  - Blank Noise Project (2003) [*India*]
  - One Billion Rising (2014) [*India*]
  - Buzzfeed's photo campaign [*India, Srilanka*]
- *Reforms, declarations*
  - CEDAW by UN General Assembly (1979)
  - Montreal Declaration (2002)
  - Bogota Declaration (2004)
  - Delhi Declaration (2010)
  - New Urban Agenda (2016)
  - Code of Conduct (Nepal, 2010)

In trying to understand why some protests fail to build momentum, while others go on to bring about policy changes, the analysis turns to socio-political studies from India by Taneja (2019) and Lochan (2019) which examine two particular campaigns that occurred a year apart but yielded significantly different outcomes: Nirbhaya agitation and the Besharmi Morcha. During the Nirbhaya agitation, which was largely bottom-up, spontaneous, and emotionally triggered mass outrage, the slogans had a spatial and temporal emphasis, grounding the notion of freedom against patriarchy. By linking structural violence with everyday sexual violence (Baxi, 2013), the Nirbhaya movement drew attention to cultures of rape, gendered

hierarchies, unequal freedoms, and moral policing (Roy, 2014). Consequently, this led to seminal legislative changes such as the Criminal Law (Amendment) Bill in 2013 and a total fund of INR 20 billion to improve women's safety in public spaces (including transport) (Baxi, 2013). Unlike the Nirbhaya campaign, Besharmi Morcha (the Indian equivalent of SlutWalk which drew attention to ending the practice of victim-blaming and clothing as the reason for sexual violence) failed to garner much support across India (Bhopal, Delhi, and Lucknow) and was widely critiqued by different groups (including women's organization). Taneja (2019) attributes its failure to the lack of contextualization (Delhi lacked a strong sex-positive discursive legacy, which had served well for Slutwalk Toronto) deeming it irrelevant to India where issues such as female feticide and dowry deaths continue to dominate the news. Journalists labeled it to be a "project for elite urban women" (Taneja, 2019, p. 181) limited to a cohort of urban, young, tech-savvy, middle-class women. Moreover, the movement failed to engage with the semantics of sexual autonomy, remaining firmly embedded in a language of masculinist protection of females, with calls to action for "real men" and safety for "daughters and sisters" in their awareness video (on YouTube). In conclusion, social activism is a potent catalyst for change, and requires strategic collaboration and adaptability for sustainable transformations.

Going beyond physical protests, hashtag movements such as #GirlsinDhabas in Pakistan (which started as an online Twitter campaign/ blog to reclaim public spaces), #Boardthebus, #Iwillgoout in India, and #Notmybus in Sri Lanka also demonstrate how participatory activism in digital spaces can transcend geopolitical borders, while crowdsourcing a collective narrative of sexual violence in public transport (Marathe & Condliffe, 2019). In a critical commentary, Eagle (2015) posits that hashtag activism raises awareness and contributes to a larger conversation about harassment, instead of allowing it to continue undisputed. However, most of these hashtag movements only garner virtual solidarity, and while there is some media coverage, it rarely translates into a continuous dialogue.

In summary, lack of contextualization, fragmented efforts, failure to combine tropes of sexuality and autonomy, and insufficient alliance-building (with the local police, local NGOs, media, and gender activists) result in waning appeal of movements over time. In an article studying the politics of women's protests in Pakistan, Khan et al. (2021) contend that although such movements can lead to improvements in state accountability, widening of feminist discourse, and empowerment of activists as public agents, the long-term gains remain uncertain due to 'shrinking civic spaces, gendered barriers to political inclusion, and increasing backlash' (p. 391).

To evaluate the impact of social activism over time, the review turns to examine legal reforms and declarations within the region. The researchers acknowledge the difficulty of definitively attributing legal changes to a single cause and emphasize that this analysis will not attempt to establish direct causation. Instead, the focus will be on exploring the intricate web of factors that contribute to these developments. On a macro level, this review finds that all six South Asian countries have ratified gender-responsive declarations and commitments. Current laws pertaining to sexual harassment in public places in all six countries have been identified and listed in

Appendix B (see supplementary file). Countries like India, Bangladesh, and Pakistan have prepared Gender Action Plans, all of which signal long-term critical roadmaps to institutionalize gender-responsive transport planning (such as mandating visible reporting desks at transit stations to address incidents of harassment and other crimes, recruiting 20% female staff, maintaining separate counters for women, etc. (GIZ, 2018). A 2010 joint initiative by Nepal's Department of Transport Management, Traffic Police, Nepal Entrepreneurs Federation, and the National Women's Commission produced a booklet outlining a Code of Conduct for public transport. This code protects the rights of women, children, senior citizens, and disabled persons. However, inconsistent adherence to the Codes and patchy implementation of the plans renders them ineffective (The World Bank, 2013). Moreover, transportation personnel, including drivers and conductors, remain largely unaware of these Codes (Bott et al., 2005) due to poor public outreach efforts by authorities. Notably, this review did not find laws on harassment pertaining to public transport in particular.

There also remains considerable ambiguity among victims about what constitutes sexual harassment (and sexual violence) in transport, whether it merits reporting, whom to report to, and how. On the other hand, transport authorities and other implementors remain unaware or dismissive of the medico-legal care guidelines and protocols that need to be followed in the aftermath of receiving a complaint. As a result, the scale of the problem is underreported, leaving transportation authorities with insufficient data on patterns of violence and no effective policy response to counter it (ADB, 2015).

That said, studies also note that anti-harassment laws alone do not guarantee behavior change, given the sociocultural roots of harassment (Williams et al., 2020; ActionAid International, 2016). Women experience social, economic, and procedural barriers to accessing the justice system. The patriarchal culture of South Asia places heavy sanctions on notions of respectability and honor for women who are violated. This hinders most women from reporting their experiences of harassment in an open court or the media, lest they dishonor themselves and their families (ActionAid International, 2011, 2017). Legal procedures can be time-consuming and costly, thereby unaffordable for women who are low-income earners or economically dependent on their families. Delayed justice and existing gender biases in the system, including insensitivity and inaction based on value judgment by the police and doctors, discourages women from reporting violence and securing convictions (Bhattacharyya, 2016; Nowrojee & Shebi, 2019).

The efficacy of legislation also depends on enforcement and time-sensitive coordination mechanisms by the state (The World Bank, 2015). Characterized by resource constraints and governance crises, LMICs including South Asian countries struggle with inadequate funding, overburdened police forces, and lack of political will (Bott et al., 2005). Bangladesh presents a telling example, where transport infrastructures are administered by seven ministries and 13 agencies, resulting in overlapping mandates and a lack of effective collaboration (Bird et al., 2018). Moreover, the dearth of gender representation in public transport planning across

all six countries further exacerbates the issue, disregarding the viewpoints of women and other gender-diverse groups.

Overall, the broad menu of laws and gender-inclusive declarations also signals a growing recognition by governments of the need for a comprehensive legal framework to address VAW. By studying the ecosystem of activism efforts and laws, the study suggests that there is clear potential for impact when bottom-up activism efforts catalyze, culminate, and galvanize the macro systems, such as combining street protests with advocacy, political backing, and alliance-building across contentions (Khan et al., 2021).

Mixed-Approach Interventions

This section looks at interventions that cut across micro (individual or household), meso (community), and macro (state-level) layers of the ecological model and are typically delivered through strategic partnerships between multiple stakeholders (justice, public health, education, and other sectors). These interventions (listed in Box 5) combine more than one approach (a mix of built-environment and design, policing, technology, education, and outreach) and are typically spearheaded by international consortiums or states.

Box 5: Mixed approach interventions

- *Women's Safety in Public spaces* (WSPP) Campaign [*Bangladesh, 2020*]
- Multi-Sectoral Programme on Violence against Women [*Bangladesh, 2000*]
- SHE Teams in Telangana [*India, 2014*], Nirbhaya Teams and Damini Squads in Maharashtra [*India, 2016*], Women Commandoes and Women Conductors [*India, 2011*]
- JNUMS [*India, 2005*]
- Safe Cities Free of Violence against Women [*India, 2010*]
- *Parivartan* (Change) program launched by Police [India, 2005]
- *Gender Inclusive Cities Project* [India, 2009–2011]
- *Punjab Safe City Authority* [Pakistan, 2015]
- *Rabta* [Rozan NGO, Pakistan, 1999–2001; 2001–2004; 2005–2010]

Most of the evidence for this section comes from commissioned reports and program evaluations by practitioners (Bott et al., 2005; Holden et al., 2016; Solotaroff & Pande, 2014; Nowrojee & Shebi, 2019; Jagori & UN Women, 2011; WICI, n.d.; UN Women, 2019). The authors are aware of the limitations of such evaluations in terms of bias and methodological rigor, but still find it worthwhile to include them in this analysis.

For instance, in 2010, UN-Habitat launched the Safe Cities Global Initiative aimed at developing and implementing model approaches to preventing sexual

harassment in public spaces. The Delhi Safe City Programme (a collaboration between UN Women, UN-Habitat, the Government of Delhi and the Indian NGO, Jagori), as evaluated by the International Centre for Research on Women (ICRW), made use of multi-stakeholder engagements at the **macro-level** by establishing public-private partnerships, with Delhi Transport Corporation (DTC) and Delhi Metro Rail Corporation, including a chapter on women safety awareness in the training manual for bus drivers (Whitzman et al., 2014). The program also implemented design interventions **(meso-level)** such as lighting at bus stops and increased visibility of police patrol. It leveraged participatory engagement at the **micro level** by using over 100 women's safety audits to inform guidelines for infrastructure and road improvement projects, and sensitizing over 1200 DTC bus drivers.

Another common micro-component that is included in mixed approach packages is bystander interventions and engagement with men and boys. Depending on whether the focus is on preventing/ stopping violence or harnessing gender equity, raising awareness, or changing gender norms, these interventions with men (and boys) are diverse in terms of the gender theories and/or politics that underpin them (Carlson et al., 2015; Ricardo et al., 2012). In the absence of credible data to inform policy, UNFPA has been instrumental in developing formative toolkits and resources for practitioners and governments on how to engage men and boys in GBV prevention among other issues (e.g., *IMAGES, Engaging Men and Boys in Gender Equality and Health: A Global Toolkit for Action* developed by Promundo, with guidance from UNFPA, WHO and MenEngage Alliance, is designed for program planners, health providers, peer educators, advocates, and others closely working on issues related to gender equality). And yet, raising awareness of VAW in public places does not guarantee behavioral change in challenging it. In a study by UNFPA (2019) in Sri Lanka, almost 82% of respondents reported witnessing instances of sexual harassment in public transport, yet 51% chose not to intervene in fear of drawing attention to themselves. While such barriers to bystander intervention are well documented (Bennett et al., 2014), the impacts and outcomes of different types of bystander intervention remain largely unexamined. Do all forms of intervention have a positive impact, or are there adverse or unforeseen consequences (such as escalating the intensity of harassment, or displacing it onto the bystander)? Throwing light on this, Jewkes et al. (2015) observe that evidence of effectiveness of interventions targeting men and boys is limited, weak and their geographical base narrow: 85% of the interventions took place in high-income countries and 90% in school settings. Some multi-component interventions including men and bystanders have been implemented sporadically in the context of South Asia, choosing male role-models to champion gender equality (e.g., HeForShe Campaigns) and engaging men and boys in community-level advocacy and local campaigns. For instance, the Stop Harassment of Women (SHOW You care) Project in Colombo in 2012 involved hundreds of young men in 1000 buses reaching out to 3000 commuters in Colombo, Sri Lanka, spreading awareness about legal resources and challenging male passengers to take responsibility (UN Women & ICRW, 2013; UNFPA, 2013, 2019). In the absence of rigorous evidence from South Asia, a global scan shows that bystander

interventions do not perform well on their own, and interventions with men and boys are more effective when they explicitly address the norms, behaviors, and relations associated with ideals of masculinity and promote more gender-equitable relationships between men and women (Fulu et al., 2014). For sustained gender transformation, it is also important for these interventions to target both women and men (Ricardo et al., 2012).

Other multi-pronged approaches have been deployed by the Indian and Pakistani governments with a special focus on capacity building of police, recruiting more female officers (Nirbhaya Teams and Damini Squads in some districts of Maharashtra), SHE teams in Hyderabad (Raman & Komarraju, 2018), and building bridges between police forces and citizens through NGO programs like Rabta (Pakistan) and Parivartan (India) (Khalique et al., 2011; Solotaroff & Pande, 2014). These programs also incorporated outreach activities to build relationships at the meso level: going door-to-door in low-income communities to register complaints, setting up emergency hotlines, and implementing community forums.

Critics of mixed-approach interventions argue that there remains a risk of emitting mixed signals if interventions are not complementary to the overall purpose (Carlson et al., 2015). For example, while NGOs emphasize women's right to safe travel, the messaging gets lost if transport authorities continue to engage in protectionist campaigns that remain entrenched in misogynistic vocabulary, referring to women as the 'fairer or weaker sex' and the need to protect 'respectability and modesty of women' (Raman & Komarraju, 2018) or using dismissive phrases like eve-teasing. This dilutes the rights-based issue relegating it to 'protection'. Almost all evaluation studies of mixed-approach interventions recommend that they be mutually reinforcing at different ecological levels (personal, household, community, and society) to achieve a reduction in violence (Ding et al., 2020; Whitzman et al., 2014; The World Bank, 2015; UN Women & ICRW, 2013). For instance, a legal guideline of reserved seats for women in buses should be coupled with CCTV surveillance inside the vehicle, while conductors and drivers should be sensitized to their own biases and trained to intervene as necessary for proper implementation of the law. Whitzman et al. (2014) recommend a strategic partnership model ('four legs for a good table') involving community advocates (to push for change), local politicians (to galvanize government resources), feminist bureaucrats (to capture local policies and programs for emancipatory ends) and researchers (to gather evidence around the problem and to document efforts around solutions).

Boundaries of Enquiry

This chapter provides valuable insights into various categories of safety interventions in public transport. While it does not delve deeply into the specifics of any single intervention, it aims to demonstrate the value of systematically reviewing a selection of safety interventions in transport from a broad range of sector entry points a systematic review approach, rather than comparing and contrasting two sets of interventions (for instance, there can be no comparison between CCTV surveillance

and law reform). Finally, the chapter is limited by the exclusion of non-binary people's experiences of safety. Although the screening process identified literature that acknowledged the intersectional complexities of race, sexuality, and gender in shaping harassment experiences for women and non-binary people on public transport (Shah et al., 2017; Adur & Jha, 2018), empirical evidence specifically focused on South Asian countries was sparse. Also, the initial search keywords for this review did not explicitly include transgender and/or non-binary gender terms. The researchers acknowledge that these groups likely encounter distinct forms of violence in public spaces, such as taunts, bullying, and transphobia, which necessitate a deeper investigation into intervention strategies tailored for their safety. However, such an exploration falls outside the purview of this particular chapter.

Final Thoughts

In order to address the issue of women's safety in public transport spaces, this review considers the effectiveness of a sample of digital, social, legal, and infrastructural interventions. By highlighting the sociocultural underpinnings of women's mobility, complicated by class, constructs of respectability, and perceptions of safety, the review moves beyond oversimplified narratives of 'what makes women feel safe in public spaces' and examines the academic discourse behind each category of intervention. For instance, although technological solutions may improve safety perceptions for some users, their access and appropriation depend largely on the technology's affordability and the tech-savviness of the user, hence not benefiting all women equitably. Similarly, while strict sex-segregation practices in South Asia (in schools, colleges, bank queues, buses, and metro) increase mobility among women who otherwise would not have ventured outside, scholars argue that 'separating worlds' is not a lasting solution and does not advance women's *right* to economic and social participation. This review shows that the hegemonic construction of safety is embedded within the ambit of protectionism and surveillance. Emergency alert systems, women-only buses, CCTVs, and GPS-tracking devices feed off and sustain women's fear of violence. While these interventions may impart a sense of empowerment, they do not necessarily shift power dynamics in favor of women's unconditional access in the long term.

A key takeaway from this review is that efforts to ensure women and girls' safety in public transport are misaligned with gender justice, exclusionary for different intersectional groups, and unsustainable (e.g., discontinuation of women-only buses in Bangladesh, see section 'Segregated Transport Provision'). For instance, the working-class population and socially disadvantaged groups experience a higher burden of walking or traveling in poor infrastructural conditions, triggering higher (bodily) exposure to harassment and challenges to physical health. Many commuters are not technology savvy to utilize all that digital solutions (e.g., emergency alarms, reporting apps) have to offer, and even then, gender-based constraints hinder reporting and justice (see section 'Social Activism Cues Instigating Policy Interventions'). Through cautious deliberation of 'what works and why' (and its antithesis of

what does not work and why not), this review finds that the most effective approach involves a multifaceted strategy that combines complementary initiatives, and integration between multiple actors: law enforcement, judiciary, bystanders, transport authorities, donors/funders, and policymakers. This multi-stakeholder ecological approach is particularly pertinent in contexts where demarcations of space are not so discrete (public transport vs. public spaces) and violence/harassment in the bus can easily spill over and/or continue even after the commuter gets off the bus. Approaching *safety* through a multi- and interdisciplinary lens will not only help to detect gaps from different perspectives but also help devise strategies that are inclusive and intersectional.

While examining interventions across the five categories, a plethora of framings were noted: an intervention is either "micro (targeted)" or "macro (systemic)" (United Nations, 2007), "reactionary" or "precautionary" (Khurana, 2020), "empowering" or "paternalistic" (Whitzman, 2012; Marathe & Condliffe, 2019) encouraging "avoidance" or "prevention" strategies (Ëisenhut et al., 2020), "self-regulating" or "self-determining" (Gopal & Shin, 2019) behaviors, with outcomes hinged on "positive liberty" or "negative liberty" (Soni, 2016). Moreover, intervention programs vary in geographic focus and scope depending on funding streams and national interests. For instance, the UN pursues a more global, policy-oriented, and normative approach, while ActionAid's interventions are more community-driven, advocacy-focused, and grounded in grassroots efforts. While some may contend that overlapping or parallel mandates of donors lead to duplicated efforts and the squandering of already limited resources, the authors maintain that this complex interplay of donor-driven, state-driven, and bottom-up initiatives can also be seen as experimenting with new models to arrive at a best-fit initiative, with potential for scaling up.

A key recommendation of this review is to use rights-based messaging to frame women's access to public transport and by extension their right to freedom from violence and its negative health consequences. This needs to be done in conjunction with long-term sensitization campaigns of vested stakeholders (including men and boys), to educate them about harmful gender norms, and capacity building to effectively intervene when situations escalate. Finally, there is an urgent need to go beyond a cis-heteronormative frame of reference when designing gender-transformative interventions. Given that safety can vary significantly depending on intersectional identities (social class, ethnicity, age, gender, sexuality, dis/ability) and circumstances (time of day, route, mode of transport, user capabilities, etc.), it is important to understand what safety means to different groups of commuters which can then inform intervention features. By placing feminist geography in dialogue with sexual violence, this review submits that there is significant work to be done to understand women's safety in public transport beyond the economic gains or productivity- an issue that remains largely unexplored.

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Appendix A

See Table 2.

Appendix B

National Laws and Policies on Violence against Women (VAW) in Public Spaces

Bangladesh

- Legislation on sexual harassment in public spaces: Dhaka Metropolitan Police Ordinance 1976 Section 76. http://bdlaws.minlaw.gov.bd/sections_detail.php?id=511&sections_id=13755
- Other legislation on VAW in public spaces:
  - Rape, sexual assault, and sexual torture criminalized under section 10(1) of the Prevention of Oppression against Women and Children Act 2000 and under section 375 of the Penal Code 1860.
  - The Prevention of Cruelty against Women and Children Act (2000) was adopted to outline punishments for sexual offense, women and children trafficking, causing death for dowry, sexual oppression, and other sexual violence.
  - Gender Diagnostics, Policy, Strategy and Action Plan For National Social Security Strategy (NSSS) of Bangladesh acknowledges that women's mobility patterns and needs in transport are different from that of men (accessed at https://socialprotection.gov.bd/wp-content/uploads/2020/03/Gender-Diagnostics-Policy-Strategy-and-Action-Plan-for-NSSS.pdf).
  - Gender Action Plan of Dhaka Metro Transport, 2015 (accessed at https://dmtcl.portal.gov.bd/sites/default/files/files/dmtcl.portal.gov.bd/policies/24a2d0e9_4f30_49b5_9d42_3ac3e8963742/d4c141db2d47be261286bf42fe3b4532.pdf).

Bhutan

- Legislation on sexual harassment in public spaces: Penal Code 2011 Art 205 and 206 as a "petty misdemeanor" https://www.oecd.org/site/adboecdanti-corruptioninitiative/46814108.pdf
- Other legislation on VAW in public spaces: Penal Code chapter 14 on Sexual offences
  - National Action Plan on Gender Section 3.6 on VAW (accessed at https://evaw-global-database.unwomen.org/-/media/files/un%20women/vaw/full%20text/asia/national%20action%20plan%20on%20gender%202008-2013/nap%20on%20gender%202008-2013.pdf?vs=1000).

India

Sexual harassment of women in public places is not defined precisely under Indian law. Several sections of the Indian Penal Code (IPC) deal with it in different ways, and in many cases, with significant overlaps.

- Section 292 states that showing pornographic or obscene pictures, books or slips to a woman or girl will draw a fine of Rs.2000 with two years of rigorous imprisonment for first offenders.
- Section 298 (A) and (B) of the IPC sentences a man found guilty of making a girl or woman the target of obscene gestures, remarks, songs or recitation for a maximum tenure of three months.
- Section 354 deals with the use of criminal force against a woman with intent to outrage her modesty, and prescribes imprisonment of up to two years, or a fine, or both.
- Under Section 509, obscene gestures, indecent body language, and comments intended to 'insult the modesty of a woman' carry a penalty of rigorous imprisonment for one year, or a fine, or both.
- Morphing pictures of a woman and sharing them with the intent to harass and defame her is a crime as per IPC Section 499 (defamation).
- Posting any obscene or defamatory material on a public online platform intending to harass a woman is a crime under Section 67 of the Indian Technology Act.
- Smart City Mission: an analysis of all 99 selected Smart City proposals concluded that the Smart Cities Mission has adopted a largely gender-neutral approach. Most references to women's safety focus on increased surveillance via the installation of CCTV cameras, and the creation of women's shelters and hostels. There are, however, no explicit plans to make cities more gender inclusive, create safe public spaces and public transport for women or address the digital gender divide.
- Gender Action Plan (GAP) under the Lima Work Programme on Gender, by the Subsidiary Body for Implementation (SBI) in its 47th Session, in order to advance women's full, equal, and meaningful participation and promote gender-responsive climate policy and the mainstreaming of a gender perspective. This was informed by a WB study in 2011 public transport needs of women and girls in Mumbai with a view to identifying their priorities in using Mumbai public transport namely, Brihanmumbai Electric Supply and Undertaking buses (henceforth known as BEST) and Mumbai Suburban Railways (consists of three lines: Western, Central and Habour). This report was prepared as a part of the Mumbai Urban Transport Project-2A by the World Bank in consultation with the Mumbai Rail Vikas Corporation (MRVC) with the help of Dalberg Global Advisors in 2010–2011.

Nepal

- The only current relevant legislation is the Public Offences and Penalties Act of 1970, which asserts that "any activities or action that carries in it a sexual nature

both verbally or physically" is harassment. The penalty is a US$120 fine and sometimes imprisonment, but the legislation is rarely enforced (IRIN, 2012).
- Other legislation on VAW in public spaces: Rape, Sexual Assault, and Sexual Harassment criminalized under Criminal Code (Muluki Ain).
- The Five-Year National Strategy and Plan of Action for Gender Empowerment and Ending Gender-based Violence.
- Government of Nepal's National Transport Management Strategy: The overall strategic vision is 'to develop safe, efficient and environmentally friendly transport'. Under the second pillar of the draft strategy which refers to 'Management of Road Transport', there is a specific reference to the particular needs of women in transport.
- Code of Conduct: A booklet was published jointly by DOTM, Traffic Police, Nepal Entrepreneurs Federation, and the National Women's Commission in 2010 comprising a code of conduct to protect the rights of women, children, senior citizens, and disabled persons.

Pakistan

- In Pakistan, section 509 of the Pakistan Penal Code (PPC) contains provision to fine or imprison, for up to one year, anyone convicted of "intending to insult the modesty of a woman" through sounds, gestures, or objects, while section 354 deals with assault and use of criminal force on a woman, again with the intent to "outrage her modesty" (Jilani & Ahmed, 2004, p. 176). Section 509 of the Pakistan penal code makes sexual harassment, including harassment on public transportation, a punishable offense. Prosecution under Section 509 is historically low however (annual data from 2001 to 2014 show an average of 293 prosecutions per annum (Prosecution data from AGHS Legal Aid, a free legal aid center in Pakistan) which seems low for a country with an estimated population of 191 million.
- Other legislation on VAW in public spaces: The Anti-Rape Laws Bill of 2014 (amend sections of the Pakistan Penal Code, 1860, the Code of Criminal Procedures, 1898, and the Qanoon-i-Shahadat Order, 1984).
- The Anti-Honour Killing Laws Amendment Bill 2014.
- Gender Action Plan (2018–2023) (Accessed at https://info.undp.org/docs/pdc/Documents/PAK/Gender%20Mainstreaming%20Action%20Plan.pdf).

Sri Lanka

- Legislation on sexual harassment in public spaces: Used Article 11 of the Constitution on Torture and Degrading Treatment or Punishment (https://www.parliament.lk/files/pdf/constitution.pdf).
- Other legislation on VAW in public spaces:
  - Rape criminalized under Article 363 of the Penal Code.
  - Section 364(2) criminalized Custodial Rape and Gang Rape.
  - Article 365 of the Penal Code criminalized Unnatural Offenses and Grave Sexual Abuse.
  - Plan of Action Supporting the Prevention of Domestic Violence Act.

References

Absar, S. S. (2000). Conditions, concerns and needs of garment workers in Bangladesh. *Development Bulletin, 51*, 82–84.

ActionAid International. (2011). *Women and the city: Examining the gender impacts of violence and urbanization action aid*. Retrieved from https://actionaid.org/sites/default/files/actionaid_2011_women_and_the_city.pdf

ActionAid International. (2014). *Safe cities for women: From reality to rights*. Retrieved from https://actionaid.ie/wp-content/uploads/2016/10/Safe-Cities-for-Women-From-Realities-to-Rights-1.pdf

ActionAid International. (2016). *Freedom to move: Women's experience of urban public transport in Bangladesh, Brazil and Nigeria, and how lost tax revenues can pay to improve it.* Retrieved from https://actionaid.org/sites/default/files/178622_2786.pdf

ActionAid International. (2017). *Whose city: An evaluation of urban safety for women in 10 countries*. Retrieved from https://actionaid.org/publications/2017/whose-city

ADB. (2015). Policy Brief: A safe public transportation environment for women and girls.© Asian Development Bank [and/or Publisher]. Accessed at https://www.adb.org/publications/policy-brief-safe-public-transportation-environment-women-andgirls

Adur, S. M., & Jha, S. (2018). (Re)centering street harassment – An appraisal of safe cities global initiative in Delhi, India. *Journal of Gender Studies, 27*(1), 114–124. https://doi.org/10.1080/09589236.2016.1264296

Ahmad, Z., Batool, Z., & Starkey, P. (2019). Understanding mobility characteristics and needs of older persons in urban Pakistan with respect to use of public transport and self-driving. *Journal of Transport Geography, 74*, 181–190. ISSN 0966-6923. https://doi.org/10.1016/j.jtrangeo.2018.11.015

Anand, A., & Tiwari, G. (2006). A gendered perspective of the shelter-transport-livelihood link: The case of poor women in Delhi. *Transport Reviews, 26*(1), 63–80.

Banks, N. (2013). Female employment in Dhaka, Bangladesh: Participation, perceptions and pressures. *International Institute for Environment and Development (IIED), 25*(1), 95–109.

Baxi, P. (2013). The Verma Manifesto. *The Indian Express*, 25 January.

Bennett, S., Banyard, V. L., & Garnhart, L. (2014). To act or not to act, that is the question? Barriers and facilitators of bystander intervention. *Journal of Interpersonal Violence, 29*(3), 476–496. https://doi.org/10.1177/0886260513505210

Bhattacharyya, R. (2016). Street violence against women in India: Mapping prevention strategies. *Asian Social Work and Policy Review, 10*(3), 311–325.

Bird, J., Yue, L., Hossain, Z. R., Martin, R., & Anthony, J. V. (2018). *Toward great Dhaka: A new urban development paradigm Eastward. Directions in development*. World Bank. https://doi.org/10.1596/978-1-4648-1238-5

Borker, G. (2020). Safety first: Perceived risk of street harassment and educational choices of women. https://girijaborker.files.wordpress.com/2020/11/borker_2020_safetyfirst-1.pdf

Bott, S., Morrison, A., & Ellsberg, M. (2005). *Preventing and responding to gender-based violence in middle and low-income countries: A global review and analysis*. World Bank Publications.

BRAC. (2017). *Study on gender responsiveness in public transport and for women pedestrians of Bangladesh* [Unpublished study].

Carlson, J., Casey, E., Edleson, J. L., Tolman, R. M., Walsh, T. B., & Kimball, E. (2015). Strategies to engage men and boys in violence prevention. *Violence Against Women, 21*(11), 1406–1425. https://doi.org/10.1177/1077801215594888

Cornell International Survey on Street Harassment. (2015). Hollaback! Together we have the power to end harassment. Available at https://www.ihollaback.org/cornell-international-survey-on-street-harassment/

Cozens, P., Neale, R., Whitaker, J., & Hillier, D. (2003). Managing crime and the fear of crime at Railway Stations – A case study in South Wales (UK). *International Journal of Transport Management, 1*(3), 121–132.

Critical Appraisal Skills Programme. (2018). CASP (Systematic review) checklist. Available at: https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf. Accessed 23 Dec 2020.

Ding, H., Loukaitou-Sideris, A., & Agrawal, A. W. (2020). Sexual harassment and assault in transit environments: A review of the English-language literature. *Journal of Planning Literature, 35*(3), 267–280. https://doi.org/10.1177/0885412220911129

Eagle, R. B. (2015). Loitering, lingering, hashtagging: Women reclaiming public space via #BoardtheBus, #StopStreetHarassment, and the #EverydaySexism Project. *Feminist Media Studies, 15*(2), 350–353. https://doi.org/10.1080/14680777.2015.1008748

Eisenhut, K., Sauerborn, E., García-Moreno, C., & Wild, V. (2020). Mobile applications addressing violence against women: A systematic review. *BMJ Global Health, 5*(4), e001954. https://doi.org/10.1136/bmjgh-2019-001954

Fulu, E., Kerr-Wilson, A., & Lang, J. (2014). *What works to prevent violence against women and girls? Evidence Review of interventions to prevent violence against women and girls*. Medical Research Council.

Gekoski, A., Gray, J. M., Horvath, M. A. H., Edwards, S., Emirali, A., & Adler, J. R. (2015). *What works in reducing sexual harassment and sexual offences on public transport nationally and internationally: A rapid evidence assessment*. Middlesex University; British Transport Police; Department for Transport. http://eprints.mdx.ac.uk/15219/

GIZ. (2018). *Sustainable transport: A sourcebook for policymakers in developing cities module 7a* (2nd ed.). Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (www.giz.de). Available at: https://sutp.org/publications/approaches-for-gender-responsive-urban-mobility-gender-and-urban-transport-smart-and-affordable/

Glazener, A., Sanchez, K., Ramani, T., Zietsman, J., Nieuwenhuijsen, M. J., Mindell, J. S., Fox, M., & Khreis, H. (2021). Fourteen pathways between urban transportation and health: A conceptual model and literature review. *Journal of Transport & Health, 21*, 101070. https://doi.org/10.1016/J.JTH.2021.101070

Gopal, K., & Shin, E. J. (2019). The impacts of rail transit on the lives and travel experiences of women in the developing world: Evidence from the Delhi Metro. *Cities, 88*, 66–75.

Green, S., & Higgins, J. P. (2009). Preparing a Cochrane review. In *Cochrane handbook for systematic reviews of interventions* (pp. 11–30). https://doi.org/10.1002/9780470712184.ch2

Grover, A. (2016). Gender perception of safety in urban public spaces: Case of New Delhi. *International Journal of Arts & Sciences, 9*(4), 325.

Haider, F. (2017). 90% pickpockets at Delhi Metro are women, be careful at these 8 stations: CISF. *Hindustan Times*. https://www.hindustantimes.com/delhi-news/90-pickpockets-at-delhi-metro-are-women-cisf-says-be-careful-at-these-8-stations/story-VSN1YriWGQEd1fCeh50u8J.html

Harrison, J. (2012). *Gender segregation on public transport in South Asia: A critical evaluation of approaches for addressing harassment against women*. Development Studies of the School of Oriental and African Studies, University of London.

Hebbar, R., Anisha, A., Hashiya, B., Chaithra, L., & Kauser, F. (2017). Suraksha women safety device and application. *Ijireeice, 5*(5), 252–255. https://doi.org/10.17148/ijireeice.2017.5538

Holden, J., Humphreys, M., Husain, S., Khan, S., & Lindsey, S. (2016). *Evaluation of the Madhya Pradesh safe cities initiative 2013–2016: End line report*. DFID.

Jadhav, A., Weitzman, A., & Smith-Greenaway, E. (2016). Household sanitation facilities and women's risk of non-partner sexual violence in India. *BMC Public Health, 16*, 1139. https://doi.org/10.1186/s12889-016-3797-z

Jagori. (2010). Understanding women's safety: Towards a gender-inclusive city. Available at https://www.endvawnow.org/uploads/browser/files/understanding_womens_safety.pdf

Jagori & Multiple Action Research Group (MARG). (2013). Safe city free of violence against women and girls initiative: A study of Delhi Police Helplines (100 & 1091).

Jagori & UN Women. (2011). *Safe cities free of violence against women and girls initiative: Report of the baseline survey Delhi 2010*. Delhi: Signate G Press.

Jain, A., Sharma, S., Kumar, H., & Parashar, D. (2019). Geographical information system based safe path recommender. *International Journal of Innovative Technology and Exploring Engineering, 8*(10), 3863–3868. https://doi.org/10.35940/ijitee.J9895.0881019

Jewkes, R. K., Flood, M. G., & Lang, J. (2015). From work with men and boys to changes of social norms and reduction of inequities in gender relations: A conceptual shift in prevention of violence against women and girls. Faculty of Law, Humanities and the Arts – Papers. 2063. https://ro.uow.edu.au/lhapapers/2063

Jilani, H., & Ahmed, A. M. (2004). Violence against women: The legal system and institutional responses in Pakistan. In S. Goonesekere (Ed.), *Violence, law and women's rights in South Asia*. Sage Publications.

Kalms, H., & Korsmeyer, N. (2017, July 17). Gender makes a world of difference for safety on public transport. Retrieved from https://theconversation.com/gender-makes-a-world-of-difference-for-safety-on-public-transport-80313

Karusala, N., & Kumar, N. (2017). Women's safety in public spaces: Examining the efficacy of panic buttons in New Delhi. In *Proceedings of the 2017 CHI conference on human factors in computing systems.* https://doi.org/10.1145/3025453.3025532

Khalique, H., Christopher, Z. N., Sadiq, E., Mir, H., Sultan, J., Abro, S., Hussain, A., & Zafar, S. (2011). Evaluation report Rabta Programme, Rozan. 1999–2010. Available at https://www.endvawnow.org/uploads/browser/files/rozanrabta_evaluation_khalique_2011.pdf

Khan, A., Jawed, A., & Qidwai, K. (2021). Women and protest politics in Pakistan. *Gender & Development, 29*(2–3), 391–410. https://doi.org/10.1080/13552074.2021.1981623

Khurana, N. V. (2020). Geographies of fear: Sexual harassment and women's navigation of space on the Delhi Metro (March 19, 2020). *South Asian Journal of Law, Policy, and Social Research, 1*(1), 18–40.

Koskela, H., & Pain, R. (2000). Revisiting fear and place: Women's fear of attack and the built environment. *Geoforum, 31*(2), 269–280. https://doi.org/10.1016/s0016-7185(99)00033-0

LeFevre, A. E., Shah, N., Bashingwa, J. J., George, A. S., & Mohan, D. (2020). Does women's mobile phone ownership matter for health? Evidence from 15 countries. *BMJ Global Health, 5*(5), e002524. https://doi.org/10.1136/bmjgh-2020-002524

Lewis, S., Saukko, P., & Lumsden, K. (2020). Rhythms, sociabilities and transience of sexual harassment in transport: Mobilities perspectives of the London underground. *Gender, Place & Culture, 28*(2), 277–298. https://doi.org/10.1080/0966369X.2020.1734540

Liddell, B. C. (2015). *The public body: Individual tactics and activist interventions on the Street in Delhi, India*. Unpublished MA thesis. Texas A&M University Repository. Retrieved online at https://core.ac.uk/download/pdf/79651304.pdf

Lochan, V. (2019). Embodied forms of politics and identity in South Asian protest movements: Pinjra TOD and Delhi. *Asian Journal of Women's Studies, 25*(1), 132–147. https://doi.org/10.1080/12259276.2019.1577032

Loukaitou-Sideris, A. (2006). Is it safe to Walk? 1 neighborhood safety and security considerations and their effects on walking. *Journal of Planning Literature, 20*(3), 219–232. https://doi.org/10.1177/0885412205282770

Mahadevia, D., Bhatia, N., Abhilasha, N., & Patel, S. (2017). *Improving women's safety on Sabarmati Riverfront*. Centre for Urban Equity.

Mahadevia, D., & Lathia, S. (2019). Women's safety and public spaces: Lessons from the Sabarmati Riverfront, India. *Urban Planning, 4*(2), 154–168. https://doi.org/10.17645/up.v4i2.2049

Manazir, S. H., Govind, M., & Rubina. (2019). My Safetipin mobile phone application: Case study of E-participation platform for women safety in India. *Journal of Scientometric Research, 8*(1), 47–53. https://doi.org/10.5530/jscires.8.1.7

Marathe, R., & Condliffe, Z. (2019). Digital landscape of women's safety. Retrieved from https://apo.org.au/sites/default/files/resource-files/2019-12/apo-nid306033.pdf

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *BMJ, 339*, b2535. https://doi.org/10.1136/bmj.b2535

Moser, C. (2012). Mainstreaming women's safety in cities into gender-based policy and programmes. *Gender and Development, 20*(3), 435–452.

Mowri, S., & Bailey, A. (2022). Framing safety of women in public transport: A media discourse analysis of sexual harassment cases in Bangladesh. *Media, Culture & Society*. https://doi.org/10.1177/01634437221111913

Nowrojee, S., & Shebi, K. (2019). *Working together for girls' and women's safety in public spaces: Lessons from India*. 3D Program for Girls and Women, United Nations Foundation.

Peters, D. (2013). Gender and sustainable urban mobility. Available at http://civitas.eu/sites/default/files/unhabitat_gender_surbanmobilitlity_0.pdf

Phadke, S., Ranade, S., & Khan, S. (2009). Why Loiter? Radical possibilities for gendered dissent. In *Dissent and cultural resistance in Asia's cities, by Melissa Butcher and Selvaraj Velayutham* (pp. 185–203). Routledge.

Phadke, S., Ranade, S., & Khan, S. (2013). Invisible women. *Index on Censorship, 42*(3), 40–45. https://doi.org/10.1177/0306422013500738

Rahman, M. S. U. (2010). Bus service for women-only service in Dhaka: An investigation. *Journal of Bangladesh Institute of Planners, 3*, 17–32, Bangladesh Institute of Planners. ISSN 2075-9363.

Raman, U., & Komarraju, S. A. (2018). Policing responses to crime against women: Unpacking the logic of Cyberabad's "SHE Teams". *Feminist Media Studies, 18*(4), 718–733.

Ricardo, C., Eads, M., & Barker, G. (2012). *Engaging boys and young men in the prevention of sexual violence: A systematic and global review of evaluated interventions*. Sexual Violence Research Initiative.

Roy, A. (2014). Critical events, incremental memories and gendered violence. *Australian Feminist Studies, 29*(81), 238–254.

Shah, S., Viswanath, K., Vyas, S., & Gadepalli, S. (2017). *Women and transport in Indian Cities*. ITDP and Safetipin.

Solotaroff, J. L., & Pande, R. (2014). *Violence against women and girls: Lessons from South Asia. South Asia Development Forum*. World Bank Group.

Soni, M. (2016). Rethinking the challenge of women's safety in India's cities. ORF Issue Brief 159. Available at https://www.orfonline.org/research/womens-safety-in-indias-cities/

Taneja, M. (2019). From Slutwalks to Nirbhaya: Shifts in the Indian women's movement. *Women's Studies International Forum, 74*, 179–187. https://doi.org/10.1016/j.wsif.2019.04.002

The World Bank. (2013). *Gender and public transport: Kathmandu, Nepal*. World Bank and Australian Aid.

The World Bank. (2015). *Safer and more efficient transportation in Kathmandu: Gender and public transport study in Nepal (English). Achieving results through partnerships*. World Bank Group. Available at http://documents.worldbank.org/curated/en/581091504592045335/Safer-and-more-efficient-transportation-in-Kathmandu-gender-and-public-transport-study-in-Nepal

Thomson Reuters Foundation Annual Survey. (2017). Ranking the most dangerous transport systems for women in major cities. Retrieved from https://poll2017.trust.org/

Tripathi, K., Borrion, H., & Belur, J. (2017). Sexual harassment of students on public transport: An exploratory study in Lucknow, India. *Crime Prevention and Community Safety, 19*, 240–250. https://doi.org/10.1057/s41300-017-0029-0

UN Women. (2017). Women's safety audit in public transportation in Lahore. Retrieved from https://asiapacific.unwomen.org/-/media/field%20office%20eseasia/docs/publications/2018/05/pk-women-safety%20audit-report.pdf?la=en&vs=5414

UN Women. (2019). *Safe cities and safe public spaces for women and girls global flagship initiative: International compendium of practices*. UN WOMEN.

UN Women & ICRW. (2013). Unsafe an epidemic of sexual violence in Delhi's public spaces. Baseline findings from the Safe Cities Delhi Programme. UN Women New York, & ICRW: Washington DC. Retrieved from http://www.icrw.org/files/publications/Baseline%20Research%20of%20Safe%20Cities%20programme%20(1)%5Bsmallpdf.com%5D.pdf

United Nations Population Fund. (2013). Engaging men and boys: A brief summary of UNFPA experience and lessons learned. Integrating work with men and boys into core areas of the UNFPA mandate at country, regional and global levels. https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20Engaging%20men%20and%20boys_web-2.pdf

United Nations Population Fund. (2019). Does She Travel Safe? Report on Sexual Harassment in Public Transportation in Sri Lanka. Retrieved from https://srilanka.unfpa.org/en/publications/does-she-travel-safe

United Nations. (2007). *Transport and communications bulletin for Asia and the Pacific. Volume 76. Gender and transport*. Economic and Social Commission for Asia and the Pacific (ESCAP).

Uteng, T. P. (2012). *Gender and mobility in the developing world*. The World Bank.

Valentine, G. (1989). The geography of women's fear. *Area, 21*(4), 385–390.

Verma, M., Rodeja, N., & Verma, A. (2017). Service gap analysis of public buses in Bangalore with respect to women safety. *Transportation Research Procedia, 25*, 4322–4329.

Viswanath, K. (2013). Gender inclusive cities programme: Implementing change for women's safety. In C. Whitzman, C. Legacy, C. Andrew, F. Klodawsky, M. Shaw, & K. Viswanath (Eds.), *Building inclusive cities: Women's safety and the right to the city* (pp. 75–89). Routledge.

Viswanath, K., & Basu, A. (2015). SafetiPin: An innovative mobile app to collect data on women's safety in Indian cities. *Gender and Development, 23*(1), 45–60. https://doi.org/10.1080/13552074.2015.1013669

Whitzman, C. (2012). *The handbook of community safety gender and violence prevention*. https://doi.org/10.4324/9781849773058

Whitzman, C., Shaw, M., Andrew, C., & Travers, K. (2009). The effectiveness of women's safety audits. *Security Journal, 22*, 205–218. https://doi.org/10.1057/sj.2009.1

Whitzman, C., Andrew, C., & Viswanath, K. (2014). Partnerships for women's safety in the city: "Four legs for a good table". *Environment and Urbanisation, 26*(2), 443–456. https://doi.org/10.1177/0956247814537580

Williams, J. L., Malik, A. A., & McTarnaghan, S., (2020). *Gender-based violence on public transportation: A review of evidence and existing solutions*. Urban Institute USAID. Retrieved from https://www.urban.org/research/publication/gender-based-violence-public-transportation

Women in Cities International. (n.d.). *Tackling gender exclusion: Experiences from the gender inclusive cities Programme*. Women in Cities International.

World Health Organization. (2010). *Gender mainstreaming for health managers: A practical approach. Participant's notes*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/44516/9789241501064_eng.pdf?sequence=2

World Health Organization. (2021). Violence Against Women (VAW) prevalence estimates, 2018: Global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women. World Health Organization. Licence: CC BY-NC-SA 3.0 IGO. https://iris.who.int/handle/10665/341337

Zahan, S. J. (2020). Feminist politicization of the urban: Young female students challenging spatial patriarchies. *Space and Polity, 24*(1), 45–59.