



Perceptions of Safety Among Taxi and Rideshare Service Patrons: Gender, Safekeeping And Responsibilisation

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Abstract

Rideshare and taxi services may commonly be perceived as safer modes of travel, particularly in comparison to public transport, and the introduction of rideshare services such as Uber has transformed urban mobilities. Yet, there is emerging anecdotal evidence to suggest that both taxi and rideshare services are sites of sexual harassment and violence. However, little is known about passengers' perceptions of safety when using taxis and rideshare services, an issue with significant implications for mobility, civic participation and social inclusion. To address this gap, we explore findings from an online survey and one-on-one interviews with rideshare and taxi patrons to examine their perceptions of safety when using taxi and rideshare services and the factors that facilitate or impede feelings of safety, including the influence of the COVID-19 pandemic. In closing, we consider the implications of the findings for conceptualisations of safety, developing policy and practice, and future research.

Keywords

Rideshare; safety; sexual violence; taxi.

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Introduction

Public transportation is frequently a site of harassment against women and is subsequently perceived as unsafe, particularly at night (Gekoski et al. 2017). Harassment and the fear of harassment or sexual violence can result in women limiting their use of public transport, restricting their mobility and right to participate in the city at night (Brown 2017). Private forms of transport, such as taxis and rideshare services, may be perceived as a comparatively safer option, particularly in the aftermath of high-profile cases of sexual and lethal violence against women on and around public transport, such as the murder of Aiiia Maasarwe in Melbourne in early 2019. Yet emerging media reporting and anecdotal accounts show patrons experience sexual harassment, assault and other forms of violence (see also Brown 2017; O'Brien et al. 2018).

In Australia, media reports have documented rideshare drivers perpetrating sexual violence (Evlin 2020) and individuals posing as rideshare drivers to lure women into their cars (Thiis-Evensen and Silva 2019; Australian Associated Press 2021). Similarly, there have been high-profile cases of sexual violence perpetrated by taxidriviers, perhaps most notoriously illustrated by the case of John Worboys, who drugged and raped passengers over many years in the United Kingdom (BBC 2019). In addition to gender-based violence and harassment, patrons may be targeted for abuse based on race, disability, gender and sexuality. However, little is known about passengers' perceptions of safety when using taxis and rideshare services—an issue with significant implications for mobility, civic participation and social inclusion.

The introduction of ridesharing services, which match passengers with available drivers, has transformed the landscape of travel and mobility, particularly in large urban centres. In 2019 alone, prior to the COVID-19 pandemic, Uber completed more than six billion trips worldwide (Uber Investor 2021). Rideshare services are increasing in popularity, with polling in Australia suggesting that Uber has overtaken taxis as the private transport method of choice (Roy Morgan 2019). Smartphone applications have facilitated the ability for travellers to request rides from nearby drivers in real time, often at a more affordable cost compared to taxis (Vij et al. 2020). Despite the prevalence of ridesharing services and their increasing embeddedness within our everyday lives, to date, there has been minimal consideration of patrons' safety and the ways in which these modes of transport might enhance or impede patrons' perceptions of safety (Brown 2017). Research has tended to focus on traffic safety and the interpersonal safety and health of taxidriviers (see, e.g., Aghabayk et al. 2021; Gilbert 2011; Mayhew 2000; Westmarland and Anderson 2001).

To address this gap in the literature, we used an online survey and one-on-one interviews with rideshare and taxi patrons to examine their perceptions of safety when using taxi and rideshare services, and the factors that facilitate or impede feelings of safety. 'Safety' was defined in relation to interpersonal safety and freedom from different forms of harassment, discrimination and violence. We understand safety to be context-dependent, affective, subjective and relational, as well as relating to an absence of tangible harm. Following the initial development and funding of this project, the COVID-19 pandemic began. Surveys from the United States suggest that the pandemic resulted in a decreased use of rideshare services by both passengers and drivers and an increased reliance on personal vehicles (CarGurus 2020; Cradeur 2020). As a result of the possible influence of the pandemic on people's sense of safety in relation to health and wellbeing when using taxi and rideshare services, we also sought to examine such issues within the research.

Safety and Violence in Taxi and Rideshare Services

Taxis and, to a lesser extent, rideshares have been sites of verbal harassment, abuse, physical violence (including homicide) and other types of crime, such as fare evasion and robbery (Gilbert 2011; Mayhew 2000; Schwer, Mejza and Grun-Réhomme 2010; Westmarland and Anderson 2001; Young 2019). Collectively, research shows that drivers face a disproportionate risk of victimisation and that contextual features of taxi driving—such as the isolated nature of the work, shift work (sometimes at night) and interaction with (often intoxicated) strangers—can create opportunities for offending against drivers (Mayhew 2000; Schwer, Mejza and Grun-Réhomme 2010). While most drivers are men, research suggests

women drivers also face sexual harassment and violence while working (Brown 2017; Westmarland and Anderson 2001; Mayhew 2000).

Turning to the experiences of patrons, Vaclavik, Macke and Faturi e Silva's (2020) survey of 485 Brazilian rideshare users found that security risks (including rideshare patrons being placed in danger) when using rideshares were considered low. Importantly, these authors concluded that the use of apps 'generates a sense of trust and security in the interaction between strangers' (Vaclavik, Macke and Faturi e Silva 2020: 6). Meshram, Choudhary and Velaga's (2020) survey of 298 women in India found participants perceived rideshares as being less safe if the driver or other passengers were male strangers. Participants reported feeling safer using rideshares during the daytime compared to night-time. Younger and middle-aged women felt less safe using rideshares compared with their older counterparts. A qualitative study with South African women who use minibus taxis found that participants were routinely exposed to violence while riding and waiting for these services, including sexual violence (Eagle and Kwele 2019). In Vietnam, Su, Nguyen-Phuoc and Johnson's (2021) study of 576 rideshare users found participants who reported higher perceptions of safety were more likely to be satisfied with rideshare services. Satisfaction, in turn, influenced participants' loyalty to a particular service. While the prevention of harassment and violence should be intrinsically important to rideshare services, Su, Nguyen-Phuoc and Johnson's research points to a strong business case for improving patrons' perceptions of safety, as 'improving safety is good not only for passengers but also good for business' (2021: 387). Collectively, such studies suggest that perceptions of safety and interpersonal violence may be concerns for rideshare and taxi patrons. Our research contributes an investigation of the perceptions of safety in the cultural and economic contexts of ridesharing in Australia.

'Staying Safe': Gender and Responsibilisation

While our study sought to recruit participants of all genders and backgrounds, the findings nonetheless reflected the overwhelmingly gendered (classed and racialised) nature of safety. Among the interview participants in our study, those who had personal experiences of harassment or violence while using taxis or rideshare services were all women, and all discussed the deployment of extensive safekeeping routines or 'safety work' (Vera-Gray and Kelly 2020) when using these services. Safety work refers to the vast array of (often subconscious) strategies women deploy to 'stay safe' or prevent men's violence (Vera-Gray and Kelly 2020). Such activities are symptoms of the gendered responsibilisation of safety, particularly in relation to sexual violence. Feminist critiques of 'safety advice' demonstrate that 'women have always been held individually responsible for preventing sexual violence that is perpetrated against them' (Brooks 2011: 637).

Responsibilising women shifts the onus for sexual violence away from perpetrators, constructs sexual violence as an inevitable reality and elides consideration of the structural causes of this violence (Brooks 2011; Campbell 2005). Thus, women (and other survivors) may be blamed for their own experiences should they have failed to engage in extensive safety work; conversely, they are viewed as paranoid due to the perception that engagement in these safety strategies is extreme and unnecessary (Brooks 2011; Vera-Gray 2018). Safety work can greatly restrict women's access to public space, limit their participation in civic life and expend untold emotional, mental and physical energy (Campbell 2005; Fileborn 2021; Vera-Gray 2018; Vera-Gray and Kelly 2020). While women routinely engage in safekeeping routines, their use of such strategies is also context-dependent and contested (Brooks 2011; Fileborn 2016; Pain 2001). Thus, we analysed survey and interview data with such gendered responsibilisation as a contextual frame for understanding rideshare users' sense of safety and danger.

Also informing our analysis was the notion that how individuals talk about their feelings or perceptions of safety is a form of gendered discourse that should be understood as a way of 'doing' or 'performing' gender as much as reflecting any lived 'reality' of feeling safe (Campbell 2005; Fileborn 2016). Women's use of precautionary routines provides ways of performing femininity and (re)producing normative femininity and hegemonic masculinity (Campbell 2005). Scholars such as Campbell (2005) argue that discourses centred on fear of crime position women as weak and passive. Further, men may downplay or understate

their fear in public spaces as this contravenes the norms of hegemonic masculinity that require them to be fearless, physically capable of defending themselves (Day 2001; Fileborn 2016; Pain 2001; Sandberg and Tollefsen 2010). Therefore, consideration of perceived safety in the ridesharing experience needs to be situated within a range of analytical frameworks in which gender, mobility and risk take place.

Methods

Sample and Procedure

Our project involved a mixed-methods pilot study that examined the perceptions and experiences of harassment, violence and other interpersonal safety incidents among patrons of taxi and rideshare services in Victoria. The project sought to interrogate the following questions:

- How safe do rideshare and/or taxi patrons feel when using these services?
- What factors shape patrons' sense of safety?
- How do patrons perceive that the COVID-19 pandemic has shaped their sense of safety?
- What strategies do patrons use to feel safe while using these services?
- How is safety shaped by aspects of patron identity, such as gender and sexuality?

A convenience sample was recruited via paid targeted Facebook advertising. Advertisements were also shared through professional social media networks (such as Twitter) and through community organisations. Advertisements directed prospective participants to a survey hosted on the Qualtrics online survey management platform, where they could access the information statement and complete the survey. To be eligible, participants had to be over 18 years of age, currently living in Victoria and have experience of using a taxi or rideshare service.

Questions were adapted from previous survey research conducted by the authors (Fileborn, Wadds and Tomsen 2020). Questions included the usage of taxi and rideshare services before and since the advent of the COVID-19 pandemic, perceptions of safety when using taxi and rideshare services before and since the advent of the COVID-19 pandemic, experiences and effects of harassment and other interpersonal safety incidents, and reporting practices. At the beginning of the survey, participants were informed that the survey would include questions on their experiences of unwanted sexual attention, racism, homophobia, transphobia and other types of harassment by either driver(s) or passenger(s). Participants were also informed that the researchers were interested in any experiences that participants' personally perceived to be a form of harassment, without any legal or other definition in mind. Surveys took approximately 20 minutes to complete. The average age of the sample was 43 years, and more than half identified as women (58%). Additional demographic characteristics of the sample are presented in Table 1.

Table 1: Demographic characteristics of the survey sample

Demographic characteristic (N = 97)	n (%)
Age M(SD), range	42.57 (13.4, 20–80)
Sex recorded at birth	
Male	36 (38)
Female	57 (60)
Prefer not to say	2 (2)
Gender	
Man/male	32 (34)
Woman/female	54 (58)
Non-binary	3 (3)
Different term	3 (3)
Prefer not to answer	1 (1)
Sexuality	
Heterosexual or straight	64 (68)
Lesbian	6 (6)
Gay or homosexual	3 (3)
Bisexual or pansexual	14 (15)
Queer	4 (4)
I use a different term: asexual	1 (1)
Prefer not to answer	2 (2)
Aboriginal or Torres Strait Islander	2 (2)
Highest level of education	
Up to Year 10	3 (3)
Year 12/VCE	3 (3)
Tertiary diploma or trade certificate/TAFE	16 (17)
Undergraduate university	30 (32)
Postgraduate university	42 (45)
Employment	
Employed full time	50 (52)
Employed part time or casually	24 (25)
On pension/social security	6 (6)
Student	10 (10)
Unemployed	1 (1)
Other	13 (13)
Disability or impairment	15 (16)
Country of birth	
Australia	65 (76)
Overseas	20 (24)

Note: Only valid numbers and percentages are reported. Participants were able to select more than one response for some questions.

At the end of the survey, participants were asked if they would like to take part in an interview about their experiences. Interested participants were then asked to provide their contact details, which were stored separately from their survey responses to ensure anonymity. All interested participants were contacted, with five proceeding to an interview via telephone or audiovisual software (such as Zoom). Semi-structured interviews explored participants' demographic characteristics, experiences of using taxi and rideshare services, perceptions of safety when using taxi and rideshare services, experiences and effects of harassment, violence and other interpersonal safety incidents, and reporting practices. The duration of

the interviews ranged from 1 hour to 2 and a quarter hours. Interviews were audio-recorded with consent and transcribed, and any identifying information about the participant was removed. An overview of interview participants is provided in Table 2. Ethics approval for this study was obtained from the University of Melbourne Human Research Ethics Committee (Ethics ID: 2057092.1).

Table 2: Demographic characteristics of the interview sample

Interview #	Pseudonym	Age	Gender	Pronouns	Sexual orientation	Disability	Work/Study	Ethnicity
1	Alice	29	Cisgender woman	She/her	Bisexual/queer	No	Full-time study, casual work	White
2	Bridgette	40	Cisgender woman	She/her	Heterosexual	Yes	Full-time work	White
3	Chelsea	48	Cisgender woman	She/they	Aromantic non-binary	No (but lives with anxiety)	Freelancer	White
4	Dee	63	Trans woman	She/her	Lesbian	No	Full-time work	European
5	Emelia	48	Cisgender woman	She/her	Heterosexual	Yes	Casual work	White

Data Analysis

Comparisons of perceptions of safety based on gender could only be conducted for participants identified as a man or a woman due to the small number of other gender identities. Independent-samples *t* tests were used to compare men's and women's, and heterosexual and LGBQ+ participants, perceptions of safety when using taxis and differences in perceptions of safety when using both taxis or rideshares. The comparison of perceptions of safety for rideshares among men and women was conducted using a Mann-Whitney *U* test due to the non-normal distribution of data for women participants (Shapiro Wilk's test $p < 0.05$). A paired-samples *t* test was used to compare the perceptions of safety among a subset of survey participants who had used both taxi and rideshare services ($n = 66$). The assumption of normality was not violated (Shapiro Wilk's test $p > 0.05$); however, there were two extreme outliers that were removed from this analysis.

Qualitative interviews were analysed using thematic analysis, following the approach outlined by Braun and Clark (2006) and Braun et al. (2019). This process involves becoming immersed in the data through reading and reflecting on the interview transcripts. From there, the transcripts were coded using inductive and deductive coding. Deductive codes were formulated from the research questions and focused on findings relating to the nature of participants' experiences of harassment and their understandings of safety. Inductive codes were generated from concepts identified in participants' discussions. Following this, codes were organised under higher-order themes (e.g., 'gender', 'power and vulnerability'), which were refined throughout the process of analysis.

Results

Survey participants predominantly reported using taxis (93%) and the rideshare platform Uber (80%), with nearly half of the sample (48%) reporting that Uber was their preferred service. Among those who

had used taxis, 64% had used these services for more than five years, while among those who had used rideshares, 40% had used these services for more than five years. Prior to the COVID-19 pandemic, participants most commonly reported using taxis (52%) and rideshares (81%) for recreational purposes, such as socialising or while on holiday. Additional details about participants’ use of taxis and rideshares are available in Table 3.

Table 3: Survey participants’ usage of taxi and rideshare services

Taxi and rideshare usage (N = 97)	n (%)	
Ever used*		
Taxis	90 (93)	
Uber	78 (80)	
Uber Pool	21 (22)	
Ola	34 (35)	
Shebah	14 (14)	
Lyft	7 (7)	
DiDi	32 (33)	
GoCatch	6 (6)	
Bolt	6 (6)	
Other	1 (1)	
	Taxis	Rideshares
Length of time using		
Not currently using	22 (24)	8 (10)
Less than 12 months	1 (1)	10 (13)
1–2 years	7 (8)	5 (6)
3–4 years	2 (2)	25 (31)
5+ years	58 (64)	32 (40)
Frequency of use before the COVID-19 pandemic		
Never	6 (7)	2 (3)
Once or twice a year	37 (41)	13 (16)
Every few months or so	26 (29)	18 (23)
Monthly	11 (12)	25 (31)
Weekly	10 (11)	22 (28)
Purpose of use before the COVID-19 pandemic*		
Work	35 (39)	31 (39)
Caring responsibilities	9 (10)	6 (8)
Recreational reasons (e.g., socialising, on holiday)	47 (52)	65 (81)
Other	13 (14)	11 (14)

*Items not mutually exclusive

Survey participants were asked to rank the factors that would help them to decide whether to use a taxi or rideshare before the COVID-19 pandemic: safety, physical health, convenience, cost, geographic location accessibility, comfort, alcohol and/or drug use, and other. Participants reported that the top three factors for deciding whether to use a taxi were convenience ($n = 30, 38\%$), geographic location accessibility ($n = 21, 27\%$) and safety ($n = 20, 26\%$). For rideshare services, the top three factors were convenience ($n = 28, 39\%$), cost ($n = 19, 27\%$) and safety ($n = 22, 32\%$).

Survey participants were asked to rate how safe they feel using taxi and rideshare services, respectively, using a five-point Likert scale ranging from 1 (never safe) to 5 (always safe). What constituted safety was left open to participants to interpret, as understandings of safety were further explored through open text response questions and qualitative interviews. Perceptions of safety among this sample of patrons of both taxis ($M = 6.41, SD = 2.74, \text{range } 0\text{--}10$) and rideshare ($M = 7.36, SD = 2.10, \text{range } 0\text{--}10$) services were relatively high. Women ($M = 5.87, SD = 2.72$) had significantly lower perceptions of safety than men

($M = 7.27, SD = 2.49$) in relation to using taxis ($t_{(72)} = 2.08, p < 0.05$). However, there was no difference in perceptions of safety between men and women in relation to using rideshare services. There were also no differences between perceptions of safety in relation to using taxis or rideshare services among heterosexual and LGBTQ+ participants. Among participants who had used both taxis and rideshare services ($n = 64$), perceptions of safety were higher for rideshare services ($M = 7.52, SD = 1.61$) compared to taxis ($M = 5.86, SD = 2.55$) ($t_{(63)} = -4.67, p < 0.001$).

When asked whether they felt more or less safe using a taxi service since the COVID-19 pandemic, 39% ($n = 37$) of survey participants reported feeling less safe, 52% ($n = 49$) reported feeling about the same and 10% ($n = 9$) reported feeling safer. When asked whether they felt more or less safe using a rideshare service since the COVID-19 pandemic, 43% ($n = 34$) reported feeling less safe, 52% ($n = 41$) reported feeling about the same and 5% ($n = 4$) reported feeling safer. Participants who felt less safe reported concerns about using these services since the pandemic, including being in close proximity in an enclosed space, the risk of transmission via shared surfaces or from drivers and previous passengers and being unaware of or not confident in any safety or hygiene protocols in place. The majority of survey participants reported that their use of taxis ($n = 51, 54\%$) and rideshare services ($n = 60, 79\%$) had changed because of the COVID-19 pandemic. Many participants reported that their use of these services had reduced drastically due to the lockdown measures in Victoria in 2020 but also reported other reasons related to the pandemic, such as that they were working from home, going out less and were concerned about their health.

From these findings, we expanded the analysis to consider the more-detailed discussion of perceived safety and the factors that either facilitated or reduced participants' perceptions of safety through interviews with participants. Results illustrated that, although participants often *felt* safe when using these services, safety was context-based, actively produced and shaped by past negative experiences when using taxi and rideshare services.

Perceptions of Safety

Participants were asked to reflect on how safe they typically felt when using taxi and rideshare services and the factors that contributed to their sense of safety. Safety was approached by participants as a multifaceted concept. Although interpersonal safety was the core focus of discussions, participants also raised factors such as the quality of the car, driver behaviour (such as speeding and fatigue) and the risk of COVID-19 transmission as shaping their sense of safety.

The influence of the COVID-19 pandemic on participants' sense of safety varied. Three participants discussed feeling safe when using rideshares and taxis because of the relatively low number of COVID-19 cases in Victoria, and the fact that they could engage in safety strategies, such as wearing a mask (which continues to be mandated in Victoria at the time of writing in March 2022), using hand sanitiser, and company policies about cleaning the car between customers. One participant commented that drivers faced a great risk of exposure to COVID-19, 'by having person after person after person in their car' (Alice). Indeed, Emelia, who was previously employed as a rideshare driver, said that she did not 'feel safe at all' and had stopped driving because of the pandemic. Bridgette said that she 'probably never thought about viral ... safety' prior to COVID-19 but expressed caution about using taxis and rideshares during this time, as she lived with medical conditions that placed her at a higher risk of experiencing severe symptoms if she contracted COVID-19.

Interview participants typically reported feeling safe most of the time when using taxis and rideshares. Rideshare services were generally considered safer than taxis, except for one participant who unequivocally felt safer in pre-booked taxis. Participants' general feelings of safety were illustrated by Alice, who said, 'Overall considering how much I've used the [rideshare] services, I've actually found them to be very good and ...I felt really safe', and Bridgette, who stated, 'I don't feel particularly nervous about personal or physical safety'.

While both participants reported feeling safe (or, in the case of Bridgette, not feeling *particularly nervous* about safety), their comments also drew attention to the relational nature of ‘feeling safe’. Alice reported feeling nervous the first few times she used rideshare services but her nerves ‘eased pretty quickly, because I realised that oh, I actually feel safer in this situation than walking home at night by myself’. This suggests that Alice’s sense of safety may be enhanced by her increased familiarity with rideshare services. Further, her sense of safety is both relational and context specific—she feels safer *relative to* walking home alone at night, generally after consuming alcohol.

All participants distinguished between their perceptions of safety in taxis versus rideshare services. Bridgette was the only participant who felt safer using taxis than rideshare services; she also distinguished between different contexts of taxi use:

Interviewer: So do you think then there’s a difference in how safe you feel between taxis and rideshare services?

Bridgette: Between ... booked taxis and rideshare services, yes, between hailed taxis and Uber, no.

Bridgette’s perceptions of the different contexts of taxi use were shaped by previous negative experiences using minicabs when younger and living in London, including what she described as ‘a kind of scary experience with a hailed taxidriver’. At the time, Bridgette said:

The concern then was like literally we could drop off the end of the earth, and I think that that was the feeling, like no one would know where we went to, it’s 2 o’clock in the morning, like people wouldn’t be expecting to hear from us ‘til Monday, this was on a Saturday night or something.

Bridgette expressed concerns about men posing as minicab drivers for nefarious purposes. As such, in Australia, Bridgette perceived hailed taxis as ‘the most risky, because no one knows you’ve got it, I don’t have any record of ... who the person is’. In contrast, as Bridgette is disabled and had worked in roles supporting other disabled people, she had close contact with local taxi services and reported feeling extremely safe using pre-booked taxis. Bridgette had developed relationships with individual drivers and would often directly contact a driver she was familiar with. Bridgette reported feeling ‘the most safe when I text the driver that I know’ and described this as being like ‘a kind of personal car service’. Access to safe transportation was particularly important to Bridgette as she found it ‘very emancipatory as a disabled woman ... because it means that I can do things that really I wouldn’t have been able to do just on public transport, or I’d be reliant on my husband’. Her disability also shaped her preference for ordered taxis, as it made the unreliability of and need to wait for a hailed taxi or public transport physically difficult. Bridgette’s heightened sense of safety in pre-booked taxis was situated at the nexus of her past negative experiences with hailed taxis, her familiarity and established relationship with individual drivers that facilitated a sense of trust and her disability.

In contrast to Bridgette, Chelsea described feeling ‘quite safe’ and having ‘overwhelmingly positive’ experiences using Uber. Chelsea did not feel safe using taxis—‘especially at night’—and said, ‘I don’t think that cabs give a level of safety to people. Unless you’re a dude’. Like Bridgette, Chelsea had past experiences of abuse and harassment perpetrated by taxidrivers, and this directly contributed to their lowered perceptions of safety in taxis. When asked what influenced their safety while using taxis, Chelsea said:

The driver not touching me would make me feel safe. The driver not speaking negatively about women, the driver not asking me about my personal relationships, or if my partner is at home ... I’d feel a lot safer if I wasn’t being asked those questions, if I wasn’t being physically touched ... because you don’t really want to get a ride and feel like you’re going to be assaulted in some way.

Several participants raised concerns regarding drivers asking intrusive questions about their personal lives and relationships. While not all participants elaborated on why these questions made them feel unsafe, Chelsea's comments suggest that these questions may raise the spectre of sexual and physical violence against women. One interpretation of these questions is that they are functioning to identify whether a woman has a male guardian or 'protector' at home, the absence of which may make women feel more vulnerable to sexual violence. This is not to suggest that drivers necessarily have ill intent in asking these questions. It is likely that most are simply making what they perceive to be 'friendly' conversation. However, the gendered nature of interpersonal safety can mean that these questions are interpreted and experienced in very different ways between young women and their (typically) male driver (Mayhew 2000), in a context where they are isolated, potentially intoxicated and do not have control over the vehicle. As Griffith and colleagues (2018) explain, the features of ridesharing mean that 'customers ... and employees are exposed to heightened relationships and increased identity exposure' (112); this can both enhance and negate customers' sense of safety while travelling.

Safety and Service Use

Participants' sense of safety also informed whether they used taxi and rideshare services and the contexts in which they used them. Participants who had negative experiences of harassment or violence in a taxi or rideshare service stopped using those services altogether (Chelsea) or avoided using those services (Bridgette). Whether participants used rideshare and taxi services was shaped by a broad range of factors, and safety was not always the most salient factor. As the survey findings demonstrated, participants ranked factors like convenience and geographic location accessibility as more important than safety when deciding whether to use a taxi or rideshare service. For example, Alice said, 'the cost of taxis is what stops me from using them, not because I think they're less safe'. Alice also commented that while she would like to use women-only services, these were out of her price range:

It's unfortunate that often services with these extra features that are really great are a bit more cost prohibitive, which means that people on lower incomes have, you know, less choice when it comes to safety. (Alice)

Alice's comments illustrate that the use of taxi or rideshare services is not always a 'choice' but rather a decision made within the restraints of socio-economic circumstances and inequalities. The prohibitive cost of these services may curtail not only women's mobility but also their ability to select modes of transport that enhance their sense of safety. While it is unclear whether taxis and rideshares are *actually* safer than other forms of transportation, it was clear that most participants used these services to enhance their sense of safety or as a safety strategy. Alice said:

I've felt a lot safer getting rideshares home after I'd been drinking than getting public transport, particularly because if there's a bit of a walk between the public transport stop and my house, that's where I feel really unsafe at night-time if I'm by myself, particularly if I'm drunk.

Although the choice to use a rideshare service requires a level of economic privilege, it nonetheless results in women restricting how they move through public spaces, especially at night. This choice illustrates how, to draw on Vera-Gray (2018), these participants were trading their freedom to traverse public spaces at night for (perceived) safety. Alice's comments reiterate the context-dependent nature of safety and transportation: public transport is positioned here as particularly unsafe at night and when intoxicated. Alice linked this explicitly to the concept of control, with her use of rideshares affording her a greater level of control in comparison to other forms of transport, while simultaneously acknowledging her *lack* of control due to being intoxicated. In the absence of being able to afford a women-only service, other rideshares were considered a safer option within a context where there 'is still no ideal way to get home where I feel totally safe' (Alice). Emelia also viewed women-only services as the only safe option for intoxicated women to travel home, saying, 'You can guarantee that if a woman is incapacitated for whatever reason, that [they] will get her home safely'.

Given that men are overwhelmingly the perpetrators of sexual and gender-based violence, this is, in many respects, a fair statement and reflects the position taken in the small body of work on women-only rideshare services to date (Brown 2017; Medina 2017). However, this logic simultaneously reiterates heteronormative understandings of sexual violence, whereby *only* women can be understood as victim-survivors, rendering invisible the experiences of gender-diverse and sexuality-diverse people (Mortimer, Powell and Sandy 2019). While sexual safety was the dominant concern raised by interview participants, our project was interested in forms of harassment and violence relating to disability, race, sexuality, diverse gender and so forth. Although men disproportionately perpetrate these forms of abuse, women (and people of diverse genders) can also be responsible for these actions. Thus, the notion that women-only rideshares will always ensure that women arrive home safely is premised on a narrow understanding of safety.

'Leave a Paper Trail': Safekeeping Strategies and the Production of Safety

Participants were asked to reflect on any strategies they used to feel safer in taxis and rideshares. As previously mentioned, taxis and rideshares were often considered a safety strategy in and of themselves, as they provided what was perceived as a comparatively safer mode of travel, particularly at night or when intoxicated. Alice also discussed using rideshares for female friends who were intoxicated and needed to go home, viewing this as a safer option than public transport. While rideshares and (to a lesser extent) taxis were considered comparatively safer options, participants still identified an extensive range of safety strategies they used while travelling in these services. Several participants referred to their physical and demographic characteristics as making them safer or less likely to be targeted for sexual violence. For example, Bridgette said, 'I think I'm probably middle aged now as a woman, and I think that that probably makes me less of a target'.

Alice believed she was less likely to be targeted by a perpetrator as she has:

A big build ... I think I give off a bit of an attitude of like I'm not going to put up with shit ... So I think that makes me feel a bit safer in that aspect.

However, this is at odds with the fact Alice *had* experienced sexual harassment. In positioning herself at a lower risk of being unsafe, Alice's comments may work as a discursive strategy that produces a sense of safety when using rideshares, particularly while intoxicated. By reducing her *sense* of personal risk, Alice can claim her right to participate in social activities and to maintain some freedom of movement (Fileborn 2016, 2021). Her comments also illustrate how safety work becomes embodied, as she has developed 'bodily strategies to resist, avoid or manage men's intrusion into ... [her] very being-in-the-world' (Vera-Gray 2016: 142). Chelsea articulated their relative sense of safety through an intersectional lens, saying that they recognise 'that I'm a white cisgendered woman ... there are people who don't have the privileges that I have'. Their comments point to the ways in which identity may function as a safety strategy by affording individuals a level of protection or access to the means and resources required to produce a sense of safety.

Participants articulated a geography of safety *within* rideshare and taxi vehicles, although they were divided in terms of which location afforded greater safety. Emelia said:

To me, sitting in the front is safer because even if, you know, it meant that I had to grab the handbrake or the steering wheel or whatever, you know, or an elbow to their face ... I hate to say it, but we have to think about self-defence as women.

Emelia also drew on her physical characteristics, including her height and commanding presence, to construct herself as physically capable of defending herself against a perpetrator. She also referenced safety advice issued by police for passengers to sit in the back seat of taxis. Drawing on discourses of responsabilisation for safety (women *have to think about* self-defence), Emelia is simultaneously able to reject 'commonsense' safety advice to sit in the back seat by positioning her decision to sit in the front as

one enhancing her safety. She also noted that sitting in the backseat is no guarantee of safety, since drivers have sexually assaulted women there (and, moreover, points to the general futility of seat choice as a safety strategy). Emelia's seat choice was further informed by social and class-related norms, saying that she feels 'a bit weird being chauffeur driven ... I feel a bit strange sitting in the back'. These social norms were also raised by Alice. In contrast to Emelia, Alice always sat in the back of rideshares, as:

The drivers have always been men, and you hear stories ... of something happening and ... I think it does send a bit of a message when you sit in the back that you have boundaries.

Seat choice functioned as a communicative act, although Alice acknowledged that it could communicate fear of the driver rather than 'personal boundaries' and, as such, may not function to enhance safety in the way she desired. Alice was also concerned that expressing fear of the driver could be problematic if the driver was a person of colour, as this could perpetuate the stereotype of black men as inherently 'dangerous'. Her comments illustrate the double bind women can face in staying safe. Alice was acutely aware of not wanting to treat drivers as a 'second-class citizen' or perpetuate racism and asked, 'am I just treating this person like a service person, am I acting like I'm better than them?' However, she recognised her decision as 'a gender safety thing', reflecting on the fact that her male partner always sat in the front seat to chat with drivers, but that was 'his male privilege showing'.

The delicate balancing act of being suitably polite yet also 'responsible' for one's safety was captured in comments from Chelsea, who listed an extensive range of safety strategies:

Even if I didn't have a partner, I'd mention that I had one and that they were home, whether they were home or not, or whether they existed or not. I would give an address a few doors differently, like down the street to my own house. I would message somebody to let them know where I was, how long I'd be ... But without being impolite, you know, when you get out of the cab, just saying thank you and all that stuff.

For Chelsea, the use of strategies was context-dependent, and they reported using them most commonly in taxis rather than rideshares. Emelia neatly encapsulated these strategies in her comment: 'just lie, leave a paper trail and not let them know where I live'. The concept of 'leaving a paper trail' was a key aspect of participants' discussions in relation to apps and rideshare services.

Safety Features of the Service

One of the central reasons participants typically reported feeling safer using rideshares than taxis was the use of rideshare apps to request and record journeys and the perceived enhancement to safety these features offered. Participants felt that having the ability to rate and report drivers after the trip enhanced their safety, as it might motivate drivers to behave appropriately and increased the likelihood that a driver could be held to account if they engaged in harmful behaviour:

They have the voting system as well and that works both ways ... there's an accountability ... with Uber that there's not with cabs. And I think cab drivers sometimes think they can get away with quite a bit. (Chelsea)

Chelsea contrasted this to taxi services, where they felt 'nothing would happen' if they reported an incident due to the difficulty in establishing the identity of the driver. In the absence of a tangible record of a trip, drivers were perceived to have plausible deniability that they had driven a particular customer, let alone that an incident had occurred. Taxis in Victoria are fitted with CCTV cameras, so the notion that there is no evidence of a trip taking place is not strictly accurate. Instead, it may be the case that participants were not aware of this safety feature of taxis. However, as Anderson (2012) discusses in the context of the United States, drivers can also readily interfere with or circumvent the operation of surveillance cameras, and the effectiveness of CCTV as a preventative measure is open to question. Interestingly, for participants in one study (Meshram, Choudhary and Velaga 2020), the ability to rate drivers did not increase their sense of

safety as 'ratings could be fake and users do not usually rate sincerely' (2863). The reasons for the apparent scepticism in Meshram, Choudhary and Velaga's study were unclear. Our findings instead reflect those of Vaclavik, Macke and Faturi e Silva (2020) in that the use of apps positively enhanced participants' perceptions of safety in rideshare services.

As rideshare apps retain a record of trips taken, this meant that patrons had access to the name and vehicle registration details of drivers and could refer to these if needed. These app features were reflected in the following comments:

It's really easy to report the driver if something did happen ... on the app, they've got the emergency I need help button. Some of the apps also have the key code that you have to give them now just to make sure you've got the right driver. (Alice)

And then for an Uber I'd probably feel the next safest after a booked taxi, because I've booked and I can send the details to my husband. (Bridgette)

The app affordances were providing an ontological function: they work to create a digital 'paper trail', to draw on Emelia's earlier comments, generating tangible evidence should something go wrong. The ability to share journey details with a friend or partner also links to the concept of having a 'capable guardian' who can intervene should something happen. As such, the app's affordances were positioned as preventative by increasing the perceived likelihood that a perpetrator would be caught. However, there is limited evidence at this stage to support or refute this perception, and the small body of evidence suggests that rideshares are also sites of interpersonal violence. Thus, while technology may mediate a sense of safety, it does not clearly prevent harm, and the safety work done through technology may be disrupted or circumvented.

Implications and Conclusion

Do passengers feel safe when using rideshare services? The answer to this question presents important implications relating to women's mobility and spatial justice pertaining to free and equitable access to and use of urban spaces—mobility is essential to spatial and gendered justice (Enright 2019; Low and Iveson 2016; Soja 2010). This article presents initial steps taken to formulate answers to this question. Findings from our Victorian pilot project provide insights relating to interpersonal safety with implications for future research, policy and practice. While participants generally reported feeling safe while using these services, safety was shaped through the lens of gender and by service type, with taxis generally perceived as less safe, particularly by women. Insights generated through qualitative interviews demonstrate that perceptions of safety are subjective, context-dependent and shaped by the trajectory of participants' previous experiences using these services as well as other modes of transport. Safety is actively and relationally produced and contingent upon socio-structural location and access to material resources. For some participants, safety was negotiated as a trade-off between contextually 'safe' transportation, cost and convenience.

The ontological function served by rideshare apps was a prominent feature enhancing participants' sense of safety, though whether apps significantly increase *actual* safety remains open to question. Nonetheless, the routine use of apps could be considered a tool to bolster patrons' sense of safety. This is particularly important given the extent to which participants' sense of safety could shape their movement through and access to public and social spaces. Some participants perceived that the COVID-19 pandemic has resulted in a decreased use of taxi and rideshare services as well as decreased feelings of safety because of the additional health concerns and strategies that participants use to navigate these spaces. However, due to the retrospective design of the study and reliance on self-report data, it is difficult to fully account for the effect that COVID-19 may have had on participants' sense of safety.

Several additional limitations should be kept in mind and addressed in future research. The survey and interview samples were small and not representative, and both relied on a self-selected convenience

sample, meaning our findings are not generalisable to the broader population of people who use taxis and rideshares. Our use of keywords to attract participants via paid targeted advertising may have also shaped who elected to participate or perceived the study was of relevance to them. Importantly, we did not include drivers in our research, and the inclusion of drivers' perceptions and practices around safety would seem to be an important direction for future research (Almoqbel, Likhari and Wohn 2019; Almoqbel and Wohn 2019). Such research could investigate how safe drivers feel, factors that influence their feelings of safety, and experiences of various forms of harassment or other incidents. Nonetheless, as one of the first projects of its kind within Australia and internationally, this work provides a starting point for further exploration. Continuing this line of work will enable us to create safe, accessible and inclusive spaces and to enhance marginalised communities' right to the city.

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