

# Chapter 33

## Older Adults' Mobility Amid COVID-19 Pandemic in Bangladesh: Safety and Perceived Risks of Using Public Transport



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**Abstract** The COVID-19 pandemic is likely to have profound impact on the human activities including mobility and social life globally. Being most vulnerable to Covid-19, the older adults' risk perceptions and safety issues of using public and shared transport is likely to affect their modal choices. Based on 221 participants' responses through a unique online survey in Bangladesh, the study aims to assess older adults' mobility patterns pre and post-lockdown during COVID-19, and perceptions of risks and safety around transport post-lockdown. The results demonstrated that over 50% of respondents were unsure of their risks of contracting the virus. If contracted, 37% respondents felt it could be very critical for them. Only 13% respondents perceived little to no likelihood of contracting it. Non-motorized transport (NMT) modes such as walking and cycling were considered the safest to travel amid pandemic. There was substantial preference for private cars (67%) and rickshaws (54%) over shared modes of transport such as taxis, trains and buses. Older adults perceived that high risks are associated with activities such as using public toilets (92%) and going to a

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salon (80%), going to a hospital (86%), and fetching water from a public tap (62%). On the other hand, the three lowest-risk activities are going to the office (33%), essential grocery-shopping (19%) and walking as a form of exercise (only 3%). Besides public transport, improved walking infrastructures combined with increased public awareness on the risks of COVID-19 transmission are key to achieve sustainable urban mobility.

**Keywords** Safety · Risk perception · COVID-19 · Older adults · Transport

## Introduction

The Coronavirus Disease 2019 (COVID-19) pandemic has unprecedentedly affected all lives and brought the world to a standstill. As people around the world are locked down to contain the spread of virus, the social, economic, and political scenarios of the world have undergone abrupt change (BBC, 2020). The COVID-19 has put lives in risk and restrained people from going out, even for essential services. Maintaining social distance has been a central approach to mitigate virus transmission. Since it is more contagious and has a faster transmission rate than other seasonal influenza, this coronavirus is perceived to be very dangerous (Korber et al., 2020; Li et al., 2020a; Liu et al., 2020). WHO (2020) and other health authorities have warned that older adults are the most vulnerable people to COVID-19 as they have low immunity and are more likely to suffer from chronic diseases such as heart disease, lung disease, diabetes or kidney disease (Tran, 2020). Oxford COVID-19 Evidence Service (2020) has assessed that older adults are at a higher risk of fatal diseases due to corona virus and its associated morbidities. Chinese Centre for Disease Control and Prevention (2020) indicated that mortality among people aged between 10 and 40 years is 0.2%; whereas it is 3.6% among 60–69 years, 8% among 70–79 years, and 14.8% among people aged 80 years and above.

However, the current pandemic has profoundly influenced the mobility and social life of older adults globally. Most of the countries have imposed lockdown<sup>1</sup> and restriction on the movements of people just after the outbreak of the pandemic (Morawska & Cao, 2020; Prather et al., 2020; Setti et al., 2020). The lockdown and subsequent inaccessible public transport has increased the vulnerability of marginal groups such as older adults as they are unable to access work places, health care facilities, and social interactions. It is important to mention here that Sustainable Development Goals (SDGs) 11.2 aimed to provide access to safe, affordable, accessible, and sustainable transport systems for all with special attention to the needs of vulnerable groups including older adults. SDG goal 9.1 also intended to develop

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<sup>1</sup> During the COVID pandemic, the term lockdown was used for actions related to mass quarantines or stay-at-home orders. By early April 2020, 3.9 billion people—more than half the world's population—were under some form of lockdown worldwide. By late April, around 300 million people were under lockdown in nations of Europe, and 1.3 billion people have been under lockdown in India.

quality, resilient, and sustainable transport-related infrastructure to facilitate socio-economic progress and wellbeing with a focus on safe, affordable, and equitable access for all. The safe and reliable modes of transport would also enable to obtain work and economic growth (SDG 8) with good health and wellbeing (SDG 3) by reducing inequalities (SDG 10). But the COVID-19 pandemic has caused barriers to access to health care, work, and social interactions and thus, would increase the inequality by adversely impacting on their mental health and wellbeing.

The low and middle-income countries of South Asia, including Bangladesh faced greater challenges to contain the outbreak due to dense population particularly in cities (Anwar et al., 2020). In Dhaka, a metropolitan city and the capital of Bangladesh, about 46 thousand people live per square kilometre (Bangladesh Bureau of Statistics, 2011). Being a lower-middle-income country, Bangladesh did not impose any stringent protocol initially, in the first week of March when first Covid-19 case was confirmed, and millions of people commuted across the cities. It is only after the nationwide lockdown on 23 March 2020 that the mobility of mass population was reduced and social distancing was enforced. A brief timeline of actions for the lockdown has been illustrated below to depict Bangladesh's responses to mitigate COVID-19 in the country (Fig. 33.1).

The restriction on movement of people has been considered as one of the major steps to mitigate the spread of virus. This has resulted in fear and anxiety among the mass population to use public transport which is assumed to be one of the main sources of community transmission. Though there is no such evidence that travelling in public transport increases infection, people assumed it to be a major risk for mobility during pandemic. Rather there is increasing evidence that public transport user are not higher at risk than other activities such as closed contacts in crowded spaces (Ardila-Gomez, 2020). For instance, countries such as Japan and Hong Kong

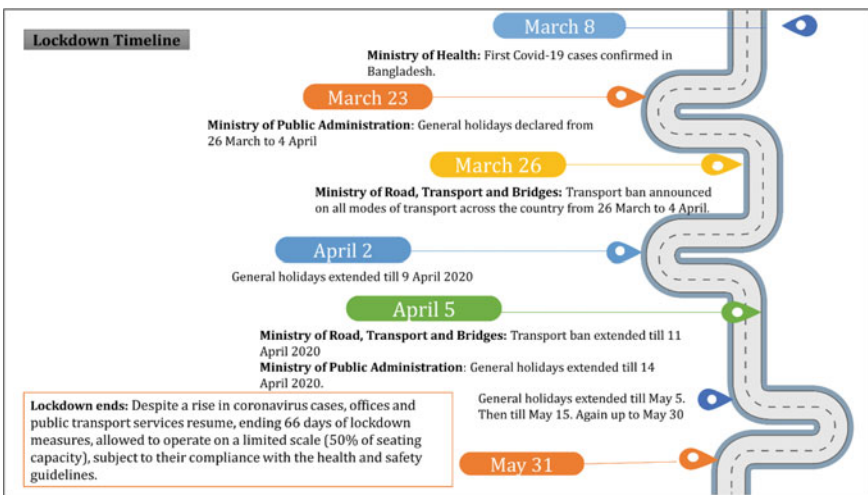


Fig. 33.1 Lockdown timeline in Bangladesh. Source The authors

are highly dependent on mass transit still the number of infected cases is very few as compared to other countries not using public transport. The reasons can be attributed to taking precautionary measures such as not talking to co-passengers, maintaining social distance, wearing mask etc. while travelling in public transport i.e. commuter trains and buses (Greenhalgh et al., 2020; Leung et al., 2020; Parady et al., 2020). In contrast, Gordon (2020) mentions that people unfairly blame public transport and public spaces for spreading virus whereas it is high car-use regions where prevalence of COVID-infections is higher.

In such fear-induced atmosphere older adults' mobility is a matter of serious concern since they are mostly dependent on public transport for their everyday movements particularly in Bangladesh where 37% people use buses (SUTI, 2018). However, the risk perceptions and safety issues of using public and shared transport have substantially affected their modal choices (Zafri et al., 2021, 2022). In this context, the present study aims to investigate older adults' mobility patterns pre and post-COVID-19, and perceptions of risks and safety around the use of public transport during and post-COVID-lockdown. There is a dearth of studies conducted on risk perception of using public transport during COVID-19 particularly in low income countries. Moreover, none of the studies so far has covers Bangladesh. There is also a knowledge gap concerning the changing modal share of older adults during pandemic in the developing world. This study addresses three research questions (1) What are the modes of transport older adults miss during the lockdown?; (2) What are the modes of transport older adults perceive unsafe during pandemic? and (3) What are the activities for which they may go out during post-lockdown?

## Data and Methods

### *Participant Recruitment*

Given the lockdown situation, an online survey was conducted across cities in Bangladesh. The country implemented a nationwide lockdown on 23 March 2020 and the responses were collected between 2nd July and 31st July 2020. A total of 221 participants aged 50 years and above responded to the survey, in both English (52%) and Bangla (48%) language, from all over Bangladesh. Social media platforms such as WhatsApp and Viber, and electronic mails were circulated using personal and professional networks to recruit participants. Hence, the target population for the survey was likely to be Bangladesh's urban population with access to internet and a smartphone. 72% of the participants were older men while only 28% were older women. Questions on which transport option they perceive safe to use after Coronavirus lockdown, what is the perceived level of risk of getting infected etc. were asked in order to assess their perceptions and choices in transport modes.

## ***Data Analysis***

Descriptive statistics such as cross tabulation and frequencies were used to show the relationships among socio-demographic characteristics, risk perception, and use of public transport. Simple arithmetic calculations were done to show the differences in transport utility pre and post-lockdown. The data was analyzed with SPSS 20.0 version and ArcGIS 10.0 software.

## ***Study Settings***

The online survey was conducted across the cities in Bangladesh and the majority of participants were from Dhaka (50%), Chattogram (25%), Narayanganj (2.3%), Gazipur (1.4%), Mymensingh (5%), Khulna (2.3%), Rajshahi (2.3%), and others (11.8%) which include Barishal, Rangpur, Cumilla, Faridpur, and Narsingdi. The data were fairly proportional to the cities in terms of number of population (Fig. 33.2).

## **Results**

### ***Socio-demographic Background***

The participants were from diverse socio-economic groups (Table 33.1). As people grow older their mobility gets reduced and this has been substantiated by scientific data and personal anecdotes of older adults (Croucher et al., 2020; Kim et al., 2020). More than 60% older adults were between 50 and 59 years of age who were more active in using different modes of transport for their everyday activities (Fig. 33.3). About 25% older adults belonged to 60–69 years of age participated in the survey. It is the oldest of the old (age group 80 years and above) who participated the least (only 2.3%), perhaps because of their limited access and unease with technology. Moreover, the older adults with multi-morbidity are typically most vulnerable in the COVID-19 pandemic.

When we see their living arrangements, about 85.5% older adults were living with family members and about 14.5% were living alone. Out of those living with family members, about 78% were living with husband/wife and children; whereas about 7% people were living with husband/wife only. Among those who claimed to live 'alone' situations were quite diverse such as "nursing home", 'with sister', 'with nephew', etc. carrying the connotation that living with extended family members or in a care facility was considered equivalent to living alone.

Majority of the people were highly educated. The results demonstrated that more than 51% older adults had qualified masters' degree and above. About 22% people were Bachelor degree holders and 11% older adults attended college. The results

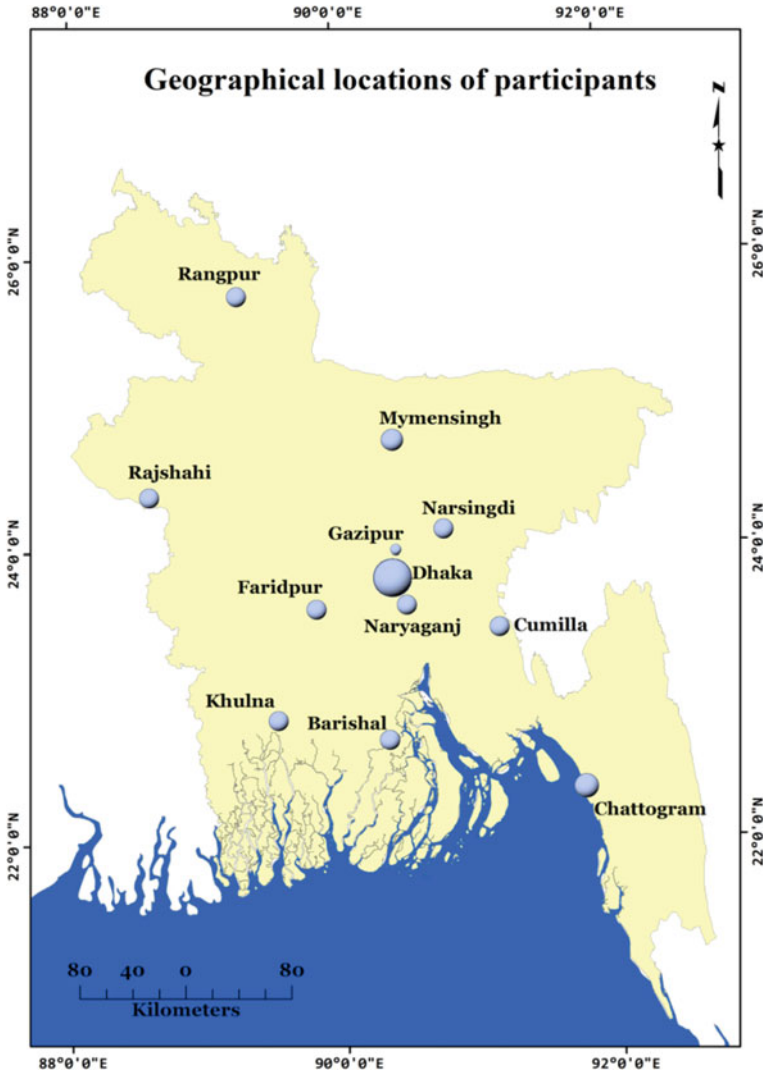
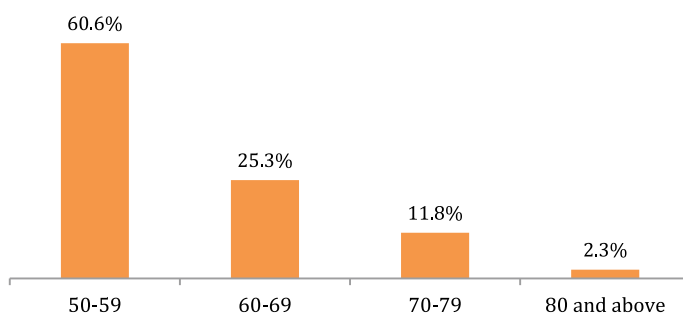


Fig. 33.2 Geographical locations of the participants. *Source* The authors

also displayed that only 6.8% people attended up to 5th standard of education. In terms of age groups, 63.7% older adults belonging to 50–59 years of age had the qualification of masters’ degree and above. More than one-fourth older adults aged 60–69 years were Bachelor degree holders.

**Table 33.1** Background characteristics of the participants (N = 221)

Background characteristics	Participants (%)
<b>Gender</b>	
Men	72
Women	28
<b>Age group (years)</b>	
50–59	60.6
60–69	25.3
70–79	11.8
80 and above	2.3
<b>Currently working</b>	
Working	56.1
Not Working	26.7
Retired	17.2
<b>Marital status</b>	
Married	84.2
Widowed	12.7
Separated	5
Single	2.7
<b>Living arrangements</b>	
With wife/husband and children	78.7
With wife/husband only	6.8
Alone	14.5
<b>Education level</b>	
Up to 5th standard	6.8
6th standard–10th standard	9.5
Attended college	10.9
Degree holder	21.7
Master's degree and above	51.1

**Fig. 33.3** Age group of the participants (N = 221)

## *Use of Transportation Before and After Lockdown*

As evidenced, the lockdown during COVID-19 pandemic has strictly restrained the mobility of people to a larger extent; more than 32% older adults viewed that they have not stepped out of home in the last one week during data collection. About 52% people went out once a week to buy essential items; whereas only 15.8% older adults, who did not have anyone to rely on for daily essentials, stepped out almost every day during the lockdown. The pandemic has created a sense of fear among users of public transport and thus, people preferred either to stay at home or use personal vehicles for mobility. The survey results reflected substantial decrease in popularity and usage of public transport such as bus, taxi (Uber etc.), car (as passenger), auto rickshaw, sub-urban railway/commuter trains after lockdown. About 39% older adults responded that they used to travel in public buses before lockdown but after lockdown only 7.7% people used it. Similarly for taxis, there is 64% reduction after lockdown. People also reduced riding the car (as passengers) after lockdown fearing the close proximity to a driver, and due to closed spaces being considered unsafe. About 27% trips were in car (as passenger) before lockdown but it reduced to 14.5% after lockdown. People also reduced using sub-urban/commuter train for intercity and intra-city commuting since they fear huge population crowd in trains may increase the virus infection. Even the use of cycle rickshaw has reduced by 12% during the pandemic. On the other hand, use of private vehicles such as scooter/bike (self) has increased during the lockdown. Before lockdown about 7.7% people used to travel in scooter/bike (self) but after lockdown its utility has increased to 8.1%. One of the most significant finding is that there is 11.5% rise in walking as a mode of transport for everyday mobility. Older adults perceived that walking is the best mode to maintain social distancing while going out for essential services.

## *Risk Perceptions and Safety*

The results (Table 33.2) demonstrate that there is substantial change in people's perceptions and behaviour towards using public transport during pandemic. To understand the nature of the potential shift, respondents were asked to select their perceived safe choice of transport modes post the lockdown. There is heightened fear of risk regarding shared modes of transport which, they perceived, may cause contracting virus while travelling with other passengers. The survey data displays that non-motorized modes of transport such as walking and cycling were considered the safest; chosen by 86 and 84% of respondents respectively. Apart from that, private vehicles such as cars and scooters/bikes were considered as safer than other modes of transport. About 67% participants perceived cars as the safest mode whereas more than 51% participants perceived scooters/bikes as the safest mode during the pandemic. In contrast, the shared modes of transport were considered as the most unsafe during the lockdown period. Almost 83% perceived public buses were the most unsafe, among



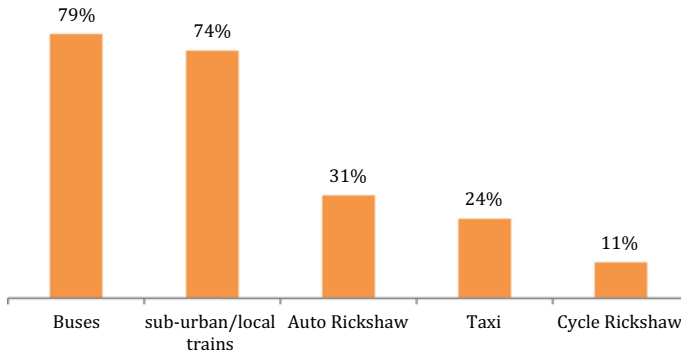
**Table 33.2** Risk perception of older adults for different modes of transport (N = 221)

Modes of transport	Safe	Unsafe	Not sure
Scooter/bike	51.6	24.9	23.5
Car	67.0	15.8	17.2
Auto rickshaw	26.7	46.2	27.1
Rickshaw	56.1	21.7	16.7
Taxi	33.5	40.7	25.8
Bus	5	83.3	11.8
Sub-urban train/commuter trains	41.6	26.2	32.1
Walking	86.4	4.1	9.5
Cycling	83.7	6.8	9.5

all other shared modes, to travel during the pandemic. On the other hand, about 46% older adults perceived that auto rickshaws were unsafe to travel.

While looking from a gender perspective more than 57% older men perceived scooters/bikes as the safe mode to travel whereas only 36% older women perceived scooters/bikes to be safe. Here it is noteworthy that older women in general are typically not inclined to using scooters or bikes in Bangladesh due to cultural barriers. So their perception of risk and safety regarding scooters does not only stem from the pandemic but also the inconvenience of sitting on a scooter, security concerns, risk of accident due to sitting sideways, and social acceptance (scooter being a youth symbol). Similarly, about 37% women perceived rickshaw as unsafe whereas 23% older men considered using rickshaw is unsafe during the pandemic. However, more than 90% older women considered bus is unsafe for travelling. Contrarily, about 11% older men perceived bus as safe mode and more than 80% of them considered it as unsafe to use during the pandemic. Surprisingly, over 48% older men perceived that sub-urban train/local trains are safe to travel and it is only 24% of women who chose it as safe mode. Besides, over 42% of older women were 'not sure' whether sub-urban/local trains are safe or unsafe; they preferred to 'avoid' travelling in it. Both older men and women perceived walking (88.8% men and 80.3% women) and cycling (88.1% men and 72.1% women) as the safest modes to travel, particularly in nearby places, for essential services. However, the social acceptance of women riding cycles in Bangladesh is very low and women are almost never seen riding cycles in public. This option was possibly chosen by women as perceived safe for others and not for themselves.

The pandemic has led to a distinct transition in people's perceptions and behaviour, which will likely affect future urban transport demand as well. Over 79% older adults perceived that they can 'avoid' using bus after lockdown is lifted (Fig. 33.4). Similarly 73.8% of them considered that they can avoid using sub-urban/commuter trains when the lockdown will be lifted. The results also showed that taxis (54%) and rickshaws (72%) fared to be more popular choices of travel for older people, over shared modes such as auto rickshaw (47%), bus (10%), and sub-urban/local trains (10%).



**Fig. 33.4** Proportion of older adults suggested avoiding the following modes of transport post-lockdown (N = 221). *Source* The authors

In terms of age groups (Table 33.3), about 12% older adults aged 50–59 years considered travelling via bus after the lockdown lifted whereas none of the older adults aged 70–79 years considered bus would be safe to travel even after lockdown. Over 10% older adults aged 50–59 years perceived that sub-urban/local trains are safe while only 3.8% older adults aged 70–79 years considered it a safe mode after the lockdown. Similarly, over 37% older adults aged 50–59 years suggested that they would avoid auto rickshaws whereas 19.6% older adults aged 60–69 years considered auto rickshaws use should be avoided due to risk of contracting virus.

The result also demonstrates that as the people get older they rely more on slow modes of transport such as rickshaws than other faster shared modes such as buses, commuter trains, and taxi. Over 40% older adults aged 50–59 years opted for auto rickshaw; whereas more than 57% older adults aged 60–70 years and 80% older adults aged 80 and above selected auto rickshaw that can be used after lockdown. On the other hand, about 68% older adults aged 50–59 years; 84% aged 60–69 and 100% aged 80 and above perceived that rickshaw can be used as a safe mode during post-lockdown period. In contrast, over 23% older adults aged 70–79 years perceived that rickshaw ‘may be’ used as one of the safe modes once the lockdown get over. Surprisingly, the oldest old (80 years and above) perceived public transport to be either ‘can use’ or ‘avoid’ except taxi for which 40% of them opted ‘may be’ used during the post-lockdown period.

Table 33.4 exhibits association of risk perception with essential activities that the older adults performed during the pandemic. About 95% of older adults viewed that travelling in public transport is a high risk activity of contracting coronavirus. Also, using public toilets (92%), going to a salon (80%), going to a hospital (87%), and fetching water from a public tap (64%) have been perceived as high risk activities. The three low risk activities involved going to the office (36%), essential grocery-shopping (19%), and walking as a form of exercise (only 3% considered it risky). Looking from a gender lens, over 69% older men and 60% women suggested buying

**Table 33.3** Perceptions of older people using mode of transport after the lockdown (N = 221)

Modes of transport	50-59			60-69			70-79			80 and above		
	Can use	Avoid	May be	Can use	Avoid	May be	Can use	Avoid	May be	Can use	Avoid	May be
	Buses	11.9	77.6	10.4	8.9	78.6	12.5	0	88.5	11.5	19.8	80
Sub-urban/commuter trains	10.4	71.6	17.9	8.9	76.8	14.3	3.8	80.8	15.4	40	60	0
Auto rickshaw	40.3	37.3	22.4	57.1	19.6	23.2	57.7	26.9	15.4	80	20	0
Rickshaw	67.9	11.2	20.9	83.9	8.9	7.1	61.5	15.4	23.1	100	0	0
Taxi	53	27.6	19.4	53.6	19.6	26.8	61.5	15.4	23.1	60	0	40

**Table 33.4** Activities and risk of getting Coronavirus infection (N = 221)

Activities	Older men			Older women		
	High risk	Medium risk	Low risk	High risk	Medium risk	Low risk
Local shop	17.5	13.1	69.4	24.6	14.8	60.7
Clinic/hospital	84.8	1.2	14.4	90.2	1.6	8.2
Office	28.8	7.5	63.8	44.3	6.6	49.2
Morning/evening walk	2.5	51.9	45.6	3.3	57.4	39.3
Going salon	77.5	1.9	20.6	82.2	3.3	11.5
Travelling in pub trans	91.2	3.8	5	98.4	0	1.6
Pub toilet/bathroom	91.2	0.6	8.1	93.4	1.6	4.9
Fetching water from common tap	60	4.4	35.6	68.9	1.6	29.5
Get-together of friends	59.4	3.8	36.9	67.2	3.3	29.5
Family events	53.1	8.8	38.1	49.2	8.2	42.6
Meeting relatives	40	6.2	53.8	45.9	9.9	44.3
Allowing domestic help	48.8	8.1	43.1	52.5	0	47.5
To worship places	48.8	14.4	36.9	68.9	4.9	26.2

groceries (at local shop) carries the lowest risks. Besides, over 63% older men opined that going to office is a low risk activity during the pandemic; while about 49% older women viewed it to so. Contrary to this, about 29% older men considered that going office during the pandemic is highly risk activity whereas more than 44% older women perceived it to be highly risk activity.

The result also displays that higher proportion of older men (53.8%) perceived meeting relatives is a low risk activity than older women (44.3%). Similarly, over 43% older men were ready to allow their domestic help to enter their houses while 47.5% older women observed that allowing domestic help to enter the house is a low risk activity. In addition, about 49% older men perceived that going to worship places such as mosques, temple, churches, gurudwaras etc. as high risk activity during the pandemic while about 70% older women viewed that going to these worship places is a high risk activity. Contrary to it, about 37% older men regarded visiting worship places for prayer as low risk; at the same time 26.2% older women observed it to be low risk activity.

## Discussion

The COVID-19 has intensely influenced the perceived risk and subsequent safety issues of the older adults regarding their mobility. Many of them have not stepped out of their homes fearing the coronavirus infection and those who did venture out maintained the social distance guidelines. Since no effective vaccines are available yet, social distancing approach is one of the measures to prevent transmission of the infection (Huynh, 2020; Xie et al., 2020). Various countries with diverse cultures, customs, population, and economy have adapted different social distancing rules to prevent the transmission (Jaja et al., 2020). In addition, some of the studies with mathematical models have evidenced that social distancing breaks the chain of transmission path of the virus and thus helps to contain the pandemic (Lang et al., 2021; Regmi & Lwin, 2020). There is mixed early evidence on the effectiveness of social/physical distancing (Mushayabasa et al., 2020; Saunders-Hastings et al., 2017).

During the lockdown, people have substantially reduced using public transport such as bus, taxi (Uber etc.), car (as passenger), auto rickshaw, sub-urban railway due to anxiety associated with getting the infection. Various studies show that pandemics such as Ebola, H1N1, plague etc. adversely impacted the use of public transport and mobility of people particularly older adults being most vulnerable (Bajardi et al., 2011; Mitchell et al., 2011; SteelFisher et al., 2012). In this fear-induced atmosphere, the use of private vehicles such as scooters/bikes and cars will, noticeably, increase to maintain direct contact from getting infection. This is consistent with the growing body of literature on the changing modal choices due to risk of using public transport during Covid-19 across the globe (Bagdatli & Ipek, 2022; Chen et al., 2022; Zafri et al., 2022). Wise et al. (2020) assessed that risk awareness increased among the people during the beginning of the pandemic in the US, and people become more protective while travelling. Social distancing method has also discouraged people to take crowded public transport due to higher chances of infection (Huynh, 2020). WHO's recommendation of maintaining at least one metre physical distance to lessen the likelihood of COVID-19 contagion (Chu et al., 2020) is almost impossible to maintain in over-crowded cities like Dhaka, and even more so in cramped public transport (Jamal et al., 2022). This has driven people to take private vehicles and non-motorized vehicles such as walking to reduce close contact with others (CDC, 2020). The growing literature shows that the use of public transport itself is not risky if the passengers wear face masks, clean frequently, improve hygiene, and do not talk in close contact (Prather et al., 2020; Shen et al., 2020).

The pandemic has not equally impacted men and women; older women have used less public transport than older men in everyday mobility for essential activities. Although women perceived that they are more susceptible to coronavirus infection than men, if they go out, in this study, studies from other parts of the world report a different scenario where older men are more at risk than older women. Reports from China show that men accounted for 60% of death due to COVID-19 (Guan et al., 2020; Li et al., 2020b); whereas in Italy it is 70% (Onder et al., 2020); in USA the

figure is 60% (Cai, 2020). Bangladesh ministry of Health and Family Welfare (2020) reported that the death rates for men, due to COVID-19, are nearly 80% whereas it is about 21% for women. The reasons might be that men engage in more risky health behaviour than women, such as smoking, drinking, substance abuse, consequently jeopardizing their long term health (Ewemooje et al., 2020; Yi et al., 2020). Smoking not only adversely affects the lungs but also causes susceptibility to coronavirus as the smokers touch their lips more and thus making them more vulnerable.

The fear of COVID-19 infection has not only sharply reduced the demand of public transportation but also overturned the future sustainability of mobilities in cities as new 'social distancing' norms would restrict many essential and non-essential activities. The impact of COVID varied, for example in developed countries namely Germany, the United Kingdom, Canada, and the United States (Adams-Prassl et al., 2020) outings for socializing or leisure are perceived as risky whereas in developing countries going to salon, fetching water from a public tap and visiting clinic/hospital are perceived as higher risks (Gerard, Imbert & Orkin, 2020; Prayas Health Group, 2020; Tirachini, 2019). Walking has been perceived as the safest mode as older adults maintain social distancing while going out; even when they go for groceries they take precautionary measures such as wearing mask. Similarly, they walk to nearby areas for activities such as morning/evening walk and meeting neighbours for social interactions that enhance their mental health during the pandemic (Ajagbe et al., 2020).

However, there are some limitations to be considered while analyzing the study results. First is the inherent design of the study such as sampling technique being only restricted to people with smart phone users with internet access; could also limit generalizability of the study. Secondly, the study was conducted after the lockdown had eased in certain places, which can have its own psychological impact and this confounder could not be addressed through the questionnaire used in the study. These issues could have caused under or over reporting in the rate of psychological impact found in the study. Since a lion's share of study respondents were above the age of 50, it is likely that participants will have had a history of underlying health conditions and so there could be a sampling bias in the study. This indicates a need for more systematic and longitudinal assessment of psychological needs of the population, which can help the government in formulating holistic interventions for affected individuals.

## Conclusion

The COVID-19 pandemic has led to a distinct transition in people's perceptions and behaviour, which will likely affect future urban transport demand as well. As cities begin easing out lockdown restrictions, public transport services are working in limited capacity, with restrictive measures to comply with social distancing norms. There is heightened fear of risk regarding shared modes of transport, as people switch to more private inter-mediate forms of transport. Since Bangladesh is struggling to

reduce its dependence on private motor vehicles this crisis may further perpetuate adverse outcomes created by high motorization rates. Given that Dhaka is one of the most densely populated cities in the world, with limited road space, it cannot afford high private motor vehicles as commuters are predominantly dependent on public transport. In this context, transport authorities and the government should raise awareness and motivate mass of people to use public transport by taking appropriate measures that will protect users from virus transmission. Besides, the government should ensure quality and adequate transport infrastructure because it would facilitate users with safe, comfortable, and timely travel to destinations. The safe and affordable access to public transport, in turn, would also enable people to access health, work, and social life which would help to achieve SDGs of sustainable transport (SDG 11.2), decent work and economic growth (SDG 8), good health and wellbeing (SDG 3) and reducing inequalities (SDG 10).

As the study found walking and cycling are preferred modes to move around for essential activities during the pandemic, developing infrastructures such as walkways and security issues etc. may be an alternate policy to promote safe and sustainable transportation. Besides, there is a need to understand the possible nature of the shift in mobility patterns and devise appropriate strategies to promote sustainable modes of travel in the coming days. It is noteworthy that mobility and transport are not gender-neutral by their nature—men and women have different mobility patterns and needs. As the unlocking process has started in many parts of the country, government and transport personnel should provide proper guidelines to passengers for their safe travel during the pandemic. To augment the public transport government should strictly implement Covid-19 protocols such as physically distanced seating, open windows, frequent sanitization of the vehicles, obligatory masks for all passengers, crowd monitoring, and thermal screening that would help to reduce the risk of contagion. Thus safe and equitable access to public transport and subsequent mobility is an essential dimension of older adults right to the city and to attain United Nation's goal of 'Sustainable Cities and Communities'.

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