

DIFFICULTIES FACED BY FEMALE FACULTY MEMBERS OF UNIVERSITY COLLEGE OF MEDICINE AND DENTISTRY AND UNIVERSITY OF LAHORE TEACHING HOSPITAL WHILE COMMUTING TO WORK

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ABSTRACT

Background: Commuting is an important aspect of modern working life and has a substantial impact on the physical, psychological, and professional well-being of employees. Female healthcare workers frequently face multiple commuting-related difficulties including traffic congestion, inadequate public transportation, long travel durations, overcrowding, and fear of harassment. In developing countries such as Pakistan, these barriers may negatively influence women's occupational performance and work-life balance.

Objective: To determine the difficulties faced by female faculty members working at University College of Medicine and Dentistry (UCMD) and University of Lahore Teaching Hospital (ULTH) while commuting to work.

Methodology: An analytical cross-sectional study was conducted at UCMD and ULTH, Lahore, Pakistan, over a period of six months. A total of 250 female participants including doctors, nurses, paramedical staff, and basic sciences faculty members were recruited through convenient sampling. Data were collected using a structured self-administered questionnaire developed after an extensive literature review and pilot testing. Sociodemographic characteristics, transportation modes, commuting duration, and commuting-related difficulties were assessed. Data were analyzed using SPSS version 25. Frequencies, percentages, and chi-square tests were applied where appropriate. A p-value of <0.05 was considered statistically significant.

Conclusion: Female healthcare faculty members experience considerable difficulties while commuting to work, which may adversely affect their health, workplace efficiency, and personal lives. Improving transportation safety, accessibility, and gender-sensitive travel policies may help promote sustainable mobility and better working conditions for women in healthcare settings.

KEYWORDS: Commuting, Female healthcare workers, Public transportation, Occupational stress, Women mobility, Pakistan.

INTRODUCTION

Commuting is an essential component of modern society and represents a common form of labor mobility worldwide. The term "commute" refers to the routine daily travel between an individual's residence and workplace. ¹ Different modes of commuting are used globally, including private cars, motorcycles, taxis, buses, trains, and conventional public transportation systems. ² Rapid urbanization and increasing workforce participation have significantly increased travel demands, particularly among working women.

The rise in female employment has resulted in a considerable increase in the proportion of women commuting independently to workplaces.³ However, women generally exhibit different travel patterns compared to men and often prefer shorter commuting distances and durations due to household responsibilities, childcare obligations, accessibility concerns, and workplace proximity.⁴ Additional factors such as overcrowding, inadequate transport facilities, unsafe travel environments, and gender-based harassment on public transportation further influence women's commuting behaviors.⁵

In many developing countries, poor transportation infrastructure and insecurity during travel are major barriers to women's economic participation and career advancement.³ Pakistan has a relatively low female labor force participation rate of approximately 25%, which remains substantially lower than countries with similar socioeconomic profiles.⁶ Several interconnected factors including cultural norms, social restrictions, safety concerns, crime, and limited mobility outside the home contribute to reduced workforce participation among Pakistani women.⁶

Female workers in Pakistan encounter numerous difficulties while commuting through public transportation systems, which negatively affect their physical health, emotional well-being, workplace productivity, family relationships, and social interactions.⁷ Studies conducted in recent years have demonstrated that female doctors face substantial professional and personal challenges due to domestic, cultural, and occupational expectations. Commute-related issues have been identified as an important barrier affecting career progression among female healthcare professionals.⁸ Similarly, research among rural nurses reported that prolonged commuting adversely affected both personal and professional aspects of life.⁹

Furthermore, the COVID-19 pandemic has significantly altered commuting behaviors worldwide, resulting in reduced public transport utilization and increased concerns regarding overcrowding and infection risk.¹⁰ Despite increasing evidence regarding commuting-related challenges among workers, limited literature specifically addresses the commuting experiences of female healthcare faculty members in Pakistan.

Therefore, this study aims to identify the difficulties faced by female faculty members of University College of Medicine and Dentistry (UCMD) and University of Lahore Teaching Hospital (ULTH) while commuting to work. The findings of this study may provide valuable evidence for policymakers, healthcare administrators, and urban planners to develop safer, gender-sensitive transportation systems and sustainable mobility interventions for working women.

MATERIALS AND METHODS

Study Design

An analytical cross-sectional study was conducted.

Study Setting

The study was carried out at:

University College of Medicine and Dentistry (UCMD)

University of Lahore Teaching Hospital (ULTH), Lahore, Pakistan.

Study Duration

The duration of the study was six months. (From 15.10.2021 to 15.04 2022.)

Study Population

The study population included:

- Female doctors (house officers, medical officers, and consultants)
- Nurses
- Paramedical staff
- Basic sciences faculty members working at UCMD and ULTH.

Sample Size

The sample size was calculated using a 95% confidence level, 5% margin of error, and an estimated prevalence of commuting difficulties among female workers of 80%. The final calculated sample size was 250 participants.

Sampling Technique

A convenient sampling technique was used for participant recruitment.

Inclusion Criteria

The following participants were included in the study:

- Female doctors, nurses, paramedical staff, and basic sciences faculty members.
- Employees working at UCMD or ULTH for more than one year.

Exclusion Criteria

The following participants were excluded:

- Physically handicapped healthcare workers.
- Faculty members residing in campus hostels at UCMD or ULTH.

Study Variables

Dependent Variable

- Difficulties faced while commuting to work.

Independent Variables

- Age
- Marital status
- Professional designation

- Mode of commuting
- Duty hours

Operational Definition

Commuting was defined as the regularly recurring travel between a person's place of residence and workplace where the individual travels outside the boundaries of their residential community.¹

Data Collection Procedure

Data were collected using a structured self-administered questionnaire developed after an extensive review of relevant literature.^{4,7,11} the questionnaire consisted of sections assessing:

- Sociodemographic characteristics
- Transportation modes
- Commuting duration
- Safety concerns
- Harassment experiences
- Physical and psychological effects related to commuting.

A pilot study was conducted among 25 faculty members to evaluate the clarity and reliability of the questionnaire. Written informed consent was obtained from all participants before data collection. Each questionnaire required approximately 15 minutes to complete.

Data Analysis

Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics including frequencies and percentages were calculated for categorical variables. Chi-square tests were applied to determine associations between variables where appropriate. A p-value of less than 0.05 was considered statistically significant.

ETHICAL CONSIDERATIONS

The study protocol was reviewed and approved by the Ethical Review Committee of UCMD-UOL, Lahore. Written informed consent was obtained from all participants prior to enrollment. Confidentiality and anonymity of participants were strictly maintained throughout the study. Participation was entirely voluntary, and participants were informed of their right to decline or withdraw from the study at any stage without any consequences. Furthermore, COVID-19 preventive guidelines including social distancing, face mask use, and hand hygiene practices recommended by the National Command and Operation Center (NCOC), Pakistan, were followed during the data collection process.

RESULTS

A total of 250 female faculty members participated in the study, yielding a response rate of 100%. Participants included doctors, nurses, paramedical staff, and basic sciences faculty members working at University College of Medicine and Dentistry (UCMD) and University of Lahore Teaching Hospital (ULTH), Lahore.

Sociodemographic Characteristics of Participants

The majority of participants belonged to the age group of 26–35 years (44.8%), followed by 36–45 years (30.4%). Most respondents were married (58.0%). Doctors constituted the largest professional group (42.8%), followed by nurses (31.2%), paramedical staff (16.0%), and basic sciences faculty members (10.0%).

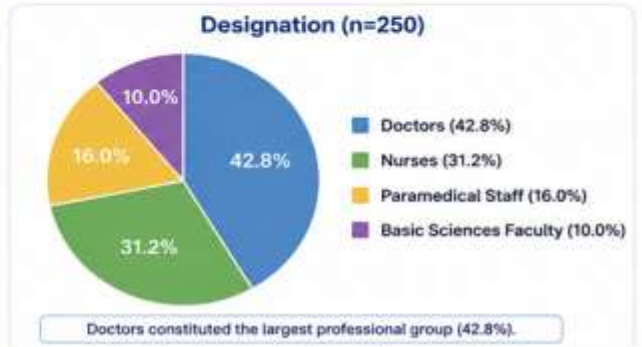
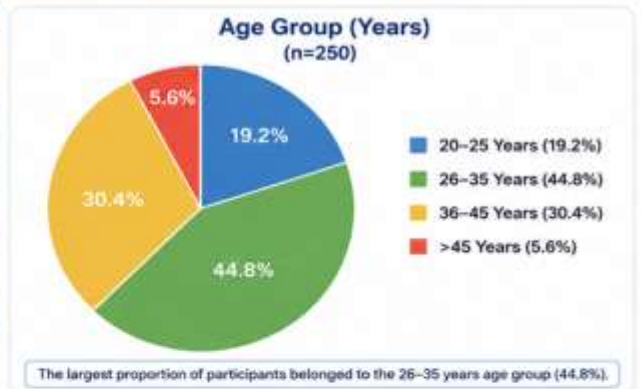
Table 1: Sociodemographic Characteristics of Participants (n=250)

Variable	Frequency (n)	Percentage (%)
Age Group (Years)		
20–25	48	19.2
26–35	112	44.8
36–45	76	30.4
>45	14	5.6
Marital Status		
Married	145	58.0
Unmarried	105	42.0
Designation		
Doctors	107	42.8
Nurses	78	31.2

Variable	Frequency (n)	Percentage (%)
Paramedical Staff	40	16.0
Basic Sciences Faculty	25	10.0

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n = Frequency; % = Percentage

Commuting Patterns Among Participants

Private vehicles were the most commonly used mode of transportation (40.4%), followed by public transport (32.8%), ride-hailing services (16.4%), and carpooling (10.4%). Most participants reported commuting durations between 30–60 minutes (46.8%), while 28.0% reported travel durations exceeding one hour.

Table 2: Commuting Characteristics of Participants

Variable	Frequency (n)	Percentage (%)
Mode of Transportation		
Private Car/Bike	101	40.4
Public Transport	82	32.8
Ride-Hailing Services	41	16.4
Carpooling	26	10.4
Daily Commute Duration		
<30 minutes	63	25.2
30–60 minutes	117	46.8
>60 minutes	70	28.0
Duty Hours per Day		
≤8 hours	96	38.4
>8 hours	154	61.6

Difficulties Faced During Commuting

The majority of participants reported experiencing at least one difficulty while commuting to work. Traffic congestion was the most commonly reported issue (72.4%), followed by fatigue and physical exhaustion (64.8%), fear of harassment (52.0%), overcrowding in public transport (49.2%), and delayed arrival at the workplace (46.4%). Psychological effects associated with commuting included stress, anxiety, irritability, and reduced concentration at work. Participants using public transportation reported significantly greater dissatisfaction and safety concerns compared with private vehicle users.

Table 3: Difficulties Faced While Commuting to Work

Difficulty	Frequency (n)	Percentage (%)
Traffic congestion	181	72.4
Fatigue/Physical exhaustion	162	64.8
Fear of harassment	130	52.0
Overcrowding in transport	123	49.2
Delayed arrival at workplace	116	46.4
Stress and anxiety	109	43.6
Sleep disturbance	88	35.2
Musculoskeletal pain	81	32.4

The findings of the present study are consistent with previous international studies reporting associations between prolonged commuting and physical as well as psychological health complaints among female workers. Similar studies conducted in Bangladesh and South Korea demonstrated that traffic congestion and longer commuting durations were significantly associated with stress, anxiety, sleep disturbances, and reduced work-life balance.^{12,15}

Association Between Commute Duration and Work-Related Difficulties

A statistically significant association was observed between prolonged commute duration (>60 minutes) and work-related stress, fatigue, and sleep disturbances ($p<0.05$). Participants with longer commuting times reported poorer work-life balance and greater physical exhaustion compared with those having shorter commute durations.

Table 4: Association Between Commute Duration and Selected Difficulties

Difficulty	<60 min n (%)	>60 min n (%)	p-value
Stress and anxiety	54 (30.0)	55 (78.6)	0.001
Fatigue	96 (53.3)	66 (94.3)	0.002
Sleep disturbance	42 (23.3)	46 (65.7)	0.001
Delayed work performance	49 (27.2)	50 (71.4)	0.003

These findings are supported by previous studies demonstrating that longer commuting duration adversely affects occupational performance, emotional well-being, and quality of life among working women.^{11,19,20}

Association Between Mode of Transportation and Fear of Harassment

Fear of harassment was reported more frequently among public transport users (68.3%) compared with participants using private transportation (29.7%). The association between transportation mode and fear of harassment was statistically significant ($p<0.001$).

Table 5: Association Between Transportation Mode and Fear of Harassment

Mode of Transportation	Fear of Harassment Present n (%)	Fear of Harassment Absent n (%)	p-value
Public Transport	56 (68.3)	26 (31.7)	
Private Vehicle	30 (29.7)	71 (70.3)	<0.001
Ride-Hailing/Carpooling	44 (65.7)	23 (34.3)	

These findings are comparable to studies conducted in Pakistan and other developing countries where women using public transportation frequently reported harassment, insecurity, and psychological distress during travel.^{18,26}

Summary of Findings

Overall, the study demonstrated that female healthcare faculty members face substantial commuting-related challenges that negatively influence their physical health, mental well-being, occupational efficiency, and work-life balance. Long commuting durations, traffic congestion, public transportation difficulties, and safety concerns emerged as major barriers affecting women's mobility and professional productivity.

DISCUSSION

The present study assessed the difficulties faced by female faculty members of University College of Medicine and Dentistry (UCMD) and University of Lahore Teaching Hospital (ULTH) while commuting to work. The findings demonstrated that commuting-related challenges are highly prevalent among female healthcare workers and substantially affect their physical well-being, psychological health, workplace productivity, and work-life balance.

In the current study, traffic congestion was identified as the most frequently reported commuting difficulty. This finding is consistent with studies conducted in Bangladesh and Pakistan, where urban traffic congestion was strongly associated with stress, delayed work performance, and physical exhaustion among working women.^{12,25} Rapid urbanization, inadequate transportation infrastructure, and increasing vehicle density in metropolitan cities such as Lahore may contribute significantly to commuting burdens faced by healthcare workers.

Fatigue and physical exhaustion were also commonly reported among participants, particularly among those with prolonged commuting durations and extended duty hours. Similar findings were observed in studies conducted in South Korea and Australia, which demonstrated that long commuting times negatively affect energy levels, sleep quality, and family life.^{15,21} Healthcare professionals already experience demanding schedules and high occupational stress; therefore, prolonged daily travel may further aggravate burnout and reduce overall job satisfaction.

The present study further revealed that female healthcare workers using public transportation experienced greater stress and dissatisfaction compared with those using private transportation. Overcrowding, delayed travel, lack of comfort, and inadequate public transport facilities were major concerns reported by participants. These findings correspond with previous international studies indicating that women using public transportation frequently experience reduced emotional well-being and poor life satisfaction.²⁰ In developing countries, insufficient gender-sensitive transport systems continue to limit women's mobility and participation in the workforce.⁵

An important finding of this study was the high prevalence of fear of harassment during commuting, particularly among public transport users. More than half of the participants reported concerns regarding harassment and personal safety while traveling. This observation is supported by previous studies conducted in Lahore and Karachi, which identified verbal harassment, staring, inappropriate comments, and unsafe public environments as major barriers affecting women's mobility and mental well-being.^{18,26} Fear of harassment not only affects psychological health but may also discourage women from pursuing professional opportunities requiring long-distance travel.

The current study also demonstrated a statistically significant association between prolonged commuting duration and stress, fatigue, sleep disturbances, and reduced work performance. Similar results were reported by Gimenez-Nadal and Molina, who observed that longer commuting hours contribute to work-family conflict and reduced quality of life among working women.¹¹ Likewise, Korean research involving a large sample of workers found that long commuting durations were significantly associated with sleep problems and poor work-life balance, particularly among women.¹⁵

Married participants and those with longer working hours reported greater commuting-related burden in the present study. This finding may be explained by the additional domestic and caregiving responsibilities commonly experienced by women in South Asian societies. Previous studies conducted in Japan and Turkey similarly concluded that women often prefer shorter commuting distances because of household responsibilities and family obligations.^{17,23}

The COVID-19 pandemic further complicated commuting experiences by increasing anxiety regarding overcrowding and infection risk during public transportation use. Similar observations were reported in studies evaluating travel behavior during the pandemic period.^{10,13} Female healthcare workers, being frontline professionals, were particularly vulnerable to these transportation-related challenges during the pandemic.

Overall, the findings of this study emphasize that commuting difficulties among female healthcare faculty members are multidimensional and influenced by transportation systems, workplace demands, social norms, and safety concerns. Addressing these issues is essential to improve women's occupational well-being, workforce participation, and healthcare productivity in Pakistan.

CONCLUSION

The present study concludes that female faculty members working at University College of Medicine and Dentistry (UCMD) and University of Lahore Teaching Hospital (ULTH) face considerable difficulties while commuting to work. Traffic congestion, prolonged travel duration, overcrowding, fatigue, stress, fear of harassment, and inadequate public transportation emerged as major commuting-related challenges.

Long commuting times were significantly associated with poor work-life balance, sleep disturbances, physical exhaustion, and reduced workplace efficiency. Public transportation users experienced greater safety concerns and psychological stress compared with private vehicle users.

These findings highlight the urgent need for safer, accessible, and gender-sensitive transportation systems to support female healthcare professionals. Improving commuting conditions may positively influence women's physical and mental well-being, occupational productivity, and long-term professional retention within the healthcare sector.

RECOMMENDATIONS

Based on the findings of the present study, the following recommendations are proposed:

1. **Improvement of Public Transportation Systems**

Government authorities should improve the quality, accessibility, and reliability of public transportation, particularly for working women in urban areas.

2. **Implementation of Gender-Sensitive Transport Policies**

Women-only transport sections, increased surveillance systems, CCTV monitoring, and stricter implementation of anti-harassment laws should be ensured to improve safety during commuting.^{18,26}

3. **Provision of Institutional Transport Facilities**

Healthcare institutions and universities should provide dedicated transport services for female staff to reduce commuting burden and improve punctuality and safety.

4. **Flexible Duty Hours and Shift Scheduling**

Flexible working hours and balanced duty schedules may help reduce commuting stress and improve work-life balance among female healthcare workers.^{11,15}

5. **Promotion of Carpooling and Ride-Sharing Programs**

Organized carpooling systems may reduce transportation expenses, traffic congestion, and travel-related stress.²⁴

6. **Mental Health and Occupational Support Programs**

Healthcare institutions should establish counseling and occupational wellness programs for employees experiencing stress, anxiety, or burnout associated with commuting difficulties.

7. **Further Research**

Multicenter studies with larger sample sizes should be conducted to explore commuting-related challenges among female healthcare workers across different regions of Pakistan.

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