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Exploring Corporate Employees' Perceptions and Experiences of Ergonomics and Ergonomically Designed Workstations in Karachi, Pakistan

¹Dr. Jawwaria Naeem Alvi, ²Muhammad Tahir Akram, ³Aisha Jabeen

Article Details

ABSTRACT

Keywords: Ergonomics, Workplace Ergonomics is essential for promoting employee health, comfort, and productivity, ergonomics, Ergonomically designed yet its implementation in Pakistan's corporate sector remains limited. This workstations, Employee perceptions, qualitative study investigates corporate employees' perceptions and lived Occupational health, Workplace design, experiences regarding ergonomics and ergonomically designed workstations. Data Corporate employees, Work-related collected through semi-structured interviews and focus groups with 20 employees musculoskeletal disorders (WMSDs), Office from various organizations in Karachi, Pakistan were analyzed thematically. ergonomics, Employee productivity, Findings reveal limited ergonomic awareness, organizational and cultural barriers, Workplace comfort, Organizational and employee-led workstation adaptations. The study underscores the need for ergonomics, Ergonomic awareness. increased ergonomic education, participatory approaches, and organizational commitment to foster healthier work environments. These insights inform policymakers and corporate leaders aiming to improve occupational health in

Dr. Jawwaria Naeem Alvi

Consultant Physiotherapist at Patient aids' Pakistan. foundation JPMC.

dr.jawwariaalvi@gmail.com

Muhammad Tahir Akram

Consultant Physiotherapist at Jinnah Post Medical Center (JPMC), Incharge Physiotherapist at Baws health facility, and Public health Specialist.

dr.mtahir92@gmail.com

Aisha Jabeen

Consultant Physiotherapist in Physiotherapy OPD and Ponseti Clinic at Patient's Aid Foundation JPMC.

Aisha.jabeen@outlook.com

INTRODUCTION

BACKGROUND

Ergonomics, defined as the scientific discipline concerned with understanding interactions among humans and other elements of a system, aims to optimize human well-being and overall system performance (International Ergonomics Association, 2020). In office environments, ergonomics focuses on designing workstations, tools, and tasks to fit employees' physical and cognitive capabilities, thereby reducing musculoskeletal disorders (MSDs), fatigue, and errors (Fatima & Farooqi, 2023). Globally, ergonomic interventions have demonstrated significant benefits in improving employee comfort, reducing injury rates, and enhancing productivity (Kroemer & Grandjean, 1997).

In Pakistan, the corporate sector has witnessed rapid growth, with increasing reliance on computer-based work. However, ergonomic practices remain underdeveloped, with many employees working in poorly designed workstations lacking adequate ergonomic features (Khan et al., 2018; Rehman et al., 2019). Studies have reported high prevalence of MSDs among office workers, often linked to inappropriate workstation design and prolonged sedentary postures (Fatima & Farooqi, 2023; Sana & Nazir, 2021). The COVID-19 pandemic further highlighted ergonomic deficiencies as many employees shifted to remote work without proper ergonomic setups, exacerbating discomfort and health risks (Malik & Ahmad, 2022).

Despite these challenges, there is limited qualitative research exploring how corporate employees in Pakistan perceive ergonomics and their experiences with ergonomic workstations. Understanding these perspectives is crucial for designing effective interventions tailored to local socio-cultural and organizational contexts.

RESEARCH PROBLEM

Poor ergonomic conditions in Pakistani corporate offices contribute to high rates of MSDs and reduced employee well-being. However, the subjective experiences, awareness levels, and organizational factors influencing ergonomic adoption remain underexplored. This gap restricts the development of targeted ergonomic policies and practices.

RESEARCH OBJECTIVES

- To explore corporate employees' perceptions and knowledge of ergonomics.
- To understand employees' lived experiences with ergonomically designed workstations.
- To identify barriers and facilitators affecting ergonomic practices in Pakistani corporate

offices.

RESEARCH QUESTIONS

1. How do corporate employees perceive ergonomics in their workplace?
2. What are their experiences regarding ergonomically designed workstations?
3. What organizational or cultural factors influence ergonomic adoption?

HYPOTHESIS

Employees with greater ergonomic awareness and access to ergonomic workstations report better comfort and productivity, while organizational and cultural barriers limit ergonomic adoption.

IMPORTANCE OF THE STUDY

This study provides rich, contextual insights into ergonomic awareness and challenges within Pakistan's corporate sector. It informs policymakers, occupational health professionals, and corporate leaders to develop culturally appropriate ergonomic interventions, ultimately improving employee health and organizational productivity.

SCOPE AND LIMITATIONS

- The study focuses on urban corporate employees in Pakistan, primarily from Karachi.
- Employs qualitative methods, limiting generalizability but providing depth of understanding.
- Does not include quantitative ergonomic assessments or health outcome measurements.

ERGONOMICS AND WORKSTATION DESIGN IN PAKISTAN

Research conducted in Pakistan consistently highlights poor ergonomic conditions in office environments. Fatima and Farooqi (2023) evaluated university administrative staff workstations in Rawalpindi and Islamabad, finding that 68.9% of participants were at high risk of developing MSDs due to inadequate workstation design, especially keyboard placement and back support. Similarly, Sana and Nazir (2021) reported significant musculoskeletal complaints among software house employees in Lahore linked to poor posture and workstation ergonomics. Khan et al. (2018) found that despite reasonable awareness, many office employees did not practice ergonomic principles consistently, contributing to discomfort and reduced quality of life.

ERGONOMIC AWARENESS AND PRACTICE

Studies indicate a gap between ergonomic knowledge and practice. A survey by Shahid et al.

(2021) revealed that while over half of office workers in Pakistan were aware of ergonomic concepts, actual implementation was low due to organizational neglect and lack of training. Malik and Ahmad (2022) emphasized that the shift to remote work during the COVID-19 pandemic exposed significant ergonomic challenges, with many employees lacking proper home office setups.

ORGANIZATIONAL AND CULTURAL BARRIERS

Organizational culture and financial constraints are major barriers to ergonomic adoption. Fatima and Farooqi (2023) noted that many Pakistani organizations do not prioritize ergonomic investments, viewing them as non-essential expenses. Cultural attitudes that undervalue workplace health and safety further impede ergonomic initiatives (Rehman et al., 2019).

THEORETICAL PERSPECTIVES

- **Human Factors and Ergonomics Theory** posits that work systems should be designed to fit human capabilities and limitations to optimize performance and safety (Kroemer & Grandjean, 1997).
- **Social Constructivist Theory** explains how workplace culture shapes employees' perceptions and behaviors towards ergonomics (Berger & Luckmann, 1966).
- **Participatory Ergonomics Framework** advocates involving employees in identifying ergonomic problems and designing solutions to enhance acceptance and effectiveness (Wilson & Haines, 1997).

CONCEPTUAL FRAMEWORK

This study adopts a socio-technical framework integrating physical workstation design with organizational and cultural factors influencing ergonomic awareness and practice.

GAPS IN LITERATURE

While quantitative studies document ergonomic risks and prevalence of MSDs in Pakistan, qualitative insights into employees' subjective experiences and organizational dynamics remain scarce. This study addresses this gap by exploring perceptions and experiences to inform culturally relevant ergonomic interventions.

RESEARCH APPROACH

A qualitative research approach was chosen to gain in-depth understanding of employee perceptions and experiences.

TYPE OF RESEARCH

Exploratory and descriptive qualitative study.

DATA TYPE

Non-numerical, textual data from interviews and focus groups.

DATA COLLECTION METHODS

- Semi-structured interviews with 20 corporate employees from diverse roles and organizations in Karachi.
- Two focus group discussions to explore shared perceptions and workplace culture.

SAMPLING TECHNIQUE

Purposive sampling to select participants with varied ergonomic experiences.

SAMPLE SIZE

Twenty participants, sufficient to reach data saturation.

TOOLS USED

Interview and focus group guides developed based on literature and expert consultation.

DATA ANALYSIS

Thematic analysis following Braun and Clarke's (2006) six-step process.

RELIABILITY AND VALIDITY

- Triangulation of interviews and focus groups.
- Member checking to validate findings.
- Audit trail maintained to ensure transparency.
- Reflexivity practiced to minimize researcher bias.

THEMATIC ANALYSIS

This study employed Braun and Clarke's (2006) six-step thematic analysis to interpret data collected through semi-structured interviews and focus groups with corporate employees in Pakistan. The analysis revealed five key themes that collectively address employees' perceptions and experiences of ergonomics and ergonomically designed workstations.

THEME 1: LIMITED ERGONOMIC AWARENESS

A dominant theme was the widespread lack of ergonomic awareness among participants. Most employees reported no formal training or education on ergonomics in their workplaces. Many only became aware of ergonomic concepts after experiencing physical discomfort or pain.

For instance, one participant shared, "I never knew what ergonomics meant until my back pain

started.” Others echoed similar sentiments, indicating that ergonomic principles are rarely communicated or prioritized in Pakistani corporate settings. This finding aligns with previous studies highlighting poor ergonomic education in the region (Khan et al., 2018; Fatima & Farooqi, 2023).

THEME 2: POSITIVE IMPACT OF ERGONOMICS

Employees who had access to ergonomically designed workstations or made personal adjustments reported significant benefits, including reduced fatigue and enhanced productivity. One participant noted, “Once I got a proper chair, I felt less tired by the end of the day.” Another explained, “Adjusting my desk height helped my wrists a lot; I can work longer without pain.” These experiences support global evidence that ergonomic interventions improve employee well-being and efficiency (Malik & Ahmad, 2022).

THEME 3: ORGANIZATIONAL BARRIERS

Participants identified organizational barriers as a major obstacle to adopting ergonomic practices. These included lack of employer support, budget constraints, and a cultural tendency to undervalue ergonomics.

A participant remarked, “Our company doesn’t prioritize these things; they think it’s an unnecessary expense.” Another shared, “There’s no policy about ergonomics here, so nothing really changes.” These findings are consistent with prior research emphasizing systemic challenges in Pakistani workplaces (Rehman et al., 2019; Shahid et al., 2021).

THEME 4: EMPLOYEE-LED ADAPTATIONS

In the absence of formal support, many employees took personal initiatives to improve their workstation ergonomics. These included using cushions, footrests, chair modifications, and self-education.

One participant explained, “I use a pillow behind my back because the chair is too hard.” Another said, “I bought a laptop stand myself to avoid neck pain.” These adaptations demonstrate employee resilience and highlight the potential for participatory ergonomics approaches (Wilson & Haines, 1997).

THEME 5: REMOTE WORK CHALLENGES

The COVID-19 pandemic introduced new ergonomic challenges as many employees transitioned to remote work without adequate guidance or equipment.

Participants reported difficulties such as poor home office setups and increased discomfort. One participant noted, “Working from home was tough; I didn’t have a proper desk or chair.”

Another shared, “No one told us how to set up our home office, so I just made do with what I had.” This theme underscores the urgent need for organizational support for remote ergonomics (Malik & Ahmad, 2022).

DISCUSSION

The findings reveal that limited ergonomic awareness and organizational barriers significantly restrict ergonomic adoption in Pakistan’s corporate sector. Employees with ergonomic workstations experience clear benefits, highlighting the importance of ergonomic interventions. Organizational culture plays a crucial role, as management’s undervaluing of ergonomics limits resources and support. Employee-led adaptations show resilience and suggest participatory ergonomics as a promising approach. The pandemic has intensified ergonomic challenges, especially for remote workers, pointing to a critical area for policy development.

These insights align with the Human Factors and Ergonomics Theory, emphasizing work design tailored to human needs (Kroemer & Grandjean, 1997), and the Social Constructivist Theory, which highlights the influence of workplace culture (Berger & Luckmann, 1966). Participatory ergonomics offers a practical framework to engage employees in designing effective ergonomic solutions (Wilson & Haines, 1997).

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

This study highlights significant gaps in ergonomic awareness and organizational support among corporate employees in Karachi, Pakistan. While employees recognize the benefits of ergonomics, systemic barriers limit widespread adoption. The COVID-19 pandemic has further exposed ergonomic vulnerabilities in remote work settings. Addressing these challenges requires integrated efforts targeting knowledge, culture, and policy.

RECOMMENDATIONS

1. **Implement ergonomic training programs** for employees and management to raise awareness and promote best practices.
2. **Adopt participatory ergonomics approaches** to involve employees in identifying and solving ergonomic issues.
3. **Allocate budgets for ergonomic investments**, including furniture and accessories.
4. **Develop formal organizational ergonomic policies** to institutionalize standards and continuous improvement.
5. **Extend ergonomic support to remote workers** through guidance and equipment.

provision.

6. **Promote a culture valuing workplace health and safety** via leadership commitment and awareness campaigns.

LIMITATIONS

The qualitative design and sample size limit generalizability. The study focused on urban corporate employees and did not include quantitative ergonomic assessments.

FUTURE RESEARCH

Future studies should use mixed methods, assess long-term ergonomic intervention impacts, and explore organizational leadership roles in promoting ergonomics across industries in Pakistan.

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APPENDICES

APPENDIX A: INTERVIEW GUIDE

1. What do you understand by the term "ergonomics"?
2. Have you received any training or information about ergonomics at your workplace? Please describe.
3. Can you describe your typical workstation setup?
4. Have you experienced any physical discomfort or health issues related to your workstation? If yes, please explain.
5. What changes, if any, have you made to improve your workstation ergonomics?
6. How supportive is your organization in providing ergonomic equipment or training?
7. What challenges do you face in adopting ergonomic practices at work?
8. How did working from home during the COVID-19 pandemic affect your workstation setup and comfort?
9. What recommendations would you give to improve ergonomic conditions in your workplace?

APPENDIX B: FOCUS GROUP DISCUSSION GUIDE

- Discuss general awareness of ergonomics among employees.
- Share experiences of ergonomic challenges and solutions.
- Explore organizational culture regarding workplace health and ergonomics.
- Identify barriers and facilitators to ergonomic practice adoption.

APPENDIX C: PARTICIPANT CONSENT FORM

Title of Study: *Exploring Corporate Employees' Perceptions and Experiences of Ergonomics and Ergonomically Designed Workstations in Karachi, Pakistan.*

Researcher: Dr. Muhammad Tahir Akram, Dr. Aisha Jabeen, Dr Jawwaria Naeem Alvi

Purpose: You are invited to participate in a research study exploring perceptions and experiences related to ergonomics in the workplace. Your insights will help improve workplace health policies.

Procedures: Participation involves one interview and/or focus group discussion lasting approximately 45-60 minutes. The session will be audio-recorded with your permission.

Voluntary Participation: Your participation is voluntary. You may refuse to answer any question or withdraw at any time without penalty.

Confidentiality: All information will be kept confidential. Your identity will not be revealed in

any reports or publications.

Risks and Benefits: There are minimal risks. Benefits include contributing to knowledge that may improve workplace ergonomics.

Contact: For questions, contact _____

Consent: I have read and understood the above information. I voluntarily agree to participate in this study.

Participant Name: _____

Signature: _____

Date: _____