

## EXPLORING CHALLENGES FACED BY OT PERSONNEL IN OPERATION THEATER AT TERTIARY CARE HOSPITAL

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### Abstract

**Background and Objectives:** In a tertiary care hospital, the operating room (OT) is a high-stress environment where employees face problems such as stress, burnout, poor communication, limited resources, and ergonomic concerns. These problems can affect both staff and patient safety. This study, which was carried out at the Ghurki Teaching Trust Hospital in Lahore, intends to determine the main difficulties that the OT staff encounter, evaluate the effectiveness of cooperation and communication in resolving these difficulties, analyze the sufficiency of available resources, and investigate stress and burnout levels. These results offer a thorough grasp of the elements influencing well-being and performance in the OT environment.

**Methodology:** A descriptive cross-sectional study was conducted over 3–4 months at Ghurki Teaching Trust Hospital, Lahore, involving 150 OT staff (surgeons, nurses technicians, supporting staff and technologists) selected through convenient sampling. Data were collected using a structured questionnaire covering workload, stress, communication barriers, burnout, resource availability, teamwork, and training. Analysis was performed using SPSS version 25 with Chi-Square tests applied to assess variable relationships at a 0.05 significance level and 95% confidence interval.

**Results:** Among 150 OT staff, most were female nurses under 45. Key issues included stress (52.7%), burnout (60.7%), and equipment problems (66.7% sterilization, 60% failures). Half reported communication and hierarchy challenges. While many felt supported (60.7%) and involved (55.3%), gaps in stress training and resource adequacy persist, affecting well-being and efficiency.

**Conclusion:** This study highlights key challenges faced by OT staff at Ghurki Hospital, including stress, burnout, communication gaps, and resource limitations. Addressing these issues through better support, training, and communication can enhance staff well-being and patient care.

### INTRODUCTION

Operating Theater (OT) personnel are central to the success of surgical procedures, particularly in tertiary

care hospitals handling complex, high-risk surgeries. The OT environment is fast-paced and high-pressure,

requiring seamless coordination among surgeons, anesthetists, nurses, and technicians. Despite their crucial roles, OT staff face various challenges impacting performance, well-being, and patient safety such as stress, fatigue, communication barriers, equipment issues, and infection control demands. These challenges are especially pressing in high-stakes settings, where the effectiveness of teamwork directly affects surgical quality and patient outcomes. Healthcare professionals, especially doctors, bear immense pressure. As lead decision-makers, surgeons must perform intricate procedures with constant precision, often leading to mental fatigue and burnout [1]. Emphasizing institutional support, studies highlight that nearly 40% of surgeons report significant psychological strain, underscoring the need for systems that protect provider well-being and patient care quality. OT nurses, who ensure sterile conditions and assist during procedures, also face heavy workloads and understaffing. Over 50% report job dissatisfaction in such high-stress environments [2]. This dual burden is magnified in resource-limited hospitals, where systemic reforms are essential to sustain their critical contributions. Likewise, OT technologists—responsible for surgical equipment—contend with outdated tools, limited training, and rapidly evolving technologies [3]. These issues can lead to delays, stress, and errors, further stressing the need for ongoing training and resource provision. Across all roles, communication and teamwork are essential. However, hierarchical structures, professional silos, and weak protocols often hinder collaboration[4],[5]. Such breakdowns can delay surgeries and increase error risks, threatening patient safety. Stress-related burnout, reduced focus, and compromised decision-making are common consequences. Moreover, adapting to new technology and maintaining rigorous infection control present ongoing challenges, necessitating regular skill updates. High-trust teams show better outcomes and lower stress, highlighting the importance of a supportive culture. The physical toll is also significant—ergonomic issues like prolonged standing contribute to chronic pain and other health issues [6], [7]. Stress management and institutional mental health support are crucial to sustain OT staff. Addressing these multifaceted issues requires comprehensive strategies—policy reform, continuous

training, improved resources, and supportive leadership. This study aims to explore the key challenges faced by OT personnel, including stress, hazards, equipment issues, and communication breakdowns. By identifying these barriers and proposing practical solutions, the research seeks to improve OT environments, ultimately enhancing both patient care and staff well-being [8]. Finally, with the increasing complexity of surgical technologies such as robotic systems, OT staff must continuously adapt. Lack of training or equipment failures can disrupt surgery, increase risk, and heighten staff pressure [9]. Continuous professional development is thus critical in this evolving landscape.

## **MATERIAL & METHODS**

### **Study Design:**

The study's design was descriptive cross-sectional

### **Data Collection:**

All participants were chosen from Ghurki Teaching Trust Hospital, Lahore.

### **Data Collection Tool:**

A structured questionnaire covered workload, stress, experience, anxiety, teamwork, surgery scheduling, infection control, and equipment use.

### **Study Duration:**

The duration of the study was 6 months after synopsis approval.

### **Sample Size:**

Using OpenEpi with a 95% confidence level and 5% precision, the sample size was calculated as 150 from a population of 250 Hospital Personnel.

### **Data Analysis:**

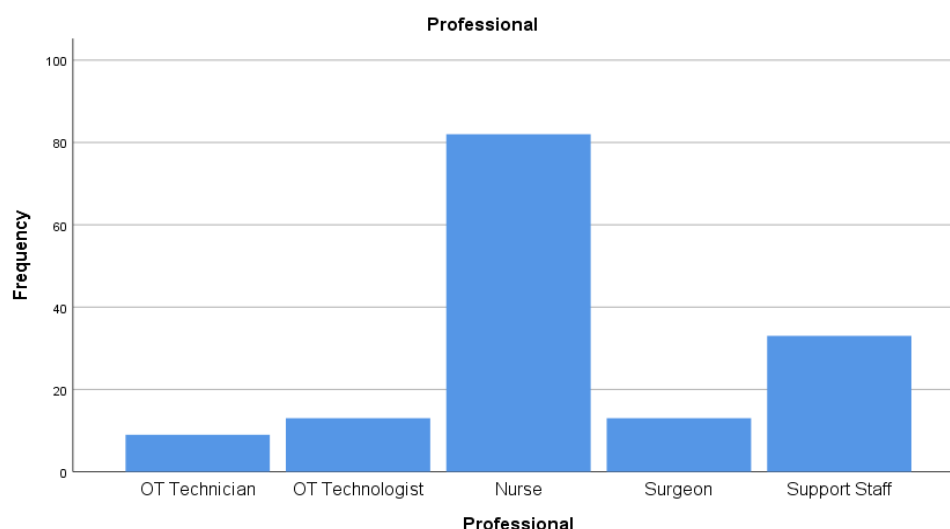
The data obtained were entered into an IBM SPSS (Statistical Package for Social Science ) Software version 25 spreadsheet. Analysis was carried out using the same software. The numbers of respondent the answers given to the questionnaires question were noted as simple percentage . Chi Square test paired sample statistics were applied in order to examine the relationship between the variables . The knowledge of respondents were compared by

calculating their mean knowledge scores. The level of significance was set at 0.05 at 95% confidence

### Results

The study's reveals a diverse range of healthcare professionals working in operating rooms (OT), with OT nurses making up the largest portion of

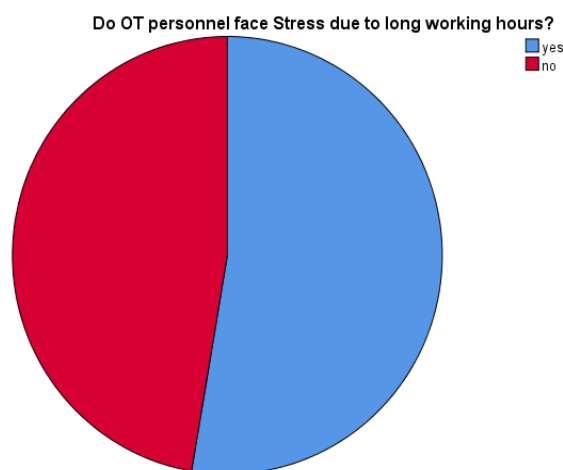
respondents at 54.7%, followed by support staff at 22.0%. Surgeons and OT technologists each account for 8.7%, while OT technicians represent the smallest group at 6.0%. This distribution highlights the central role that nurses and support staff play in the OT setting, whereas specialized roles such as surgeons and technologists are less prevalent.



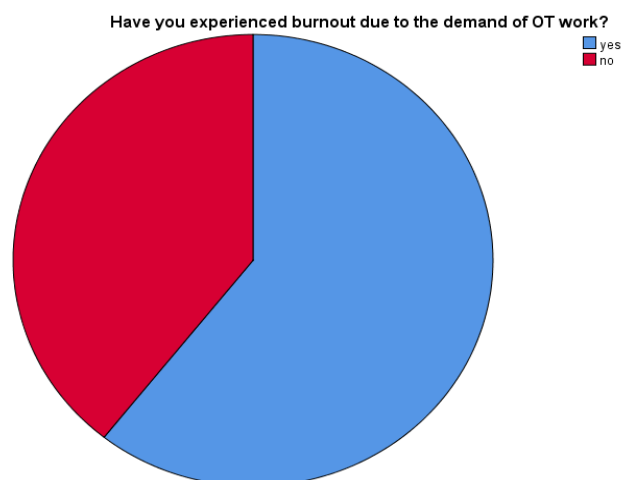
**Figure-1: Frequency of Professional participate in study**

Regarding workplace stress, 52.7% of respondents reported experiencing stress due to long working hours, while 47.3% did not. This nearly even split suggests that while extended hours are a source of stress for many, the impact varies among individuals.

Burnout appears to be a more widespread issue, with 60.7% of OT staff indicating they have experienced burnout, compared to 39.3% who have not. This points to significant concerns about workload, stress, and fatigue in the operating theater.



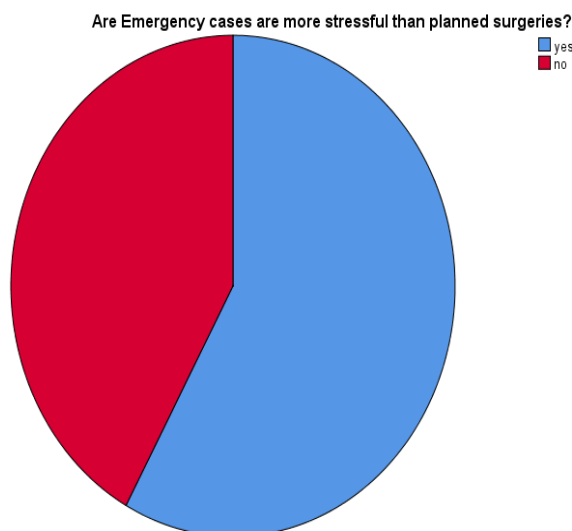
**Figure-2: Frequency of OT Personnel Feeling Stress in long working hours**



**Figure-3: Frequency of OT Personnel Experienced Burnout due to OT work**

The majority of the OT practitioners report that emergency cases are more stressful than planned procedures, according to survey results. 87 (58.0%) of the 150 respondents said that emergency situations are in fact more stressful than planned

surgeries, whilst 63 (42.0%) disagreed. The immediacy, unpredictability, and high-pressure nature of emergency situations are probably the main reasons why over half of the OT staff think they are far more difficult.



**Figure-4: Frequency of OT Personnel Feeling Stress in Emergency cases.**

Technical equipment failures also emerged as a key concern, with 60.0% of staff agreeing that such issues lead to delays in surgical schedules, while 40.0% disagreed. This indicates that equipment reliability is perceived as affecting the efficiency and timing of procedures. Lastly, opinions on workplace

fairness are split, with 50.7% of respondents reporting experiences of discrimination or favoritism, while 49.3% have not. This highlights the importance of promoting equity and inclusivity within the OT environment to improve morale, teamwork, and overall job satisfaction.

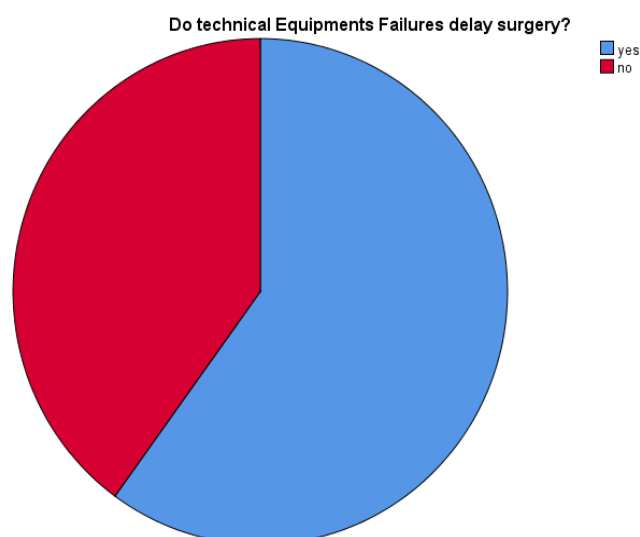


Figure-5: Frequency of Equipment Error Delay Surgery

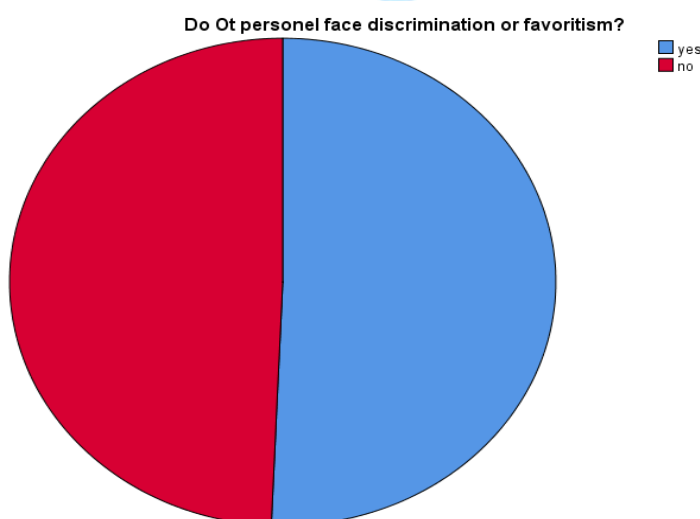


Figure-6: Frequency of OT personnel Face discrimination in OT

### Discussion

The findings of this study highlight several challenges faced by OT personnel at Ghurki Hospital, Lahore, which are consistent with the existing literature on occupational stress, communication barriers, and resource constraints in healthcare settings. These challenges, including long working hours, burnout, inadequate staffing, poor emotional support, and the need for improved communication, have been previously documented in various healthcare settings, particularly in surgical units [10,11]. The study's results suggest that addressing these challenges is critical for improving the work

environment in the operating theater, ultimately leading to enhanced patient care and job satisfaction among OT personnel. One of the major findings of the study is the significant stress experienced by OT personnel due to long working hours. This is consistent with previous studies that indicate healthcare workers, especially those in high-pressure environments like the operating theater, often face high levels of stress, which can result in burnout [12]. A study found that extended working hours and insufficient breaks are major contributors to burnout and work-related stress among healthcare professionals. To mitigate these issues, it is essential

for Ghurki Hospital to consider implementing policies that regulate working hours and provide adequate breaks to staff, thus promoting their well-being and reducing stress.[13]. Another key finding from the study is the inadequate staffing in the operating theater, which affects efficiency and increases stress levels. This finding aligns with literature that suggests understaffing is a common challenge in surgical settings, contributing to fatigue and compromising patient safety. Inadequate staffing can lead to delays in surgeries, errors, and reduced patient satisfaction, all of which impact the overall functioning of the OT. The study indicates that hospital management should focus on recruiting additional personnel or optimizing existing staffing patterns to ensure that the workload is manageable and that the quality of care is not compromised [14]. The study also revealed that emotional support for OT personnel is often insufficient, which is a significant issue in high-stress work environments. Emotional well-being plays a critical role in the ability of healthcare workers to cope with the pressures of their job. Previous studies have emphasized the importance of providing psychological support and creating a supportive work environment to prevent burnout and improve job satisfaction. At Ghurki Hospital, introducing counseling services, peer support programs, and regular debriefing sessions after surgeries could help address this gap and provide the necessary emotional relief for OT staff [15]. Communication barriers were also identified as a challenge in the operating theater. Effective communication within the surgical team is essential for patient safety and successful outcomes [16]. Inconsistent communication can lead to errors, misunderstandings, and delays during surgery, as noted in this study. Training in communication skills and creating a culture of openness and collaboration would help enhance teamwork and reduce the likelihood of errors. Studies have shown that improving communication practices, such as using standardized communication protocols like SBAR (Situation-Background-Assessment-Recommendation), can significantly reduce medical errors [17]. The study also found that OT personnel faced challenges related to inadequate resources, particularly with the availability of advanced surgical equipment. This is a common issue in many

healthcare settings, where the demand for up-to-date technology exceeds available resources [18]. Equipment failures can delay surgeries and impact patient safety, underlining the importance of regular maintenance and timely upgrades of surgical instruments. Hospitals should allocate resources efficiently to ensure that equipment is reliable and available when needed. Regarding decision-making, the study revealed that OT personnel often feel excluded from the decision-making process. Studies have shown that involving staff in decision-making enhances job satisfaction, fosters a sense of ownership, and leads to better overall performance [19]. It is recommended that Ghurki Hospital adopt a more inclusive approach, allowing OT personnel to contribute to decisions that affect their work environment and patient care practices. Finally, the issue of fair compensation was highlighted in the study. Although OT personnel play a crucial role in ensuring the success of surgeries, many reported feeling inadequately compensated for their work. This is a concern in many healthcare settings, as staff who feel underappreciated or inadequately compensated may experience decreased job satisfaction, which can lead to higher turnover rates and reduced quality of care [20]. Fair compensation, along with recognition programs and career advancement opportunities, could improve OT staff retention and job satisfaction.

### Conclusion

This study explored the challenges faced by OT personnel at Ghurki Hospital, Lahore, highlighting key issues impacting their daily work and well-being. Findings indicate significant stress due to long hours, burnout, understaffing, poor communication, and limited emotional support. Concerns about equipment quality, sterilization, and unclear role definitions were also common. While most staff feel well-trained and value teamwork, gaps remain in stress management, fair compensation, and decision-making involvement. The study emphasizes the need for better resources, support systems, and communication to improve job satisfaction, performance, and overall OT efficiency. Ongoing research and staff engagement are essential for sustained improvements.



**Limitation**

The 150 respondents may not fully represent the entire OT staff, potentially excluding certain departments or roles and limiting the diversity of perspectives.

The study is confined to Ghurki Hospital in Lahore, limiting the generalizability of the findings to other healthcare settings in different regions with varying organizational structures, resources, and staff dynamics. The 3-4 month period may not capture fluctuating challenges faced by OT personnel over time, such as seasonal workload variations or shifts in hospital policies. Reliance on self-reported data introduces the possibility of bias, as participants may provide responses based on perceptions or concerns about potential retaliation. The study focuses on challenges like stress, communication barriers, and staffing issues, potentially overlooking other factors such as personal health or external socio-economic pressures.

**Recommendation**

Recruit additional personnel or redistribute tasks to reduce stress and prevent burnout. Implement regular stress management training and wellness programs to help staff cope with the high-pressure environment. Improve mental health services, offering counseling and peer support programs to help staff manage emotional demands. Ensure regular maintenance of surgical equipment and adherence to sterilization protocols to prevent delays and complications during surgeries. Define roles more clearly and involve OT personnel in decision-making processes to improve responsibility and job satisfaction. Prioritize ongoing training for OT staff in surgical procedures and medical advancements to enhance skills and knowledge.

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#### Authors Contributions:

**Arooj and Alia:** Substantial contributions to the conception and design of the work.

**Mohibba:** Design of the work and the acquisition. Drafting the work.

**Asma:** Final approval of the version to be published.