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Original research article

AN EVALUATION OF WORK-RELATED QUALITY OF LIFE AMONG GENERAL SURGERY RESIDENTS WORKING IN A TERTIARY CARE HOSPITAL

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Abstract: *Work-related quality of life (QoL) assessment has become indispensable due to the increasing number of occupational health issues among doctors. Despite their role in promoting community well-being, doctors' health is often neglected. The demanding working hours and significant daily stress of surgical residents have negatively impacted their WRQoL.* ***Objective:*** *This study aims to assess the factors affecting the quality of life, particularly among general surgery residents in our hospital, using the WRQoL questionnaire.* ***Methods:*** *A cross-sectional study was conducted in the Department of Surgery at DHQ hospitals. Data were collected electronically via email and WhatsApp messages from all general surgery residents from January 2024 to March 2024. A total of 84 resident surgeons participated in the study. The WRQoL questionnaire, comprising 23 items scored on a 5-point Likert scale, evaluated various aspects of their work-related quality of life. Data analysis used appropriate statistical methods to determine satisfaction levels across different parameters.* ***Results:*** *The study revealed that the home-work interface and stress at work were less satisfactory among the residents. In contrast, the overall general well-being and control at work were rated acceptable. These findings highlight areas where improvements are necessary to enhance the WRQoL for surgical residents.* ***Conclusion:*** *Despite the unsatisfactory home-work interface and stress at work, the overall quality of life among our surgical residents is satisfactory. However, further studies are needed to compare the QOL of different specialties and to examine differences between male and female residents.*

Keywords: Quality Improvement of Doctors, Surgical Residency, Well-being of Surgeons, Work-Life Balance, Work-Related Quality of Life

Introduction

Training programs are a way through which young graduates become consultants; this requires junior doctors to work under seniors' supervision for four to five years. General surgery training is considered one of the most demanding and hectic fields among all other specialties. (1). Resident surgeons being the primary caregivers(2) While dealing with the trauma in emergency or working in operation theaters (OT) for long undue hours, facing a lot of difficulties long working hours, sleep depravedness and lack of workforce in hospitals affect their professional as well as personal lives(3). This leads to higher rates of tiredness, lack of motivation, loss of enthusiasm, a poor curve of learning, depression, and loss of hope, among them leading to suicidal tendencies. (4),(5)

Quality of life captures individuals' perceptions of their personal and professional lives and satisfaction levels.(6). Easton and van Laar designed the questionnaire with a 5-point scoring system from "strongly disagree" to "strongly agree." WRQoL assesses only the professional aspect of one's life by seven core factors. These include general well-being (GWB, job and career satisfaction (JCS), home-work interference (HWI) balancing, control at work(CAW), favorable working conditions(WCS), and stress at work(SAW)(7).

Zubair et al. conducted a study assessing the QoL of USA surgical residents. This study included 738 residents, 477 of whom were junior doctors. It concluded males had statistically better HWI ($p<0.001$), better GWB ($p = 0.03$), more CAW ($p = 0.0003$), and WCS ($p = 0.001$). Junior residents had a lower JCS ($p = 0.002$) and CAW ($p = 0.04$) than seniors.

No study has been conducted in Pakistan among general surgery residents to evaluate their WRQOL. Therefore, we aim to evaluate the standard of living related to residency routine among surgical trainees in order to highlight the most significant factors leading to decreased quality of life among them.

Methodology

The data was collected between January 2024 and March 2024 from all General Surgery Residents enrolled in an Accreditation Council for Graduate Medical Education (ACGME) training program. Ethical approval was obtained from the Ethical Review Board of Rawalpindi Medical University. Residents from different years of training were included in this survey, while those with any previously diagnosed mental or physical health conditions impacting their quality of life were excluded. The questionnaire was

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distributed electronically via email and WhatsApp, and a brief explanation of the survey's purpose was provided.

The WRQoL questionnaire, which includes 23 questions, assessed employees' capabilities at work, their workforce experience, and their adaptability to changes within the system. The questionnaire covers six main parameters: Home-work interface (HWI) with four items, General well-being (GWB) with six items, Job and career satisfaction (JCS) with six items, Control at work (CAW) with three items, Working conditions (WCS) with two items, and Stress at work (SAW) with two items. Each parameter includes various items that help researchers evaluate factors that undermine the quality of work among surgical residents.

Each question was scored on a 5-point Likert scale, where one indicated "Strongly Disagree," 2 indicated "Disagree," 3 indicated "Neutral," 4 indicated "Agree," and five indicated "Strongly Agree." Higher scores reflected better quality of life (QOL). Although the scale comprises 23 variables, question 24 was not included in the scoring. The overall score was calculated by averaging the question scores, except for three negatively phrased items (questions 7, 9, and 11), which were reverse scored. This comprehensive approach ensured a thorough assessment of the factors affecting the work quality of surgical residents.

The data was collected through the Google Forms Questionnaire, and results were compiled using SPSS Version 26.0. mean and standard deviation estimated for quantitative variables like age. Frequency and percentage were calculated for categorical variables like gender. The Kruskal-Wallis test was was used to compare continuous variables and showed a P-value of <0.001.

Results

The questionnaire was sent to all surgical residents in tertiary care hospitals affiliated with Rawalpindi Medical University. Out of 110 residents, 84 participated in this survey between January and March 2024. Among the respondents, 48 (57.1%) were male, and 36 (42.9%) were female.

Table 1: Gender Distribution:

Gender	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Female	36	42.9%	42.9%	42.9%
Male	48	57.1%	57.1%	100.0%
Total	84	100.0%	100.0%	

The majority of participants were first-year residents (38.3%). The table below shows the distribution of residents by their year of training. The mean age of the participants was 27.76 years.

Table 2: Year of Residency:

Year of Residency	Frequency	Percentage	Valid Percentage	Cumulative Percentage
R1	31	38.3%	38.3%	38.3%
R2	27	33.3%	33.3%	71.6%
R3	8	9.9%	9.9%	81.5%
R4	15	18.5%	18.5%	100.0%
Total	81	100.0%	100.0%	

The study findings revealed that the majority of residents reported average general well-being (66%), home-work interface (46%), and job and career satisfaction (48%). Additionally, 67% of residents reported reasonable control at work, while 54% rated their working conditions average. However, 25% of residents reported poor control over stress at work.

Table 3: Resident Satisfaction by Parameter:

Resident Year	GWB	HWI	JCS	CAW	WCS	SAW
R1	65%	39%	46%	75%	59%	30%
R2	64%	41%	41%	57%	50%	21%
R3	64%	49%	55%	64%	46%	20%
R4	71%	56%	48%	73%	61%	29%
Mean	66%	46%	48%	67%	54%	25%

Abbreviations: GWB: General Well-Being, HWI: Home-Work Interface, JCS: Job and Career Satisfaction, CAW: Control at Work, WCS: Working Conditions, SAW: Stress at Work

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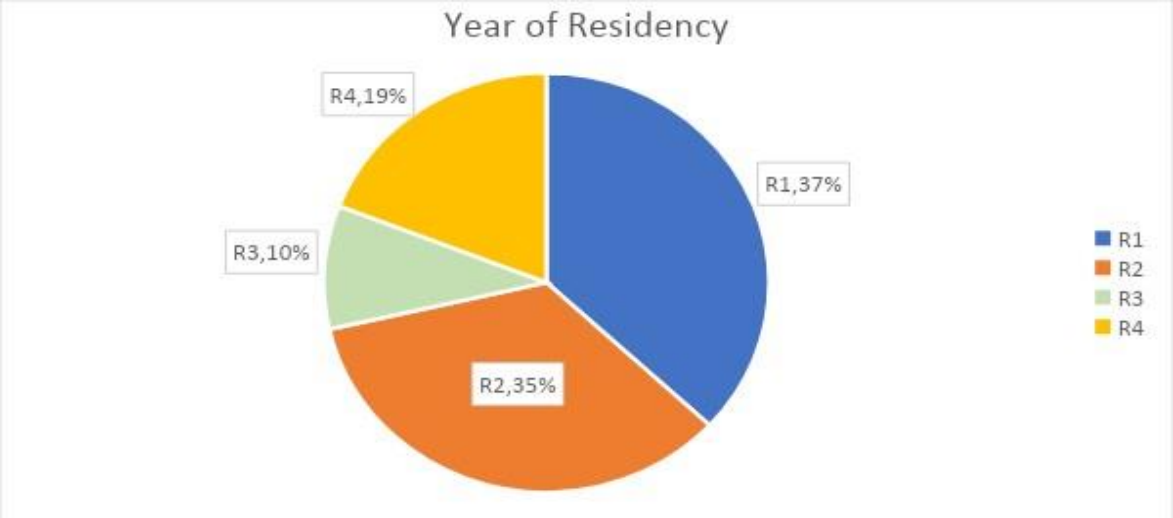

Figure 1 Shows the year of residency of the study population

Discussion

For the first time in our hospital, work-related quality of life among general surgery residents has been studied. The study's main objective is to evaluate their quality of life in 6 different domains.

The home-work interface gives us an idea about their personal and professional life balance.(8). Long and Implicit working hours, high demands of the job, and lack of sleep affect home and work-life balance, as proved by a study conducted in Germany.(9). Another study conducted in King Abdulaziz Medical City in Jeddah showed that 76.7% of their residents have a poor HWI, while only 6.9% have a good HWI.(10). For this reason, healthcare professionals are more prone to burnout and stress.(5). Young surgeons are more prone to burnout than senior surgeons due to long working hours and poor control over stress at work.(11-13). A study conducted amongst US surgery Residents concluded that mindfulness can help prevent burnout.(14).

Female surgeons are more likely to experience burnout than male surgeons.(15). A study conducted in South Africa sowed that female residents face more difficulties in managing home and work-life balance.(16). However, our study did not show any difference between the QOL of male and female residents.

The study was limited to general surgery residents working in Rawalpindi Medical University-affiliated hospitals and included a small number of participants.

Conclusion

Despite poor control over stress at work and difficulty managing the homework interface, our residents have a satisfactory quality of life. However, further studies need to be done to compare the QOL of different specialties and to compare the QOL of male and female residents.

Declarations

Data Availability statement
All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate.
Approved by the department concerned. (IRB-RWPDHQ letter number 98-22)

Consent for publication
Approved

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Conflict of interest

The authors declared an absence of conflict of interest.

Authors Contribution

FAREEBA (Resident Surgeon)
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Drafting
SARAH SABIR (Physiotherapist) & NAZRAH SHABBIR (Resident Surgeon)
Concept & Design of Study

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