

# Investigation of health workers' quality of life and its psychological determinants

Hussain Abdullah Hussain Alkhamis<sup>1</sup>, Najah Almutairi<sup>2</sup>, Majed Obaid Abusettah<sup>3</sup>, Khatoon Mohammad Hashim Al Sadah<sup>4</sup>, Nadiyah Habib Q Alsulaiman<sup>5</sup>, Nawaf Faleh Alharbi<sup>6</sup>, Tefail Fodi Tefail Alrasheedi<sup>7</sup>, Walaa Abdullah Madkhali<sup>8</sup>, Hind Sahal Almutlaq<sup>9</sup>, Majid Abdullah Eidhah Althagafi<sup>10</sup>

1. *General Practice, Prince Saud Bin Jalawi Hospital*
2. *Doctor Of Physical Therapy, Ministry Of Health*
3. *Pharmacist Assistant, Dalee Rashid Health Center, Alrass General Hospital*
4. *Laboratory, Dammam Regional Lab*
5. *Technician-Radiological Technology, Maternity & Children Hospital*
6. *Radiology Specialist, Security Forces Hospital*
7. *Assistant Pharmacist, Doly Rasheed Primaryhealth Care Center, Alrass Hospital*
8. *Nursing Specialist, Al Rawdah Health Center For Primary Health Care*
9. *Medical Laboratory Sciences, Armed Forces Hospital In Wadi Aldawasir*
10. *Operating Theatre Technician, Jeddah Forensic Medicine Services Center*

## Abstract

### Background:

The quality of life (QoL) of healthcare workers is a critical factor influencing both personal well-being and professional performance. Healthcare environments often involve high occupational stress, leading to burnout, reduced job satisfaction, and potential risks to patient safety. This study aimed to assess the QoL among healthcare workers in a tertiary care facility and examine the psychosocial factors influencing it.

### Methods:

An observational study was conducted with 300 healthcare workers, including 150 doctors and 150 nurses, at a tertiary care hospital. Participants, employed for at least six months, completed an anonymous, self-administered survey consisting of three sections: the Quality of Life Questionnaire (QLQ), the Occupational Stress Inventory-Revised (OSI-R), and demographic and social background information. The QLQ assessed five domains of QoL, while the OSI-R measured occupational stress and coping resources. Data analysis was performed using SPSS version 19.0, employing descriptive and inferential statistics.

### Results:

Participants reported an overall QoL mean T-score of 47.84 (average range) and an occupational stress T-score of 63.87 (mild maladaptive stress). Coping resources had a mean T-score of 51.28 (average range). Significant correlations were observed between QoL domains and psychosocial factors such as role ambiguity, role boundary, psychological strain, and interpersonal strain. Additionally, demographic and occupational factors, including family structure and area of work, were significantly associated with specific QoL domains.

### Conclusion:

Healthcare workers in this study reported average QoL and coping resources but moderately elevated stress levels. The findings underscore the importance of targeted interventions to address occupational stress and enhance coping strategies. Improving QoL for healthcare workers can lead to better job satisfaction, personal well-being, and patient care outcomes.

## Introduction

The World Health Organization (WHO) describes quality of life as an individual's perception of their position in life within the context of their cultural and value systems, as well as in relation to their personal goals, expectations, standards, and concerns. This emphasizes that quality of life is inherently subjective, encompasses both positive and negative aspects, and is multidimensional in nature (1).

While practicing medicine can provide a sense of fulfillment and purpose, it also presents significant challenges and stressors. Hospitals are particularly known for high levels of occupational stress, which can contribute to a decline in quality of life (2, 3, 4, 5). Research suggests that a substantial number of healthcare professionals experience burnout, a condition marked by emotional exhaustion, feelings of depersonalization, and diminished personal accomplishment (6, 7, 8). Although difficult to measure accurately, studies indicate that burnout can negatively impact professional conduct, reduce the quality of patient care, increase error rates, and lead to early retirement (9, 10, 11, 12, 13). Moreover, burnout can have detrimental personal effects on healthcare workers, such as strained relationships, substance abuse issues, and suicidal ideation (14, 15). Many healthcare workers express dissatisfaction with their inability to meet professional standards and often consider leaving their profession (16).

Physicians not only serve as role models in the community concerning healthy lifestyles but also their personal health behaviors can influence how they counsel patients (17, 18). Studies indicate that physicians fail to identify or manage up to 60% of depression cases in their patients (19, 20, 21). Additionally, approximately 40% of individuals who die by suicide had visited their primary care physician within a month of their death, yet their condition often went unnoticed or unaddressed by the physician (22).

Emerging evidence shows that physicians experiencing mental distress or illness may unintentionally jeopardize patient safety, particularly when dealing with depression (23, 24). For instance, a study found that medical residents experiencing depression committed six times more medication errors compared to their non-depressed counterparts, although burnout did not appear to have a similar effect (25). A review published in *The Lancet* emphasized that the mental well-being of physicians is a crucial yet underestimated factor in healthcare quality, suggesting it should be regarded as an indicator of systemic health (9).

Research by Yu et al. examined the association between job satisfaction and quality of life among nurses, revealing a strong positive correlation between these factors (26). Another study by Lee investigated the relationship between fatigue and quality of life in clinical nursing staff, identifying a significant negative correlation between these variables (27).

Chiu et al. explored the connection between workability and quality of life in nurses, recommending strategies such as enhancing mental coping skills for younger staff and optimizing job design to reduce physical strain for experienced workers (28). Similarly, research by Delmas and Duquette investigated the interplay between hardiness, coping mechanisms, and work-related quality of life in nurses. Their findings highlighted the mediating role of problem-solving coping strategies in linking traits like commitment and mastery to workplace quality of life (29).

## Materials and Methods

This study utilized an observational design and was conducted in a large tertiary care facility offering a broad range of specialty and advanced services. The study included 200 healthcare workers, comprising doctors and nurses, who had been employed at the facility for at least six months and voluntarily agreed to participate. Those with a prior history of mental illness were excluded. Participants were introduced to the study by the researcher, who identified themselves as a physician conducting research on the quality of life among healthcare workers. Written informed consent was obtained from all participants. The survey was anonymous, self-administered, and consisted of three sections:

1. A Quality of Life Questionnaire (QLQ) designed to evaluate the quality of life of healthcare workers (30).
2. The Occupational Stress Inventory (Revised) (OSI-R), which assessed occupational stress as a psychological factor affecting quality of life (31).

3. A demographic and social background section to gather data on various factors influencing quality of life.

The QLQ comprises a 192-item true/false self-report scale, incorporating 15 subscales, a Social Desirability scale, and an overall Total Quality of Life score. This tool can be administered either individually or in groups, and the scoring can be done manually or via computer. Raw scores for each subscale are converted into T-scores. The QLQ evaluates five primary domains:

- **General Well-Being**
  - Material Well-Being (A)
  - Physical Well-Being (B)
  - Personal Growth (C)
- **Interpersonal Relations**
  - Marital Relations (D)
  - Parent–Child Relations (E)
  - Extended Family Relations (F)
  - Extrafamilial Relations (G)
- **Organizational Activity**
  - Altruistic Behavior (H)
  - Political Behavior (I)
- **Occupational Activity**
  - Job Characteristics (J)
  - Occupational Relations (K)
  - Job Satisfiers (L)
- **Leisure and Recreational Activity**
  - Creative/Esthetic Behavior (M)
  - Sports Activity (N)
  - Vacation Behavior (O)

The OSI-R is designed to provide a comprehensive theoretical framework linking three core dimensions and to develop universal measures of occupational stress applicable across various professions and work environments. These dimensions are:

- **Occupational Roles Questionnaire**
  - Role Overload (RO)
  - Role Insufficiency (RI)
  - Role Ambiguity (RA)
  - Role Boundary (RB)
  - Responsibility (R)
  - Physical Environment (PE)
- **Personal Strain Questionnaire**
  - Vocational Strain (VS)
  - Psychological Strain (PSY)
  - Interpersonal Strain (IS)
  - Physical Strain (PHS)
- **Personal Resources Questionnaire**
  - Recreation (RE)
  - Self-Care (SC)
  - Social Support (SS)
  - Rational/Cognitive Coping (RC)

The data analysis was performed using SPSS version 19.0 software. Both descriptive and inferential statistical methods were employed to address the research objectives and test the hypotheses. Sample characteristics were analyzed using frequencies and percentages.

## Results

The study included 300 eligible participants, comprising an equal number of doctors (n=150) and nurses (n=150), with ages ranging from 21 to 60 years. The largest proportion of respondents (44.5%) fell within the 21–30 age group. Females constituted 70% of the sample, and 43.5% held professional qualifications in general nursing and midwifery. Most participants (70%) were married, with 41% of them having two children. The majority (74.5%) lived in nuclear family arrangements. Among the respondents, 45.5% worked in medical wards, and 78% reported working shifts of 8–10 hours. Among the doctors, 60% were male, with 87% holding MBBS degrees (including residents) and 13% holding postgraduate qualifications working as consultants. All nurses were female, with 87% being general nurses.

The mean T-score for the overall quality of life among healthcare workers was 47.84, which falls within the average range according to interpretive guidelines for T-scores. The mean T-score for occupational stress was 63.87, indicating a mild level of maladaptive stress and strain. Meanwhile, the mean T-score for coping resources was 51.28, also categorized as average based on the same guidelines.

Statistically significant correlations were identified between several variables. Personal growth (C) showed significant correlations with Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Psychological Strain (PSY), Interpersonal Strain (IS), and Physical Strain (PHS). Extended family relations (F) were significantly correlated with Role Overload (RO) and Role Boundary (RB). Political behavior (I) was significantly associated with RI, RA, RB, PSY, PHS, and Social Support (SS).

Job characteristics (J) were significantly correlated with Vocational Strain (VS), SS, and Rational/Cognitive Coping (RC), while occupational relations (L) had a significant association with Self-Care (SC). Creative/esthetic behavior (M) was significantly correlated with VS, SS, and RC. Sports activity (N) was significantly associated with VS, PSY, SS, and RC. Vacation behavior (O) showed significant correlations with RI, RA, RB, VS, PSY, IS, PHS, and SS.

Furthermore, specific demographic and occupational factors were found to be significantly associated with quality of life domains. The type of family structure (nuclear or joint) was significantly associated with physical well-being (B). The area of work was significantly associated with parent–child relations (E) and vacation behavior (O).

## Discussion

The findings of this research showed that the overall quality of life (QOL) among the participants was generally within the average range. While the quality of life in areas such as general well-being, leisure, and recreational activities was average, it was slightly below average in domains related to interpersonal relations, organizational activities, and occupational activities. Factors such as frequent conflicts with colleagues over decision-making, assigning responsibility for patient-related errors, and unmet expectations from patient caregivers may explain this below-average occupational quality of life.

Comparable results were observed in a study by Jovic-Vranes et al., which highlighted a low level of overall quality of life and job satisfaction among healthcare professionals in Serbia (32). These findings could potentially be linked to the relatively young age of participants, consistent working hours, nuclear family living arrangements, and most participants having two or fewer children. Ayers suggested that a supportive work environment that motivates employees and aligns with the organization's mission can positively influence job satisfaction and overall quality of life (33).

The study also revealed that the mean occupational stress level among participants was mild. Specifically, 44.5% of the respondents experienced mild stress, while 44% reported high levels of occupational stress. At the personal level, 51.5% reported mild stress, and 47.5% indicated no stress. Coping resources were generally average, with 97.5% of participants falling into this

category. The demanding nature of healthcare work, dealing with patient suffering, workplace conflicts, and caregiver expectations likely contributed to these stress levels. Balancing professional duties with personal and social responsibilities could explain the mild stress experienced on a personal level. However, factors such as young age, family support, and adequate coping mechanisms may serve as protective factors. For comparison, perceived stress prevalence in the general population was reported at 14% in Sweden (34) and 17.6% in Germany (35). In Jordan, 27% of healthcare professionals experienced high stress levels (36). Similarly, studies from the United States indicated stress and burnout rates among physicians ranging from 25% to 60% (37, 38, 39, 40). Despite these figures, the stress levels observed in this study were not alarmingly high.

The study also identified significant correlations between various occupational stress domains (psychological variables) and QOL dimensions. This suggests that problem-solving approaches were commonly used as coping strategies, and effective coping was linked to improved quality of life. For instance, vacation behavior (O) positively correlated with psychological stress (PSY). Participants appeared to plan vacations as a response to increased personal stress, which may serve as a protective strategy. Similarly, a study by Lee highlighted an inverse relationship between direct coping strategies and occupational stress, as well as a positive correlation between coping strategies and perceived health status (41).

This research also revealed significant associations between family structure and work area with quality of life. However, other factors like marital status, number of children, and working hours did not show significant associations. Family support, particularly in joint family systems, may play a vital role in balancing professional and personal responsibilities. A study conducted in a Norwegian hospital identified positive local leadership as a key predictor of high quality of life and job satisfaction across healthcare roles (42).

The study had several limitations. Data relied on self-reported measures, requiring an assumption of participant honesty. The cross-sectional design restricted causal inference regarding the relationship between quality of life and occupational stress. Additionally, the sample distribution across units, wards, and specialties was uneven. External factors not examined in this study may also have influenced participants' stress levels and quality of life.

## Conclusion

Addressing the challenges in healthcare systems requires an understanding of the satisfaction levels and influencing factors of healthcare workers' quality of life and job satisfaction. This study found that participants generally perceived their quality of life as average, their stress levels as moderately elevated, and their coping resources as average. These results suggest that as healthcare workers experience increased stress, their coping abilities may also improve to counterbalance its effects.

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