Journal of Health, Wellness and Community Research
ISSN: 3007, 0570

OPEN ACCESS

JHWCR

Type: Original Article
Published: 15 July 2025
Volume: III, **Issue:** VIII
DOI: https://doi.org/10.61919/gb8q1s23

Correspondence
✉ Rukhsana Kausar, rukhsanakausar112@gmail.com

Received 21, 06, 25 **Accepted** 12, 07, 2025

Authors' Contributions
Concept: RK; Design: SM; Data Collection: RK; Analysis: ZH; Drafting: NI

Copyrights
© 2025 Authors. This is an open, access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0).

Declarations
No funding was received for this study. The authors declare no conflict of interest. The study received ethical approval. All participants provided informed consent.

"Click to Cite"

An Evaluation of Health-Related Quality of Life Assessment Among Nurses in Secondary Health Care Hospitals in South Punjab, Pakistan

Rukhsana Kausar[1], Shamaila Mohsin[2], Zaryab Hassan[3], Navid Iqbal[4]

1 Post Assistant Nursing Instructor, College of Nursing, Muzaffargarh, Pakistan; Armed Forces Post Graduate Medical Institute, Rawalpindi, Pakistan; National University of Medical Sciences (NUMS), Rawalpindi, Pakistan. Email: rukhsanakausar112@gmail.com
2 PhD (Supervisor; Professor and Head of Department), Department of Public Health, Armed Forces Post Graduate Medical Institute, Rawalpindi, Pakistan. Email: sm104177@hotmail.com
3 Institute of Chemical Sciences, Bahauddin Zakariya University, Multan, Pakistan. Email: zaryabhassan110@gmail.com
4 PhD Scholar, Department of Education, The Islamia University of Bahawalpur, Bahawalpur, Pakistan. Email: navidiqbal074@gmail.com

ABSTRACT

Background: Nurses are exposed to sustained physical and psychological demands that can influence perceived quality of life and perceived health, with potential implications for workforce sustainability and care delivery in resource-constrained secondary hospitals. Objective: To assess perceived quality of life and satisfaction with health among nurses working in a secondary health care hospital in South Punjab, Pakistan, and examine associations with demographic and professional characteristics. Methods: A cross-sectional analytical study was conducted among nurses at a secondary care hospital in Muzaffargarh, South Punjab, after IRB approval (Re: 411-AAA-ERC-AFPGMI). Using convenience sampling, 196 nurses completed a WHOQOL-BREF-based questionnaire. Categorical outcomes (overall quality of life and satisfaction with health) were analysed across demographic and professional strata using chi-square tests ($p<0.05$). Results: Most nurses rated overall quality of life as good/very good (90.9%) and reported good/very good satisfaction with health (85.7%). Pain-related interference was prominent, with 59.7% endorsing high levels of pain preventing required activities, and 41.4% reporting high need for medical treatment to function daily. Negative feelings were frequent, with 43.9% reporting poor/very poor levels. Overall quality of life was significantly associated with age ($\chi^2=24.092$, $p=0.001$), marital status ($\chi^2=28.839$, $p=0.001$), and job designation ($\chi^2=20.136$, $p=0.017$), while health satisfaction was associated with age ($\chi^2=23.904$, $p=0.002$) and marital status ($\chi^2=30.776$, $p=0.002$). Conclusion: Although global quality-of-life ratings were favourable, substantial symptom burden—particularly pain interference and distress—was evident, supporting targeted occupational health and psychosocial interventions in secondary care nursing environments.

Keywords

Health-related quality of life; WHOQOL-BREF; nurses; secondary health care; South Punjab; pain interference; psychological distress; social support; work environment.

INTRODUCTION

Health-related quality of life (HRQoL) is a core outcome for evaluating workforce sustainability in health systems because it captures how physical symptoms, psychological functioning, social relationships, and environmental conditions influence day-to-day performance and wellbeing. For nurses, HRQoL is particularly consequential because sustained exposure to long duty hours, high cognitive load, emotional labour, and repeated physical handling tasks can affect both occupational functioning and quality of patient care. Contemporary public health and outcomes frameworks increasingly treat HRQoL as a measurable endpoint that supports organisational decision-making, resource allocation, and targeted workforce interventions, rather than as a purely descriptive construct. Conceptual models of HRQoL emphasise multidimensional functioning and perceived wellbeing, and distinguish "health-related" domains from broader macro-level determinants that are not directly health-linked, while still acknowledging that work environments and living contexts can shape perceived quality of life through health-mediated pathways. (5,17,18)

In hospital settings, nurses are frequently positioned as continuous-care providers and therefore experience cumulative exposure to occupational stressors that can manifest as pain-related functional limitation, sleep disturbance, reduced concentration, negative affect, and increased need for medical care. These factors are not only clinically relevant to nurses' own health but are operationally relevant to staffing continuity and service quality. Despite the recognised importance of HRQoL assessment for workplace health surveillance and prevention strategies, evidence from lower- and middle-income settings remains comparatively limited, particularly in secondary-level hospitals where staffing resources, institutional supports, and professional development opportunities may differ from tertiary centres. (4,6,14)

Within Pakistan, empirical evaluation of nurses' quality of life has been reported less consistently than in many comparable health systems, and regional evidence is particularly sparse for South Punjab, where secondary care hospitals often face constraints in staffing depth and organisational resources. Such constraints may plausibly increase work strain, contribute to musculoskeletal pain, and intensify psychological burden, while social support and household contexts may simultaneously buffer perceived wellbeing. Social support, including collegial and interpersonal support, has been repeatedly linked to better perceived wellbeing and may function as a protective factor in occupationally stressed clinical groups. (6,15) However, the degree to which demographic and professional characteristics such as age group, marital status, duty shift pattern, qualification level, and job designation relate to perceived quality of life and perceived health satisfaction among nurses in secondary care settings in South Punjab remains insufficiently described using standardised instruments.

DOI: https://doi.org/10.61919/gb8q1s23

Accordingly, the present study used the WHOQOL-BREF framework to evaluate perceived quality of life and health satisfaction among nurses working in a secondary health care hospital in Muzaffargarh, South Punjab. The study specifically examined whether self-rated overall quality of life and perceived health satisfaction differ across key demographic and professional strata. The research question was: among nurses working in a secondary health care hospital in South Punjab, Pakistan, what is the pattern of WHOQOL-BREF item-level perceptions, and which demographic and professional characteristics are associated with self-rated overall quality of life and health satisfaction? (14)

MATERIALS AND METHODS

A cross-sectional analytical study was conducted among nurses employed at a secondary health care hospital in Muzaffargarh, South Punjab, Pakistan. Ethical approval was obtained from the Institutional Review Board (Re: 411-AAA-ERC-AFPGMI) on 13 December 2023 prior to initiation of data collection. The study setting is a 450-bed hospital serving a catchment population exceeding five million and providing outpatient and emergency services at substantial monthly volume, with specialised units including intensive and high-dependency care services, cardiac care, trauma services, dialysis, and paediatric wards, within an operational context characterised by limited resources and staffing constraints in evening and night coverage.

The source population comprised 440 nurses employed at the facility. A total of 196 nurses were enrolled using convenience sampling, implemented operationally by approaching eligible nurses who were available during routine clinical shifts in patient care areas. Participation was voluntary and contingent upon written informed consent. Confidentiality was protected through coded data capture and secure handling of completed instruments, with analyses performed on anonymised datasets. To minimise information bias, participants were provided standardised instructions for questionnaire completion and were allowed adequate time to respond without interference from supervisors or researchers.

Health-related quality of life and related perceptions were assessed using the World Health Organization Quality of Life instrument, WHOQOL-BREF, administered as a structured questionnaire. The instrument evaluates perceived quality of life and perceived health satisfaction, alongside item-level perceptions linked to physical, psychological, social, and environmental aspects of life. Scoring and interpretive alignment followed the WHOQOL-BREF guidance for administration and use. (14) Demographic and professional variables recorded included age group, marital status, qualification, years of experience, duty shift pattern, and job designation.

The analytical strategy focused on descriptive summarisation of sample characteristics and item-level response distributions, followed by inferential testing of associations between categorical outcomes and categorical predictors. Self-rated overall quality of life and satisfaction with health were examined as key outcomes using chi-square tests of independence across demographic and professional strata. Statistical significance was set at $p<0.05$. Analyses were conducted in SPSS, with categorical variables reported as frequencies and percentages and inferential outputs reported as chi-square statistics and corresponding p-values. (18)

RESULTS

The sample comprised predominantly mid-career nurses, with 105/196 (53.6%) in the 36–45-year group and 70/196 (35.7%) aged 25–35 years, while 21/196 (10.7%) were aged 46–60 years. Most respondents were married (122/196, 62.2%). Educationally, a majority held Post RN qualifications (119/196, 60.7%), and the workforce profile reflected substantial seniority with 135/196 (68.9%) reporting at least 10 years of experience. Operationally, fixed shifts were more common than rotation (132/196, 67.3% vs 64/196, 32.7%), and general nurses constituted the largest designation group (152/196, 77.6%), with smaller proportions in charge roles, heads of nursing, and supervisors.

Table 1. Sociodemographic and Work-Related Characteristics of Nurses (n=196)

Variable	Category	n (%)
Age (years)	25–35	70 (35.7)
	36–45	105 (53.6)
	46–60	21 (10.7)
Marital status	Married	122 (62.2)
	Single	65 (33.2)
	Widowed	5 (2.6)
	Divorced	4 (2.0)
Qualification	Diploma Nursing	61 (31.1)
	Post RN	119 (60.7)
	MSN	16 (8.2)
Experience	<10 years	61 (31.1)
	≥10 years	135 (68.9)
Duty shift	Fixed	132 (67.3)
	Rotation	64 (32.7)
Job designation	General nurse	152 (77.6)
	Nurse-in-charge/ward-in-charge	15 (7.7)
	Head of nursing	20 (10.2)
	Supervisor	9 (4.6)

Table 2. Selected WHOQOL-BREF Item Responses (n=196)

Survey item	Very poor n (%)	Poor n (%)	Neither n (%)	Good n (%)	Very good n (%)
Quality of life (overall)	3 (1.5)	5 (2.6)	10 (5.1)	113 (57.7)	65 (33.2)
Satisfaction with health	1 (0.5)	4 (2.0)	23 (11.7)	142 (72.4)	26 (13.3)
Physical pain prevents needed activities	3 (1.5)	27 (13.8)	49 (25.0)	64 (32.7)	53 (27.0)

Survey item	Very poor n (%)	Poor n (%)	Neither n (%)	Good n (%)	Very good n (%)
Need medical treatment to function daily	22 (11.2)	59 (30.1)	34 (17.3)	65 (33.2)	16 (8.2)
Enjoy life	3 (1.5)	15 (7.7)	33 (16.8)	120 (61.2)	25 (12.8)
Life feels meaningful	6 (3.1)	5 (2.6)	39 (19.9)	118 (60.2)	28 (14.3)
Concentration	5 (2.6)	11 (5.6)	32 (16.3)	91 (46.4)	57 (29.1)
Feel safe in daily life	2 (1.0)	10 (5.1)	37 (18.9)	90 (45.9)	57 (29.1)
Physical environment is healthy	3 (1.5)	12 (6.1)	53 (27.0)	103 (52.6)	25 (12.8)
Enough money to meet needs	0 (0.0)	15 (7.7)	27 (13.8)	97 (49.5)	57 (29.1)
Information available day-to-day	3 (1.5)	13 (6.6)	39 (19.9)	89 (45.4)	52 (26.5)
Opportunity for leisure activities	2 (1.0)	53 (27.0)	40 (20.4)	86 (43.9)	15 (7.7)
Ability to get around	1 (0.5)	3 (1.5)	34 (17.3)	140 (71.4)	18 (9.2)
Satisfaction with sleep	7 (3.6)	6 (3.1)	19 (9.7)	144 (73.5)	20 (10.2)
Personal relationships	0 (0.0)	3 (1.5)	15 (7.7)	113 (57.7)	65 (33.2)
Sex life	0 (0.0)	12 (6.1)	29 (14.8)	108 (55.1)	47 (24.0)
Support from friends	0 (0.0)	5 (2.6)	58 (29.6)	104 (53.1)	29 (14.8)
Living place conditions	1 (0.5)	9 (4.6)	40 (20.4)	117 (59.7)	29 (14.8)
Access to health services	1 (0.5)	4 (2.0)	30 (15.3)	142 (72.4)	19 (9.7)
Transport	7 (3.6)	18 (9.2)	47 (24.0)	108 (55.1)	16 (8.2)
Negative feelings (blue mood/anxiety/depression)	12 (6.1)	77 (39.3)	35 (17.9)	63 (32.1)	9 (4.6)

Overall quality of life ratings were favourable, with 178/196 (90.9%) selecting "Good" or "Very good," while only 8/196 (4.1%) rated quality of life as "Poor" or "Very poor." Health satisfaction followed a similar pattern, with 168/196 (85.7%) reporting "Good/Very good" satisfaction and 5/196 (2.5%) reporting "Poor/Very poor." Despite these positive global perceptions, symptom burden was substantial: 117/196 (59.7%) reported that physical pain prevented them from doing what they needed to do at a "Good/Very good" intensity level, and 81/196 (41.4%) reported needing medical treatment to function daily at "Good/Very good" levels. Psychological and experiential perceptions remained largely positive in several areas, including enjoyment of life (145/196, 74.0% "Good/Very good"), perceived meaning in life (146/196, 74.5% "Good/Very good"), concentration (148/196, 75.5% "Good/Very good"), and sleep satisfaction (164/196, 83.7% "Good/Very good").

Table 3. Association of Overall Quality of Life with Demographic and Professional Variables (n=196)

Variable	Category (n, %)	Chi-square	p-value
Age (years)	25–35: 70 (36%) / 36–45: 105 (54%) / 46–60: 21 (11%)	24.092	0.001
Marital status	Married: 122 (62%) / Single: 65 (33%) / Widowed: 5 (3%) / Divorced: 4 (2%)	28.839	0.001
Qualification	Diploma: 61 (31%) / Post RN: 119 (61%) / MSN: 16 (8%)	5.038	0.539
Experience	<10 years: 61 (31%) / ≥10 years: 135 (69%)	1.605	0.658
Duty shift	Fixed: 132 (67%) / Rotation: 64 (33%)	7.747	0.052
Job designation	General nurse: 152 (78%) / In-charge: 15 (8%) / Head: 20 (10%) / Supervisor: 9 (5%)	20.136	0.017

Table 4. Association of Satisfaction with Health by Demographic and Professional Variables (n=196)

Variable	Category (n, %)	Chi-square	p-value
Age (years)	25–35: 70 (36%) / 36–45: 105 (54%) / 46–60: 21 (11%)	23.904	0.002
Marital status	Married: 122 (62%) / Single: 65 (33%) / Widowed: 5 (3%) / Divorced: 4 (2%)	30.776	0.002
Qualification	Diploma: 61 (31%) / Post RN: 119 (61%) / MSN: 16 (8%)	10.945	0.205
Experience	<10 years: 61 (31%) / ≥10 years: 135 (69%)	4.506	0.342
Duty shift	Fixed: 132 (67%) / Rotation: 64 (33%)	4.777	0.311
Job designation	General nurse: 152 (78%) / In-charge: 15 (8%) / Head: 20 (10%) / Supervisor: 9 (5%)	13.335	0.345

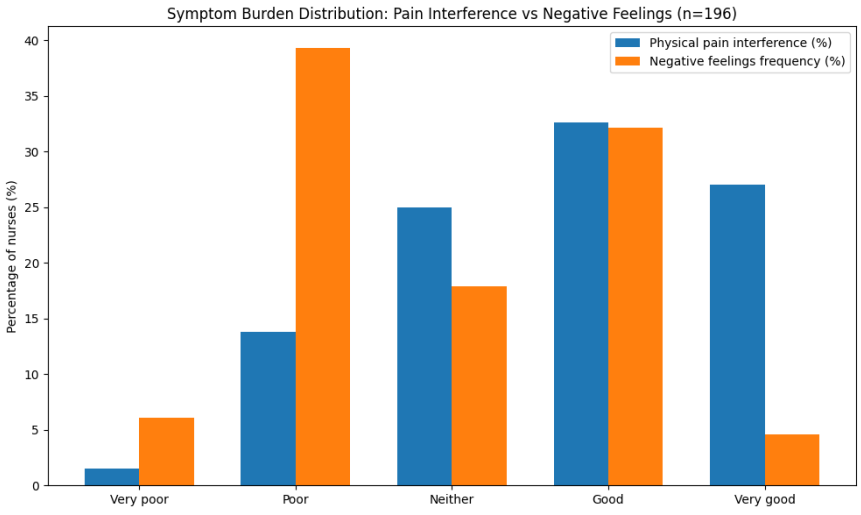

Figure 1 Symptom Burden Distribution: Pain Interference vs Negative Feelings (n=196)

Social domains were strong, with satisfaction in personal relationships reported as "Good/Very good" by 178/196 (90.9%) and support from friends "Good/Very good" by 133/196 (67.9%). Environmental and practical constraints were more mixed, particularly leisure opportunities where 55/196 (28.0%) reported "Poor/Very poor," and transport where 25/196 (12.8%) reported "Poor/Very poor." Negative feelings were notable: 86/196 (43.9%) reported "Poor/Very poor" levels on the negative feelings item, indicating frequent distress symptoms in a substantial subgroup despite favourable overall quality-of-life ratings.

Overall quality of life showed statistically significant associations with age group (χ^2=24.092, p=0.001), marital status (χ^2=28.839, p=0.001), and job designation (χ^2=20.136, p=0.017). In contrast, qualification level and years of experience were not significantly associated with overall quality of life (p=0.539 and p=0.658, respectively). Duty shift showed a borderline association (χ^2=7.747, p=0.052), indicating that shift pattern may warrant further evaluation in a design that can more precisely estimate its relationship with perceived quality of life.

Satisfaction with health was significantly associated with age group (χ^2=23.904, p=0.002) and marital status (χ^2=30.776, p=0.002), indicating that perceived health satisfaction varied across demographic strata. Qualification, experience, duty shift pattern, and job designation did not demonstrate statistically significant associations with health satisfaction (all p>0.05), suggesting that demographic factors were more strongly aligned with perceived health satisfaction than professional role variables in this sample.

The distribution shows a substantial dual symptom burden in this cohort, where pain interference was concentrated in higher response categories, with 32.7% (64/196) reporting "Good" and 27.0% (53/196) reporting "Very good," indicating that 59.7% experienced pain preventing required activities at high levels. In contrast, negative feelings clustered toward poorer categories, with 39.3% (77/196) reporting "Poor" and 6.1% (12/196) reporting "Very poor," demonstrating that 45.4% experienced frequent distress symptoms at low wellbeing levels. Notably, both symptom dimensions converged within the "Good" category (32.7% pain vs 32.1% negative feelings), reflecting coexistence of functional strain and emotional burden within the same perceived band of response severity, supporting the clinical interpretation that favourable global QOL can coexist with high symptom interference and psychological distress in secondary care nursing populations.

DISCUSSION

This study provides an item-level profile of perceived quality of life and health satisfaction among nurses working in a secondary health care hospital in South Punjab, showing a generally favourable global appraisal alongside a meaningful burden of physical and emotional symptoms. While 90.9% of participants rated overall quality of life as good or very good and 85.7% reported good or very good satisfaction with health, a substantial proportion simultaneously endorsed high levels of pain-related interference (59.7% in the upper response categories) and frequent negative feelings (43.9% in the poorest response categories). This pattern is clinically important because it suggests that global quality-of-life ratings may remain high even when symptom clusters that predict occupational strain—such as pain, distress, and functional limitation—are prevalent, highlighting the need for interventions that target specific modifiable burdens rather than relying solely on global satisfaction items.

The prominence of pain-related interference in this sample is consistent with the broader understanding that chronic or recurrent pain can reduce functional capacity, compromise wellbeing, and increase healthcare utilisation, particularly in physically demanding roles. The observed alignment between pain interference and higher perceived need for medical treatment is clinically plausible and suggests a subgroup of nurses experiencing symptom severity sufficient to affect daily functioning. Although this study did not quantify ergonomic exposures directly, nursing work routinely involves patient handling, prolonged standing, and task repetition, which can contribute to musculoskeletal strain over time. Integrating structured occupational health measures—such as ergonomic training, assistive handling devices, and early referral pathways for pain management—may therefore be a high-yield strategy to reduce functional limitation and preserve workforce sustainability, especially in settings where staffing coverage is already constrained. The association between coping, psychosocial support, and pain-related quality of life reported in the literature further supports the need to combine physical risk reduction with psychological and social buffering strategies rather than treating pain as an isolated biomedical complaint. (19)

Social and relational indicators were comparatively strong in this cohort, with 90.9% reporting good or very good satisfaction with personal relationships and 67.9% reporting good or very good satisfaction with support from friends. These findings are relevant because interpersonal support can mitigate occupational stress appraisal and may partially explain why global quality-of-life ratings remained favourable despite symptom burden. In practice, strengthening peer support mechanisms at unit level, improving supervisory communication, and facilitating access to counselling services may help reduce distress-related symptoms and improve perceived wellbeing. However, the relatively high proportion reporting frequent negative feelings indicates that support systems may not be sufficient for all nurses, and targeted mental health screening and referral pathways may be warranted—particularly for those simultaneously reporting pain interference and elevated treatment needs, which can indicate higher risk of burnout-related trajectories.

The inferential findings also suggest that demographic strata may be more influential than professional strata for certain self-rated outcomes in this sample. Age and marital status were significantly associated with both overall quality of life and health satisfaction, and job designation was significantly associated with overall quality of life but not health satisfaction. These differences imply that perceived quality of life may be influenced by role-related autonomy, responsibility, or work-context factors captured indirectly by designation, whereas perceived health satisfaction may be more sensitive to demographic and household contexts. At the same time, qualification and years of experience were not significantly associated with either outcome, suggesting that educational attainment and tenure alone may not protect against symptom burden or improve perceived wellbeing in resource-limited contexts. The borderline association observed for duty shift pattern with overall quality of life (p=0.052) should be interpreted cautiously, but it is consistent with the premise that shift-related disruption may influence recovery time and social functioning; a larger or probability-based study design would be appropriate to clarify whether shift system effects emerge more clearly when confounding and selection biases are more tightly controlled.

The study has practical implications for secondary care settings in South Punjab because it identifies specific domains where quality-of-life perceptions are comparatively weaker and potentially modifiable. Leisure opportunity dissatisfaction and transport dissatisfaction were more prominent than dissatisfaction with core relational domains, suggesting that institutional policies that enable recovery time, predictable scheduling, and supportive commuting arrangements may indirectly improve wellbeing, particularly for nurses already reporting symptom burden. Importantly, because this study is cross-sectional and relied on convenience sampling, causal interpretation should be avoided; nonetheless, the internal pattern of high global quality-of-life ratings coexisting with high symptom burden supports a pragmatic policy approach that prioritises targeted

occupational health interventions alongside psychosocial support. Future work should extend this approach by incorporating WHOQOL-BREF domain scoring, probability-based sampling, and multivariable models that quantify the independent contribution of pain, distress, shift systems, and workplace constraints to clinically interpretable outcomes, including absenteeism and turnover intent, within Pakistan's nursing workforce. (21)

CONCLUSION

Among nurses working in a secondary health care hospital in South Punjab, most participants reported good or very good overall quality of life and satisfaction with health; however, a substantial symptom burden was evident, particularly pain-related interference with daily activities, frequent negative feelings, and higher perceived need for medical treatment in a sizeable subgroup. Significant associations of overall quality of life and health satisfaction with age and marital status, and of overall quality of life with job designation, indicate that both demographic context and role-related factors may shape perceived wellbeing. These findings support the need for targeted occupational health strategies—especially ergonomic risk reduction and pain-management support—alongside structured psychosocial support and recovery-enabling workplace policies in secondary care settings.

REFERENCES

1. Muhammed Z, Abubakar IR. Improving the quality of life of urban communities in developing countries. In: Responsible Consumption and Production. Cham: Springer International Publishing; 2022. p. 357-370.
2. Manias E, Geddes F, Watson B, Jones D, Della P. Perspectives of clinical handover processes: A multi-site survey across different health professionals. J Clin Nurs. 2016;25(1-2):80-91.
3. Zhang Y, Wang L, Wang Y, et al. Nurses' perspectives on professional self-concept and its influencing factors: A qualitative study. J Adv Nurs. 2024.
4. Prosser LA, Lamarand K, Gebremariam A, Wittenberg E. Surveying family HRQoL impacts utilizing direct utility assessment. Clin Outcomes Res. 2015;35:81-93.
5. Kaplan RM, Hays RD. Health-related quality of life measurement in public health. Annu Rev Public Health. 2022;43(1):355-373.
6. Ibrahim N, Desa A, Chiew-Tong NK, Ismail R, Zainah AZ. Social support and religious coping strategies in health-related quality of life of end-stage renal disease patients. Pertanika J Soc Sci Humanit. 2011;19:91-97.
7. Johnson A. Nursing: The fundamental line of safety. Diary of Nursing Practice. 2019;10(4):78-92.
8. Smith CM. A male point of view on being a clinical regulator in the ongoing clinical advantages climate [doctoral thesis]. Appalachian State School; 2018.
9. Jones L, et al. Standard heading occupations and nursing occupation. Ladies' Assessments Quarterly. 2020;35(3):112-125.
10. Cogin J, Fish A. Vulgar approach to acting - a delicate subject for clinical supervisors. Diary of Success, Connection and The Pioneers. 2009;23(4):442-462.
11. Mason VL. The impact of chronic pain on quality of life: the development of a WHOQOL-based pain module [thesis]. University of Bath; 2004.
12. Kumar S, Kumar N. Concept of quality of life in health care research: a review. Int J Community Med Public Health. 2023.
13. Ashri MHM, Saad HA, Adznam SNA. Factors related with success related individual satisfaction among government workers in Putrajaya, Malaysia. Overall Diary of Normal Examination and General Thriving. 2021;18:2626.
14. World Health Organization. WHOQOL-BREF: Introduction, administration, scoring and generic version of the assessment. Geneva: World Health Organization; 1996.
15. Dionysiou M, Giannouli V. The role of social support in the psychological well-being of nurses in Cyprus: A cross-sectional study. BMC Nurs. 2020;19(1):1-8.
16. Sadeq MA. South Asian Institute of Policy and Governance North South University. 2018.
17. Ferrans CE, Zerwic JJ, Wilbur JE, Larson JL. Conceptual model of health-related quality of life. J Nurs Scholarsh. 2005;37(4):336-342.
18. Karimi M, Brazier J. Health, health-related quality of life, and quality of life: What is the difference? Pharmacoeconomics. 2016;34(7):645-649.
19. Gonzalez SA, Roth RS. Psychological adaptation to chronic pain and HRQoL: the role of coping, social support, and depression. Pain Med. 2006;7(6).
20. Rueda S, Mitra S, Chen S, Gogolishvili D, Walmsley SL, Bayoumi AM, Rourke SB. Examining the associations between HIV-related stigma and health outcomes in people living with HIV/AIDS: a series of meta-analyses. BMJ Open. 2016;6(7):e011453.
21. Rahim N, Naseer A. Quality of life among nurses: A cross-sectional study in tertiary care hospitals of Pakistan. Pak J Public Health. 2017;7(3):150-153.