

Determinants of Quality of Nursing Work Life: A Systematic Review

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Abstract--- *A large number of studies have addressed the detection of quality of nursing work life determinants, and the results are still inconclusive. This study aimed to systematically identify and review evidence regarding determinants of quality of nursing work life and to seek the reasons for contradicting results in relationships between determinants and quality of nursing work life in the literature to design a more robust measurement system for the quality of nursing work life. Methods: This systematic inclusion review followed the guidelines of the Preferred reporting items for Systematic reviews and Meta-Analysis (PRISMA) statement. The search was conducted in Scopus, EBSCO, Science Direct, and ProQuest. We used some search terms which were ('predictors' Or 'determinants' Or 'factors affecting' Or 'measurements' Or 'dimensions' Or 'aspects' Or 'attributes') AND ('quality of nursing work life'). The search terms were adapted from previous review studies with the same purpose and general search in various data bases. We also manually searched for a list of relevant article references to identify additional publications. A total of 61 articles researching QNWL were identified. All quantitative, qualitative, and mixed-methods studies, including experimental, quasi-experimental, observational, review, and so on, were considered for the systematic review. Six, one and five papers had been published in Asia, America, and Europe. As we used broad inclusion and exclusion criteria to gather as many studies as possible, this attempt led us to have a huge amount of data to extract and synthesise. The number of documents that focus on nursing organizations' factors (66.7%) was the most concerned sector. There were over 200 participants (83.3%) in significant studies. We found several determinants of QNWL investigated in a wide diversity of contexts. However, results varied as there is no globally accepted formulation of quality of nursing work life and measurement system.*

Keywords--- *QNWL; Cultural; Organization Factors; Determinant Factors*

I. INTRODUCTION

The human dimension of work has gained significant prominence with a particular focus on the quality of nursing work life [1]. In fact, the quality of nursing work life is considered less important in the workforce. There are many nurse facilities at work that do not support nurses in carrying out their duties. The purpose of QNWL is to increase employee satisfaction and employee support [2]. Therefore, health service policies are needed to understand the needs of nurses and make strategic plans to improve the quality of services. The way to achieve optimal nurse performance is to increase the quality of the nurse's work environment [3]. There are four dimensions that affect the quality of the work life of nurses,

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namely the dimensions of work-home life which involve the relationship between nurses' life experiences at work and home life [4]; work design dimensions that concern the need for work, such as job satisfaction, workload, and work motivation [5]; work context, that is, the environment at work and the aspects of the work world influenced by the social environment, such as people's perceptions or views [6]. The aim of ensuring a certain quality of work life is to develop the best working conditions for employees and the health of the organization's economy.

Research suggests that appropriate practices leading to a sound quality of working life within healthcare organizations can contribute to other positive outcomes for the institution, healthcare providers, and patients [7]. Such practices can also improve productivity measures, such as reduced cost and improved quality, increased organizational commitment, and higher patient satisfaction [8]. For instance, a high quality of service is reported as one of the positive consequences of a high QNWL [5], [9].

However, it seems that the findings of QWL research in nursing have not been systematically examined in recent years, especially regarding the diversity of factors leading to diverse dimensions in various regions around the world. A short systematic review was carried out on the determinants of QNWL. No systematic review has been carried out using reliable methods and guidelines in the past decade. It is clear that there is a need for more research on the importance of the main factors influencing QNWL and the variation of these factors in various countries, which cannot be generalized. This study aims to systematically identify and review evidence regarding the determinants of the quality of nursing work life and to seek the reasons for contradicting results in the literature about the relationships between these determinants and the quality of nursing work life in order to design a more robust system for measuring the quality of nursing work life.

II. METHODS

- Research Design

This systematic review followed the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement. The PRISMA statement includes a 27-item checklist that assures transparency, iteration, and complete reporting for systematic reviews.

- Search Strategy

The electronic search was conducted based on Scopus, EBSCO, Science Direct, and ProQuest in February 2020. The electronic databases were searched using the below terms identified from the title, abstract, keywords, or medical subject headings: ('predictors' Or 'determinants' Or 'factors affecting' Or 'measurements' Or 'dimensions' Or 'aspects' Or 'attributes') AND ('quality of nursing work life'). The search terms were adapted from the previous review studies with a similar purpose. We also manually searched reference lists of relevant articles to identify additional publications. Finally, references of all included studies were listed to eliminate duplicates and ensure proper reporting guidelines for the selected articles.

- Inclusion and Exclusion Criteria

The inclusion criteria for articles were defined as follows: they had to be published between 2015 - 2020, written in English, and including keywords relevant to our search. Articles with samples that did not focus on nurses' quality of work life, articles discussing quality of life outside work, as well as articles on systematic review, narrative review, theses, books or chapters, abstracts and editorials issued in this study.

- **Study Selection**

Our initial searches identified 61 titles and abstracts. 34 were duplicates owing to the same articles emerging in the selected databases and a list of references of relevant materials. After the elimination of the duplicates, we had 27 titles and abstracts that matched the eligibility criteria. During the title and abstract reviewing process with eligibility criteria application, 15 irrelevant case-specific, setting-specific, and questionnaire construction and validating related articles were identified, and removed from the list of eligible full articles. We retained 12 potentially eligible full articles, and the eligibility criteria were applied to each of them. Furthermore, the GRADE approach was used on all full articles to check the quality of the evidence. A flow diagram of the study selection is shown in Figure 1.

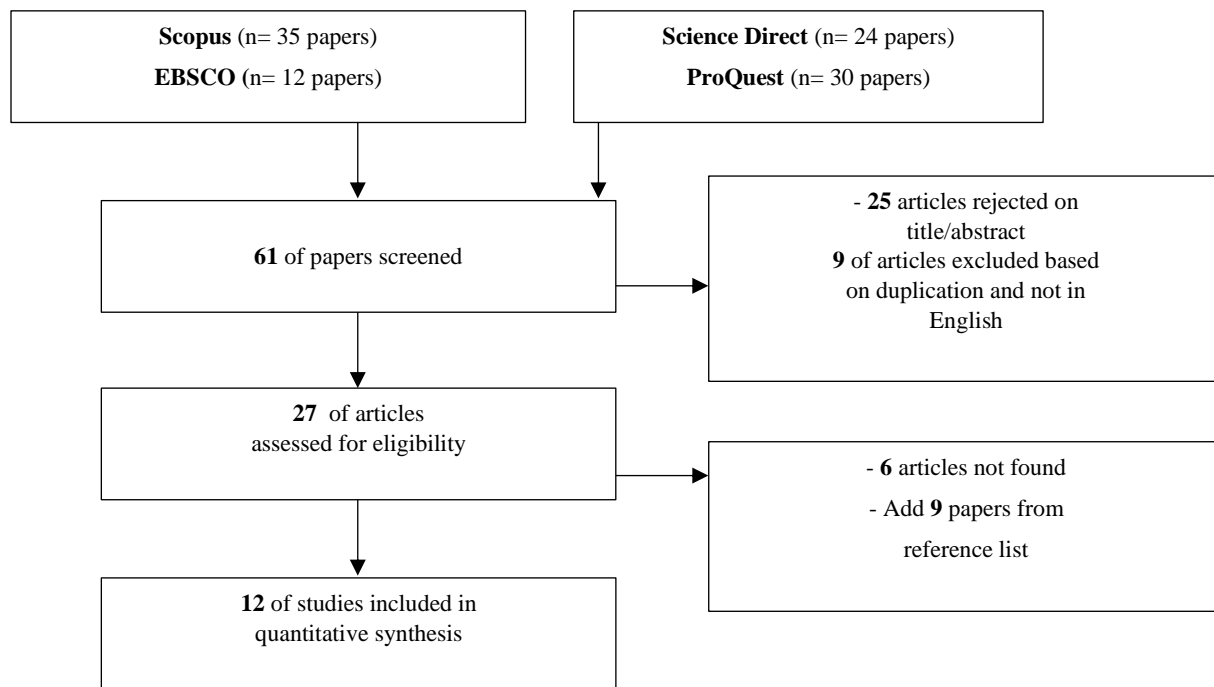


Figure 1: Search flow for systematic review

- **Eligibility Criteria**

All quantitative, qualitative, and mixed methods studies, including experimental, quasi-experimental, observational, review, and so on, were considered for the systematic review. Studies were included if they (1) evaluated the overall quality of nursing work life; (2) assessed any association between quality of nursing work life determinants and nurse related variables; (3) tested any theoretical framework related to the quality of nursing work life; (4) compared quality of nursing work life or its determinants between particular populations or settings; and (5) conducted a literature review, systematic review, or meta-analysis on quality of nursing work life determinants. To get more eligible articles, we scanned the reference lists of the papers we had selected to find studies in English published in full in peer-reviewed journals between 2015 and 2020. We included 61 articles for the synthesis, and excluded the rest as they were unfit for our purpose and inclusion criteria

(disease-specific, nurse in general or primary health care services and facility-specific characteristics), were unclear in their statement of methodology and instrument, and/or very poor quality of evidence.

- **Data Extraction**

Data were extracted by study characteristics (author names, year published, country, and study design), the aim of the study, the sample analyzed in each study, the period of time spent conducting it, the results of the article related to methodological quality or factors of QWL, and critical findings. Titles and abstracts of studies in the results of searches were reviewed by two independent authors for the next stage of review. If there was a disagreement between them, the resolution was made through discussion with a third author. Full texts of all included studies were checked against the eligibility criteria by two authors independently, and disagreements were resolved by discussions with the third author. All the eligible or potentially eligible studies were assessed by the third author once again. Studies that did not meet the eligibility criteria or whose texts were not found in full were excluded from the next stage of review.

Data Analysis

The heterogeneity of theoretical bases, methods, measurements, and outcomes of the included studies did not allow us to employ statistical purposes to combine data. Furthermore, study countries, settings, population characteristics, and data collection methods varied. As a consequence, we did not attempt to pool the data for a meta-analysis. Therefore, the data were narratively synthesized. The studies were grouped by the determinants of quality of nursing work life as they related to healthcare service providers and predictors related to nursing background characteristics. Within each group of studies, consistent and contradicting results were synthesized. We attempted to interpret potential reasons for varying results in relationships between determinants and quality of nursing work life across studies on the basis of the involved study characteristics.

- **Quality Assessment**

Heterogeneity and variability in design of eligible studies meant that the validated design-specific quality assessment tools were inappropriate; however, each eligible study was assessed by the GRADE approach for grading the quality of evidence and the strength of recommendations. This approach was developed to improve transparency of process in developing and presenting evidence for systematic reviews and recommendations in public health and policy [10]–[12]. Five main quality factors of evidence were assessed: (1) risk of biases [13] (2) inconsistency of results [14] (3) indirectness of evidence, (4) imprecision [15] and (5) publication bias [16]. The majority of the included studies were in non-experimental design, and thus, their quality of evidence was assessed as low. Therefore, we included as many articles as possible in the review, unless their methodology and quality were seriously flawed. Two authors assessed the quality of all included studies independently. A third author checked for completeness and precision of the assessment. Differences in the quality assessment were resolved through consensual discussion.

III. RESULTS

- **General characteristics of publications**

The studies were heterogeneous. Among the included articles, nine were cross-sectional, one was a systematic review, one was quasi-experimental, and one was qualitative. From 2015 to 2020, there were papers focused on QNWL every year. Asia had the most articles (n = 50%), the other articles were from America (n = 8.3 %) and Europe

(n = 41.7%). Generally, the studies discussed many factors related to, correlated with, and affect QNWL, including years of experience, education level, monthly income, social support, work environment, health status, stress level, and skills. Most studies concerned nursing organizations (n = 83.3%), while the most different from other studies is the variable about acculturation, which has a significant impact on QNWL. We retained 12 potentially eligible full articles, and the eligibility criteria were applied to each of them. Furthermore, the Grade approach was used to all the full articles to check the evidence quality.

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- Nurse-related characteristics–related determinants

Our review identified eight determinants, which may have played a role in variations in the quality of nursing work life: years of experience, education level, monthly income, social support, work environment, health status, stress level, and skills. Studies are not only about QWL but also other factors relating to job satisfaction and job performance [17], [18]. Some papers focused on factors related only to QWL [19]–[26].

- Years of experience

This factor alone could not explain the statistically significant variance of QWL. Experienced nurses perform the same role and nursing activities as new graduates. Besides this, career paths for nurses are not clearly developed as a result; nurses with more years of experience did not perceive a higher level of QWL [19].

- Educational level

Years of education could not explain the statistically significant variance of QWL. One possible explanation is that nurses with higher education (bachelor or master's degree) work similarly to those with diploma degrees in the same positions because they are not willing to go far away from their families. As a result, higher educated nurses could not perceive a higher level of QWL [19].

- Monthly income

Monthly income also had a moderate positive correlation with nurses' QWL. Sufficient wages and salaries have a high association with QWL. The possible explanation of the moderate positive correlation between monthly income and QWL among nurses is that nurses with higher monthly incomes, as earners, are more likely to be able to help fulfill the needs of various family members. Nurses need their salaries to run their own family, and their parents' family, as girls from lower and lower-middle classes come to the nursing profession. Therefore, if nurses can receive higher salaries, they can manage their families very well [19].

- **Social support**

Social support has an influence on nurses' QoL more than their ability to cope with stress. Social support from supervisors, bosses, co-workers, family members, and friends was a significant factor that influenced nurses' QoL. Social support can act as a stress buffer to help an individual cope with stress by reducing the pressure on his/her psychological and physical health, which, in turn, improves well-being and QoL [25], [27].

- **Work environment**

This can be defined as the environment which addresses financial resources, freedom and physical security, accessibility and quality of health and social care, home environment, opportunities for acquiring new information and skills, and participation in and opportunities for recreation, the physical environment, and transport [24]. QNWL was positively associated with accessibility through aspects such as the convenient location of healthcare facilities [27], [28]. People spend much of their day at work, which creates an expectation that their physical needs will be met from the work environment. It is a fact that the people in the working environment influence the working life. The importance of job life quality is positive in business environments. Nursing care is emphasized in the 45th World Health Assembly in line with 'Health Strategies for All,' and it is stated that, providing appropriate working conditions, will motivate more nurses to improve [18]. Nowadays, nurses can participate in hospital affairs; they can emphasize the quality of patient care; they have opportunities for leadership that can help nursing work, and hospitals have improved the supply of resources, but staffing is not adequate yet. Finally, there is a good relationship between nurses and physicians, even though physicians create some extra responsibility for nurses [19]. Furthermore, the results showed that the level of acculturation and quality of life were positively correlated with the psychological, social, and environmental domains. In general, better acculturation contributed to better well-being and is directly related to better job satisfaction feelings [28]. Considering that job satisfaction is linked with health-related quality of life, nurses' managers should examine the work environment and improve it so that nurses will not only feel valued but also be encouraged to provide better services to those who need them [17].

- **Health status**

Another critical factor in the dissatisfaction of nurses with their QWL was high job stress. Several types of research concluded that stress in the work environment decreases the level of QWL of nurses [22]. Regarding the work environment, healthcare organizations can design health promotion programs such as aerobic dance, yoga, mindfulness interventions, and breeze walks during breaks or after work for 30 to 45 min for nurses who spend more than 50% of their time working. This will help to improve QoL, physical and mental health, and a pleasant workplace environment [24].

- **Stress level**

Job stress was a significant predictor of QWL and is negatively correlated with QWL, as shown in some previous studies also found a moderate level of negative correlation between JS and QWL. This is because nurses perform their duties with heavy workloads, limited resources, and shortages of nurses and other staff, which creates stress among nurses. The regular picture of the hospital includes the following: death and dying, the conflict between nurses and physicians and other staff, heavy workload, problems with patients and their families, and some discrimination within the profession. Nurses try to adjust to all factors related to job stress, focusing on the quality of care as their primary goal. The stress in the workplace reduces the level of quality of work life among nurses [19]. In this regard, factors such as occupational stress, high emotional disturbances, close relationships with patients, and responsibility for their mortality and life, as well as the presence of other factors, can be considered as the stressors leading to a decline in quality of life [25].

- Skills

Feelings, attitudes, and beliefs of the person toward the level of relationships (communications domain) were significantly correlated with all aspects of life quality except for the home environment. The reason is that when people learn communication skills, they use them in every condition and environment. Although, obviously, there are many factors which affect the quality of life [27].

IV. DISCUSSION

Quality of work life has emerged as a popular concept. In the area of health care, the number of articles on QWL is increasing. It shows the proper attention of organizations on this critical issue. QWL researches are conducted in many countries with different objects. Each study uses separate methodologies and tools to survey to assess the related factors to get a highly reliable result. Our review found that the potential determinants that were seen as playing important roles in the quality of nursing work life varied across studies. However, the strongest determinants of the quality of nursing work life across studies were work environments. More specifically, financial resources, freedom and physical security, accessibility and quality of health and social care, home environment, opportunities for acquiring new information and skills, and participation in and opportunities for recreation, the physical environment, and transport [24]. This result supports some theories and models on the work environment indicators that play crucial roles in QNWL. Among the service-related determinants, the majority of studies found the strongest positive association related to the excellent relationship between nurses and physicians [19]. The previous systematic reviews with the same purpose came to similar conclusions. Therefore, first, it may be necessary to attempt to formulate QNWL based on the work environment indicators and how nurses develop the quality of their work life with accessibility.

Second, if QNWL is a central issue, a first step would be establishing or strengthening the training of interpersonal skills to increase communication and empathetic skills of nurses and to ensure the continuity of the training at the workplace for health professionals [27]. Third, health status is essential to prioritizing resources, so improving nurses' job satisfaction and quality of work life can increase efficiency by giving health insurance for employees, adequate and flexible holidays, and flexible shift schedules [25]. However, there is evidence that socio-demographic factors of nurses also affect the quality of nursing work life. Yet, the different effects of the socio-demographic variables show that they should be taken into account when comparing the quality of nursing work life between specific groups or countries. On the other hand, the heterogeneity of theoretical frameworks, study design, and measurements may have been responsible for the inconsistency and incomparability of results. In addition, we reviewed a wide range of different studies from different departments, settings, and countries. Thus, various types and geographic locations were the potential sources of inconsistency in the review due to the cultural differences between them [28]. Hence, a crude QWL score is not recommended for the comparison of the quality of nursing work life results.

There is no 'typical nurse,' and individuals are different regarding their background characteristics. Thus, individual nurse characteristics played a significant role in varying results. However, in our sample, some studies did not consider adjusting for individual nurse characteristics for adjustment. Although many other individual characteristics should have been taken into account, we found that not much attention was paid to them. We identified surprisingly little evidence for the influence of nurse culture, attitudes, and values on the quality of nursing work life [24], [26]–[28].

Moreover, health sector resource constraints, health insurance coverage, political situation, nurses' expectations, healthcare policy, and labor markets may intervene in the evaluation of the quality of nursing work life. Thus, cross-cultural or cross-country studies should interpret their results cautiously. The majority of the measuring instruments were not well validated in this study, and there is a need for a 'gold' standard instrument that can be adapted to different countries, cultures, and preferences. According to the results, the selected studies were widely varied, and the concept of quality of nursing work life itself is heterogeneous. A generalization of results from the specific reviews to a nationwide or cross-national picture does not seem to be the best trend for detecting the most influential person-related determinants of QNWL for further improvement of the conceptualization unless the presence of reference instruments can be adapted to other languages and sociocultural contexts.

- **Limitations**

This study has two important limitations. The main problem links to the quantity and the aim of the literature. Although we conducted a comprehensive search, we found only a limited group of publications with quantitative data and only one with qualitative data. A second limitation is about summarizing the factors of QNWL and their consequences, as well as how they affect QNWL. Since each paper was conducted with a different aim and they did not just research QNWL but other issues, many factors are mentioned and assessed.

V. CONCLUSION

In this review, studies published between 2015 and 2020 on the quality of nurses' work life and its determinants were examined. We found several determinants of quality of work life investigated in a wide diversity of studies, including fields such as marketing, behavioural science, psychology, and health management. Nonetheless, study results varied greatly between and within fields, due to no globally accepted formulation of the concept of the quality of work life. QWL is becoming more and more relevant in order to improve quality and job performance.

The study revealed some factors affecting the quality of nursing work life in a wide diversity of studies, such as years of experience, education level, monthly income, social support, work environment, health status, stress level, nurse skills. Besides knowing those factors, it is important to recognize and access the limiting factors for improving QNWL.

However, across all the studies, work environment indicators had strong and positive influences on quality of nursing work life. From these, the most consistent and strongest determinant of the quality of nursing work life was financial resources. There is evidence that sociodemographic factors of nurses affect the quality of their work life with years of experience. However, the strength and direction of these effects on quality of nursing work life were varied. These varied effects may demonstrate that the sociodemographic factors do not only affect quality of nursing work life, but also play moderating and mediating roles in the association between health service determinants and quality of nursing work life. In this sense, person-related variables should be considered both potential predictors of patient satisfaction and confounders in the same study to control their roles in the true associations between determinants and patient satisfaction.

The diversity of conceptual definition of quality of nursing work life resulted in diverse and insufficient measurements. Also, some measures could not capture all experiences of nurses within the work environment. Therefore, it is suggested that employing population-specific or setting specific and valid instruments with open questions for comments and complaints from nurses would reduce the weakness. Furthermore, a great proportion of studies were cross-sectional and descriptive, and the results precluded from estimating causal relationships between determinants and satisfaction. Thus,

there is a need to employ a longitudinal or experimental study design to detect true causal relationships. Furthermore, the selected studies were not able to show all potential characteristics which may affect the quality of work life. Further studies are needed on how cultural, behavioural, and socio-economic differences affect quality of nursing work life with standardized questionnaires that can be adapted to specific groups and countries for further comparisons.

CONFLICT OF INTEREST

The authors have declared that no competing interests exist.

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APPENDIX

Table 1. Articles evaluated in this review

No	Study, year (N=12)	Country	Method	Samples	Period of time	Factors of assessment	Result
1	[27]	Iran	a cross-sectional study	446	n/a	<ul style="list-style-type: none"> - marital satisfaction - communication idealistic - distortion - personality - equalitarian roles 	Happy hours spent with family, working hospital, and belief in the negative effect of night shift work on personal, family, and social life were found to be effective parameters on four domains of life quality. Marital satisfaction and communication domain in the Enrich questionnaire were significantly correlated with total score of quality of life. Idealistic distortion domain in the Enrich questioner was significantly correlated with the social domain of quality of life.

No	Study, year (N=12)	Country	Method	Samples	Period of time	Factors of assessment	Result
						<ul style="list-style-type: none"> - conflict resolution - financia - management - leisure activities - sexual - relationship - children and marriage - family and friends - religious - orientation 	
2	[19]	United Kingdom	a cross-sectional study	2459	2 years	Years of experience Years of education Monthly Income JS OC WE QWL	The quality of work life as perceived by nurses in Bangladesh was at moderate level. Monthly income was found as the best predictor followed by work environment, organizational commitment and job stress. A higher monthly income helps nurses to fulfil their personal needs; positive work environment helps to provide quality care to the patients.
3	[18]	Turkey	a cross-sectional study	231	4 months	job life quality and job satisfaction level of the nurses	According to our study data, 46.7% of the nurses evaluated the quality of work life as good and the average score of "Nursing Work Life Quality Scale" was found to be moderate (99.69 ± 18.98). Nurses' job satisfaction level average was 56.99 ± 13.49.
4	[20]	Vietnam	Systematic review	56	1 month	Work life/home life work design work context work world	Nowadays, there are nine countries that focus on QWL of healthcare staffs by researching and assessing concerned factors to enhance worker's satisfaction and support workers to be better manager change and transition.
5	[21]	Spain	Qualitative study	8	3 months	Adaptation Psychological wellbeing Burnout Stress Fatigue Occupational risk Satisfaction	It is necessary to examine in depth the construct of self-care, to counteract emotionally stressful problems and situations, to propose intervention strategies, training plans and greater involvement of health institutions in the improvement of nurses' quality of work life.
6	[22]	UK	A cross-sectional study	2391	1 year	Demographic variables were assessed: age, gender, marital status, clinical experience, work hours, wards, income, educational level, and type of employment Participation and involvement Job promotion	The mean score for total quality of work life was 2.58, indicating a low level of self-reported quality of work life, with 69.3% of nurses dissatisfied with their work life. The major influencing factors were inadequate and unfair payment, lack of solving staff problems by organization and poor management support, job insecurity, high job stress, unfair promotion policies, and inadequate involvement in the decision-making. Significant predictors in the multivariate analysis for lower quality of work life were male gender, being single, older age, having lower educational levels, and working in teaching hospitals.

No	Study, year (N=12)	Country	Method	Samples	Period of time	Factors of assessment	Result
						Solving staff problems by organization Communication Wages and salaries Job stress	
7	[23]	USA	A cross-sectional study	4908	1 year	BFS Outcomes Patient Characteristics Nursing Organization Facility Characteristics	FS respondents were 17% more likely to give an excellent overall rating of the quality of EOL care received by the veteran in facilities with better nurse work environments. The nurse work environment also was a significant predictor of providers listening to concerns and providing desired treatments. Nurse staffing was significantly associated with an excellent overall rating, alerting of the family before death, attention to personal care needs, and the provision of emotional support after the patient's death.
8	[24]	UK	A descriptive quantitative study	600	3 months	Age, gender, working status and shift rotation Time spent on private life Job satisfaction Social support Stress	Social support and sense of coherence were found to be significant predictors for high quality of life in all domains. Most nurses in this study spent more time on work than their private lives. However, there was no significant difference in job satisfaction among the four groups of nurses' proportions of percentages of actual time spent on work and private life
9	[25]	Iran	cross-sectional study	185	1 month	Access Reading skills Understanding and perception Evaluation Application of health information (decision-making) Total health literacy	A significant relationship was observed between health literacy and quality of life in nurses. Healthcare policy-makers are suggested to take measures to develop programs on promoting health literacy and related skills to improve the status of quality of life among nurses.
10	[17]	Korea	A cross-sectional study	508	n/a	Workload Support Training pay prospects	Greek nurses were found to be dissatisfied with their job according to the total score of the job satisfaction scale, although personal satisfaction and satisfaction with support had had higher scores. Their general health was reported as average, because of physical and mental health problems, low vitality, low energy, and increased physical pain. Multivariate linear regression analysis revealed that males and those wishing to stay in the job had higher physical and mental health. Increased job satisfaction was related to increased physical and mental health.
11	[26]	Iran	cross-sectional study	750	n/a	Socio-demographic (sex, age, work experience, unit, type employment,	The mean WAI was significantly associated with total WRQoL score and the two of its sub-items including Stress at Work, and General Well-Being. Moreover, the results showed a significant correlation between total WRQoL and WAI Subscales including mental resources, number of current diseases, and work ability in relation to the job demands.

No	Study, year (N=12)	Country	Method	Samples	Period of time	Factors of assessment	Result
						over time, number shift) Working conditions Stress at work	The WRQoL and WAI showed significant associations with age and job experience. The average score of WAI and WRQoL was statistically different among various working units.
12	[28]	UK	A cross-sectional, correlational study	814	6 months	Acculturation	There were variations in the acculturation level among different nationality groups of international nurses. Acculturation levels were the lowest among Mainland Chinese international nurses. A positive correlation was found between acculturation and quality of life whereas a lower perception of work environment was associated with lower acculturation level.