


Research Article

Correlation between the Professional Quality of Life and Social Support in Oncology Nurses: A Cross-Sectional Study

Muhammad Sohaib¹, Ran AN^{1,2}, Meizi LIU^{1,2}, Wenfeng CHEN^{2*}, Qiaomiao ZENG²

Abstract

Purpose: To examine the prevalence of Compassion Fatigue and Compassion Satisfaction and correlate them with Social Support among oncology nurses in Pakistan.

Design: Quantitative, descriptive, cross-sectional study.

Methods: The population size is 344 participants. An online survey was conducted using a simple random convenience sampling method to select the participants from different oncology hospitals in the province of Punjab, Pakistan. An equal chance of selection will be given to each participant. A survey was used to collect the data, then examined by using descriptive statistics and the Pearson correlation coefficient. This study employed the social support scale and the Professional Quality of Life scale version 5.

Research Variables: Compassion satisfaction (CS), Burnout (BO), Secondary traumatic stress (STS) and Social support (SS)

Findings: Demographics data shows that those who have Bachelor's and master's degrees nurses have a good level of Compassion Satisfaction and a lower level of burnout as compared to those who have only nursing diplomas. When Compassion Satisfaction and Compassion Fatigue were correlated with Social support, it was observed that Burnout and Secondary Traumatic Stress are substantially correlated with supervisors and management. In contrast, Compassion Satisfaction is highly correlated with family and friends.

Conclusions: Oncology is a stressful field compared to other departments, and a healthy and supportive environment is needed for nurses to work and enjoy their professional lives. Hospital management needed to conduct seminars and training programs for nurses to sort out their stress and patient disease management.

Keywords: Oncology nurses; Social support; Healthcare professional

Abbreviations: ProQOL: Professional quality of life; CF: Compassion Fatigue; CS: Compassion satisfaction; BO: Burnout; STS: Secondary traumatic stress; SS: Social support

Introduction

The stress on a healthcare professional is rising, as is pressure, and as a consequence, both emotional exposures are rising [1]. It primarily works on specialized activities that are highly dependent and also composed; on the deathbed, with the strain of patient care and anguish of cancer patients and their families, the oncology ward nurse observes the patient's dread of sound, medical limits, poor prognosis, and painful treatment [2].

Affiliation:

¹Xiangya School of Nursing, Central South University, Lushan Rd, Yuelu District, Changsha, Hunan, China

²Teaching and Research Section of Clinical Nursing, Xiangya Hospital, Central South University, Xiangya, Kaifu District, Changsha, Hunan, China

*Corresponding author:

Wenfeng CHEN, Teaching and Research Section of Clinical Nursing, Xiangya Hospital, Central South University, Xiangya, Kaifu District, Changsha, Hunan, China

Citation: Muhammad Sohaib, Ran AN, Meizi LIU, Wenfeng CHEN, Qiaomiao ZENG. Correlation between the Professional Quality of Life and Social Support in Oncology Nurses: A Cross-Sectional Study. International Journal of Plant, Animal and Environmental Sciences. 13 (2023): 68-74.

Received: October 10, 2023

Accepted: October 17, 2023

Published: October 23, 2023

Cancer patients are increasing in Asia and worldwide, and the mortality rate is very high in cancer patients [3]. Oncology nurses are under more mental strain than nurses in the general ward [4]. This endangers both their physical and emotional well-being [5]. Negative emotions affect you indirectly [6]. This colossal anxiety Compassion fatigue is a term used to express this feeling of tension that comes from instinctively knowing via constant contact with those who have gone through it [7].

Healthcare professionals frequently experience work-related stress, which negatively affects their happiness and job satisfaction as well as their mental and physical well-being [2,8]. The Oncology Nurse population is very limited compared to the patient ratio, especially in Pakistan and as well in worldwide [9]. It can also hasten the development of compassion fatigue syndrome [10]. According to Jonson, who originally identified and investigated Compassion Fatigue (CF) in 1992, it is a disorder that results in depletion and instability in healthcare employees due to continued experience with both professional and compassion stressors [11].

The Professional Quality of Life (ProQOL) scale, established by Figley (1996), is the most frequently abandoned instrument to measure CF. The scale was revised by Stamm (2005). Three components make up the ProQOL: Compassion satisfaction (CS) is the joy one experiences from accomplishing one's goals or from helping trauma patients. Burnout (BO) is a detrimental result of ongoing work-related stress that results in emotional exhaustion, depersonalization, and failure [12,13]. When trauma patients or situations are exposed repeatedly at work, Secondary traumatic stress (STS) develops [14].

Social Support (SS) has identified characteristics that may mitigate or buffer the harmful consequences of stress [15]. According to Brown and Wood's 2009 research, oncology nursing staff employees tend to keep their feelings inside. Making errors, not receiving cooperation from hospital managers to enhance working conditions, a lack of resources and equipment, feeling inadequate or powerless, and other situations were found to be the most stressful, and observing miserable individuals who receive no other medical care [16]. Perceived SS was first defined by Zimet in 1988 [17]. SS is used to measure how well-being among family, friends, and significant others is expected to be maintained [18]. SS can be defined as the presence of individuals one can rely on or as the amount of help received through relationships with others [19]. In addition to being a component of a communication network, it is connected to the idea that the subject is taken into account, respected, and loved by others [20]. SS is a complicated phenomenon that, among other things, depends on a person's socio-political context, socialization process, and personal morality [21,22].

According to research, sociocultural support directly affects how well people perform at work [23]. Workplace sources of support have become important for all oncology nurses [24]. Effective stress management techniques integrating SS networks can be developed by understanding how stress impacts job performance and how SS influences both workplace anxiety and work description [25]. The quality of care may, therefore, increase when nurses have strong SS. By creating environments with more SS and less stress, one may help retain employees and solve the nursing shortage [26].

The purpose of this study was to (a) investigate the prevalence of ProQOL in oncology nurses and (b) Analyse the situation of SS for nurses in Pakistan's oncology department. What is the correlation between the ProQOL and SS in oncology nurses?

Method

Study design

A quantitative cross-sectional correlation study on nurses was carried out by providing an online questionnaire to evaluate the ProQOL and SS between oncology nurses in Pakistan, as well as their relationship with SS.

Study population

In this study, individuals were chosen using simple random convenience sampling techniques from various cancer hospitals in Punjab, Pakistan, from November to December 2022.

Inclusion criteria: (1) Presently licensed nurses who are working continuously in an oncology department and involved in direct patient care; (2) having a minimum of a bachelor's degree or nursing diploma; (3) having completed a minimum of six months of clinical experience in any department.

Exclusion criteria: (1) No bedside nurses like Nursing managers, supervisors, etc. (2) those who haven't completed their degree yet, like internees and final-year students. (3) Those who were absent for any cause, such as being on leave, etc.

All contestants were made conscious of the study and consented to fill out the questionnaire voluntarily.

Sampling

A simple random convenience method was used in this study. As specified earlier, data were collected from the oncology nurse's province of Punjab, Pakistan. Formal permission to conduct data collection was obtained from the International Review Board (IRB) committee of Central South University. Notably, data collection took virtually two months, from November 2022 to December 2022, in all five

oncology hospitals. Firstly, the researcher (myself) conducted a data collection orientation program involving one research assistant (Staff Nurse) from each hospital to ensure their efficiency in data collection.

The Yamane Equation (1967:86) provides a simplified formula to calculate the sample size for a finite Population, which is best for this study. The formula is $n=N/\{1+N(e)^2\}$. the estimated margin error is 0.05, and the confidence level of participants is 95%. Then, 344 people will be needed as a sample size for this study.

Instruments

Data was gathered using a self-report questionnaire. A research assistant informed all eligible participants of the study's objectives. The following sections were included in the questionnaire's content.

General demographics and work-related characteristics

The participants' basic demographic information, including age, gender, marital status, level of education, number of years of experience working in the oncology department, and working hours, was gathered at the beginning of the survey.

ProQOL scale (Pro-QoL)

The ProQOL scale was employed to evaluate compassion fatigue and satisfaction. The scale has three subscales: CS, BO, and STS. BO and STS are used to measure compassion fatigue. It comprises 30 items that are rated from 1 (Never) to 5 on a Likert scale of 1 to 5 (Always). Low is defined as a subscale score of 22 or less, while medium is defined as a subscale score of 23 to 41. A 42 or higher is regarded as excellent. The Pro-QoL scale was applied in the current investigation. In this study, Cronbach's alpha value for the overall scale was 0.716, and the values for each subscale were 0.910, 0.811, and 0.798.

Social support

The SS Questionnaire was employed to gauge how much assistance participants received from co-workers, managers, and friends/family through tough times over the previous three months. Twelve items with a Likert scale of 1 (strongly disagree) to 5 (strongly agree) are used to evaluate each source of SS (strongly agree). Higher values represent perceived support that is regarded to be more robust.

Each SS system is given a total score between 11 and 55. This approach classifies any mean scale score between 1 and 2.9 as weak support, 3 to 5 as moderate support, and 5.1 to 7 as excellent support. The content validity index scores were in the range of 0.83 and 1.0. Cronbach's alpha was used to evaluate internal consistency. Cronbach's alpha values were. 97, 98, and.98 for SS from friends or family, co-workers, and supervisors, respectively.

Data analysis

To evaluate the data, IBM SPSS 26.0 was used. Demographic information, including age, gender, number of years working in oncology, and educational background, were evaluated using descriptive statistics, which comprised median, range, frequency, and proportion. Analyses of the bivariate correlation between ProQOL and demographic factors were conducted. The inception for statistical significance was set at P 0.05 (two-sided). Correlation analysis was used To determine the relationship between ProQOL and SS.

Ethical considerations

Ethical approval was granted by The Ethics Committee of Xiangya School of Nursing, Central South University (E2022216). The Helsinki Declaration applied to all study protocols involving human subjects. Before the investigation could be completed, each participant provided an online consent form, and informed consent was obtained from all participants. Participants were instructed that their information would be kept anonymous, that only cumulative results would be provided, and that they might withdraw at any moment.

Results

Demographic characteristics

The survey included 344 nurses, or a 100% response rate, representing the total population's professional background and training (N = 344). Table 1 provides an overview of their qualities. All respondents were licensed registered nurses, and the majority (60.8%) of the participants were men. The participants were young, with ages ranging from 18 to 37 (M=26.13) years. Most participants have graduated degrees (55.24%), and the average experience in the oncology department is 3.55 years.

ProQOL and demographic factors

The Pearson correlation between the participant's age, education, number of hours worked, work experience, and variables like CS, BO, and CF The findings showed there is no statistically significant correlation between CS and CF and age, gender, marital status, or several hours worked. A statistically moderate correlated significant positive relationship between BO and job experience was observed ($r=.396^{**}$, $p=.000$). CS is highly correlated significantly positively with education, job hours, and BO ($r=.589^{**}$ ($p=.000$), $r=.437^{**}$ ($p=.000$), $r=.736^{**}$ ($p=.000$)). STS is highly correlated insignificantly positive with education, CS and negatively correlated with BO ($r=.453^{**}$ ($p=.000$), $r=.613$ (.000) and $-.421^{**}$ ($p=.001$) (Table 2,3).

Demographic factors and ProQOL:

CS is average in oncology Nurses as compared to STS and BO; both are high in oncology nurses. (Table 4).

Table 1: Demographic characteristics.

Variable	n(%)	M(SD)
Gender		
Male	209 (60.8%)	
female	135 (39.2%)	
Age		
18-20 years	110 (31.97%)	26.13 (3.541)
20-23years	90 (26.16%)	
24-26 years	96(27.92%)	
> 26years	48(13.95%)	
Education		
nursing diploma	134(38.95%)	
Graduation	190 (55.24%)	
master	20 (5.81%)	
Job experience		
In oncology department		
6m-12m	69 (20.06%)	3.55(1.44)
1-2years	109(31.68%)	
3-4 years	90(26.16%)	
5-6years	61(17.73%)	
>6 years	15(4.36%)	
Working hours		
6-8 hours	237 (68.9%)	
8-12 hours	93 (27.0%)	
>12 hours	14 (4.1%)	
Marital status		
Single	165 (48%)	
married	179 (52%)	

Descriptive statistics of SS

Descriptive statistics show that there is high support from friends/family (5.63 SD (1.20)), Moderate support from Co-workers (4.21, SD (1.20) and low support from supervisor (2.31, SD (.54) (Table 5).

1 to 2.9 weak, 3 to 5 moderate, and 5.1 to 7 strong supports

Correlations between ProQOL and SS

The Pearson correlation among SS (friends, family, supervisor) with ProQOL (Table 6). CS is positively correlated with family and friends (.688** (.000) and supervisor, STS, and BO have a highly substantial positive association (.822** (.000), .615** (.000).

Discussion

The purpose of this study was to identify the prevalence of CS, BO, and STS among oncology nurses and to correlate them with SS. The most important is this is the first study in Pakistan to use the ProQOL scale to measure the SS and professional quality of nurse life for oncology nurses. In this study, the results for BO, STS, and CS were 22, 26, and 28, and SS from friends and family, co-workers, and supervisors were 5.64, 4.21, and 2.31, respectively. Another study conducted in Taiwan about the professional quality of nurses' lives found that CS, BO, and STS were 31.52, 29.63, and 27.11; according to this study, CS is higher than STS and BO [2].

In this study, oncology nurses have high STS, BO, and Moderate levels of CS. Moderate levels of CS, high levels of STS, and high levels of BO were observed in nurses according to their education and job experience [1]. Those who have Bachelor's degrees and master's degree can better understand the diagnosis of oncology patients and their

Table 2: ProQOL and demographic factors.

	Age	Sex	Education	Job experience	Marital status	Working hours	BO	CS	STS
Age	1	–	–	–	–	–	–	–	–
Sex	.022(.687)	–	–	–	–	–	–	–	–
Education	.005 (.925)	-.106 (.351)	–	–	–	–	–	–	–
Job Experience	.003 (.865)	-.016(.772)	-.065 (.232)	–	–	–	–	–	–
Marital status	.029 (.601)	.045(.408)	.048 (.379)	.046(.391)	–	–	–	–	–
Working hours	.044 (.415)	.014(.654)	.021 (.695)	.068(.412)	.035 (.590)	–	–	–	–
BO.	.065(.396)	.076(.401)	.018 (.738)	.396**(.000)	.015(.634)	-.056 (.450)	–	–	–
CS.	.079 (.415)	-.053(.362)	.589 (.000)	.437**(.000)	.043 (.417)	.049 (.360)	.736**(.000)	–	–
STS	.057(.407)	.028(.609)	.453 (.000)	.069 (.201)	.004(.939)	-.008 (.785)	-.421**(.000)	.613(.000)	–

**At the 0.01 level, the correlation is significant (2-tailed). R-values of less than 0.2 indicate a weak connection, between 0.2 and 0.4, a moderate correlation, and greater than 0.4, a strong association.

Table 3: Demographic factors and ProQOL.

		CS r (P)	STS r (P)	BO r (P)
Job experience	06m-1.0y	.086 (.124)	.024 (.543)	.078 (.284)
	1y-2.0y	.008 (.93)	.065 (.243)	.311* (.03)
	2y-4.0y	.230 (.012)	.052 (.275)	.036 (.752)
	4y- 6y	.465** (.000)	.017 (.750)	.294** (.003)
	>6 years	.322** (.002)	.086 (.124)	-.178 (.768)
Education	N. Diploma	.43 (.67)	.466** (.000)	.023 (.021)
	Graduation	.612** (.000)	.012 (.672)	.275 (.04)
	Master	.822** (.000)	-.186 (.064)	.129 (.04)

Table 4: Prevalence of ProQOL in Oncology Nurses.

M SD total
CS 22.63 4.29 344
BO 26.63 5.20 344
STS 28.67 5.66 344
12 or less Low 13 to 23 Average 24 or more High

Table 5: Descriptive Statistics of Social Support.

	Mean	Std. Deviation	N
Co-worker	4.2151	1.064	344
FRIENDS/family	5.6468	1.206	344
SUPERVISOR	2.3101	0.549	344

treatment process, and they have a high level of CS. Those believed that their workplace operated cohesively. STS is very high for those who have a nursing Diploma, which indicates that there is no teaching skills or education session for nursing from management.

In this study, most participants were young, and job experience was very low, indicating that there is high job turnover among oncology nurses. The spirit of cooperation has been associated with many advantages, including the requirement for more encouraging leadership and more efficient mentoring of new nurses [4]. The retention of nursing staff may benefit from team cohesion. It was shown that highly educated (Bachelor, master) nurses had a superior awareness of disease situations, which undoubtedly aided them in selecting exact treatment plans.

In this study, there was a substantial relationship found between the direction of SS and BO, STS, and CS. Increasing SS, lowering BO and STS, and helping nurses feel greater compassion for their patients might be able to improve a nurse's quality of life [18]. CS was shown to be less significant in the association between ProQOL and nurses' SS than BO and STS. Supervisors have a major impact on STS, BO, and insufficient management support, all of which raise nursing stress, and BO BO and STS are more heavily influenced by the workplace. In contrast, compassion is more closely related to pleasure and satisfaction.

The results of this study may suggest that rather than boosting patient care passion to put greater stress on nurses' quality of life, hospital administration should focus on assisting nurses in coping with patients' traumatic experiences and lowering external pressures from the workplace [7]. Some study participants had health issues that might have been caused by their workload or the specifics of cancer care, which might result in compassion fatigue and reduced job satisfaction. Cancer nurses in Pakistan experience high rates of BO and compassion fatigue due to their propensity to neglect their own needs to care for their patients.

The nature of cancer care makes oncology nursing, a profession that is profoundly anchored in the idea of caring, increasingly prominent. Researchers from all around the world, including Asia, have investigated various elements of ProQOL among nurses, but there is a lack of research from Pakistan. Increasing patient ratios, management pressure on the quality of care, and positive and negative psychological effects are among the key issues raising STS and BO among oncology nurses and, in certain patients' cases.

In this study, participants reported feeling more support from friends and family than from co-workers and superiors. This may be due to the difficulty in receiving support from co-workers due to the shortage of nurses, low experience, and high patient ratio associated with cost constraints [27]. In this study, most participants are male nurses, and in Pakistan, male nurses are very new and face more pressure of workload from management. Additionally, in Asian cultures like that of Pakistan, ties to family and kin are the main form of defense against life's hardships. They could explain the findings that social Regarding nurses' physical and emotional well-being, assistance from family or friends is valued higher than support from co-workers and managers.

In this study, the relationship between STS and SS was adjusted with aid from family or friends [28]. STS impacts the interactions between medical personnel and patients. One form of interpersonal resource that can assist you in preventing trauma-related psychopathology is SS. Therefore, nurses' sensitivities to support from family or friends may help to lessen the detrimental consequences of STS on their health. It may be useful to increase SS from family or friends and offer educational training programs from supervisors and administrators to lessen the harmful effects of STS. On the other side, issues at work, including a heavy workload, are connected to BO.

This multicentre study's findings on the high frequency of CF among oncology nurses are an essential starting point for alerting authorities and specialists to this problem. While developing CF strategies to encourage compassionate, high-quality treatment and boost staff retention, oncology nursing's unique characteristics should be considered. Professionals

ought to undergo training that equips them with the soft skills necessary to successfully deal with stress in the workplace and regulate their emotions.

Conclusion

From the perspectives of work-life balance and SS, the results of this study may add to improving nurses' psychological well-being. It is important to provide SS and compassion fulfillment while reducing BO and STS. However, in this case, it might be more practical to improve compassion effectiveness than to lessen STS and fatigue. Furthermore, avoiding STS and BO may be more beneficial to nurses' mental than physical health. By improving the SS from family, friends, and supervisors, the harmful effects of STS and BO on nurses' health may be mitigated.

Declaration

Ethical approval and consent to participate:

Ethical approval was granted by The Ethics Committee of Xiangya School of Nursing, Central South University (E2022216). The Helsinki Declaration applied to all study protocols involving human subjects. Before the investigation could be completed, each participant provided an online consent form, and informed consent was obtained from all participants. Participants were instructed that their information would be kept anonymous, that only cumulative results would be provided, and that they might withdraw at any moment.

Consent to publication

Not applicable.

Data availability statement

The dataset generated and analyzed during this study is not publicly available due to participants' confidentiality but is available from the corresponding author upon reasonable request.

Conflict of interest

There is no conflict of interest.

Authorship contribution

Muhammad Sohaib, Prof Wenfeng CHEN wrote the paper Ran AN, Meizi LIU helped to collect data and analysis by using SPSS, manuscript final review by Qiaomiao ZENG.

Acknowledgment

No

Funding

Self-sponsored study, No funding

References

1. Karaca A, Durma Z. Patient satisfaction with the quality of nursing care. *Nursing Open* 6 (2019): 535-545.
2. Fu CY, Yang MS, Leung W, et al., Associations of professional quality of life and social support with health in clinical nurses. *Journal of Nursing Management* 26 (2018): 172-179.
3. Huang J, Ngai CH, Deng Y, et al. Cancer Incidence and Mortality in Asian Countries: A Trend Analysis. *Cancer Control* 29 (2022): 10732748221095955.
4. Kwon S, Kim M, Choi S. Nurses' experiences of providing "sensitive nursing care" for terminally-ill individuals with cancer: A qualitative study. *European Journal of Oncology Nursing* 46 (2020): 101773.
5. Li Y, Zhang X, Zhnag L, et al. Effects of evidence-based nursing on psychological well-being, postoperative complications and quality of life after breast cancer surgery. *American Journal of Translational Research* 13 (2021): 5165.
6. Kim MA, Yi J, Molloy J, et al. The Impact of Compassion Fatigue on the Well-Being of Oncology Social Workers in Korea. *Journal of Social Service Research* 47 (2021): 634-648.
7. OConnell C. Understanding the Prevalence of Compassion Fatigue, Compassion Satisfaction, and Resilience (2021).
8. Prada-Ospina R. Social psychological factors and their relation to work-related stress as generating effect of burnout. *Interdisciplinaria* 36 (2019): 39-53.
9. Abbas S, Zakar R, Fischer F. Qualitative study of sociocultural challenges in the nursing profession in Pakistan. *BMC Nursing* 19 (2020): 1-7.
10. Li J, Wang Q, Guan C, et al. Compassion fatigue and compassion satisfaction among Chinese palliative care nurses: A province-wide cross-sectional survey. *Journal of Nursing Management* 30 (2022): 3060-3073.
11. Zhan Y, Liu Y, Chen Yi, et al. The prevalence and influencing factors for compassion fatigue among nurses in Fangcang shelter hospitals: A cross-sectional study. *Int J Nurs Pract* 28 (2022): e13054.
12. Geoffrion S, Lamothe J, Morizot J, et al. Construct validity of the professional quality of life (ProQoL) scale in a sample of child protection workers. *Journal of Traumatic Stress* 32 (2019): 566-576.
13. Stamm BH. The ProQOL manual: The professional quality of life scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales. Baltimore, MD: Sidran (2005).

14. Partlak Günüşen N, Üstün B, Serçekuş Ak P, et al. Secondary traumatic stress experiences of nurses caring for cancer patients (2019).
15. Jolly PM, Kong DT, Kim KY. Social support at work: An integrative review. *Journal of Organizational Behavior* 42 (2021): 229-251.
16. De Brasi EL, Giannetta N, Ercolani S, et al. Nurses' moral distress in end-of-life care: A qualitative study. *Nursing ethics* 28 (2021): 614-627.
17. Pushkarev GS, Zimet GD, Kuznetsov VA, et al. The multidimensional scale of perceived social support (MSPSS): reliability and validity of Russian version. *Clinical Gerontologist* 43 (2020): 331-339.
18. Szkody E, Streans M, Stanhope L, et al. Stress-Buffering Role of Social Support during COVID-19. *Fam Process* 60 (2021): 1002-1015.
19. National Academies of Sciences, Engineering and Medicine. Integrating social care into the delivery of health care: Moving upstream to improve the nation's health (2019).
20. Bunn F, Goodman C, Russell B, et al. Supporting shared decision making for older people with multiple health and social care needs: a realist synthesis. *BMC Geriatrics* 18 (2018): 1-16.
21. James AH, Bennett CL. Power, Politics and Leadership. *Clinical Leadership in Nursing and Healthcare* (2022): 385-402.
22. Collins S. *The positive social worker*. Routledge (2019).
23. Wu F, Ren Z, Wang Qi, et al. The relationship between job stress and job burnout: the mediating effects of perceived social support and job satisfaction. *Psychol Health Med* 26 (2021): 204-211.
24. Wazqar DY. Oncology nurses' perceptions of work stress and its sources in a university-teaching hospital: A qualitative study. *Nurs Open* 6 (2019): 100-108.
25. Bedaso A, Adams J, Peng W, et al. The relationship between social support and mental health problems during pregnancy: a systematic review and meta-analysis. *Reprod Health* 18 (2021): 162.
26. Gandi JC, Wai PS, Karick H, et al. The role of stress and level of burnout in job performance among nurses. *Mental Health in Family Medicine* 8 (2011): 181.
27. Bedaso A, Adams J, Peng W, et al. The relationship between social support and mental health problems during pregnancy: a systematic review and meta-analysis. *Reproductive Health* 18 (2021): 1-23.
28. Gandi JC, et al., The role of stress and level of burnout in job performance among nurses. *Ment Health Fam Med* 8 (2011): 181-194.