



Job-Related Stress Among Libyan Nurses in Operating-Room Misurata National Cancer Institute: An Assessment Basis

Misurata Ulusal Kanser Enstitüsü
Ameliyathanesindeki Libyalı Hemşireler Arasında İş
ile İlişkili Stres: Temel Bir Değerlendirme

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JOB-RELATED STRESS AMONG LIBYAN NURSES IN OPERATING-ROOM MISURATA NATIONAL CANCER INSTITUTE: AN ASSESSMENT BASIS

ABSTRACT:

Aim: In this the job-related stress among Libyan nurses working at the operating room in Misurata National Cancer Institute and explored the occupational stressors in terms of frequency and severity.

Method: The retrospective study was carried out on Libyan nurses, who work in the operating room at Misurata National Cancer Institute. The researcher used purposive sampling wherein all Libyan nurses who had been working as nurses in the operating room in Misurata National Cancer Institute have been defined as participants. There were 14 Libyan Nurses currently working at Misurata Cancer Institute, and all respondents participated.

Results: The occupational stressors have appeared with the most frequent level to be “Workload”, while much severity level of occupational stressors, appears to be “Conflict with other nurses” followed by “workload” and “Insufficient preparation”. The much frequency occurred for occupational stressors item, which appears to be “Lack of medications and equipment, which required for nursing care”, and yet the much occupational stressors severity item appears to be “Conflict with supervisor”, followed by “Performing procedures that patients experience as painful” and “Criticism by a physician” and last item “feeling helpless regarding a patient who had failed to improve”.

Conclusions and Suggestions: From these findings conclude that Libyan nurses required much attention to deal with their social and psychological conditions. This should provide a suitable pathway and help in designing effective stress management systems, that improve the stress level of nurses and thus enable them to provide gentleness patient care.

Keywords: *Assessment; Cancer Centre; Misurata; Nursings; Stress; Coping Mechanism.*



MİSURATA ULUSAL KANSER ENSTİTÜSÜ AMELİYATHANESİNDEKİ LİBYALI HEMŞİRELER ARASINDA İŞ İLE İLİŞKİLİ STRES: TEMEL BİR DEĞERLENDİRME

ÖZ:

Amaç: Bu çalışmada, Misurata Ulusal Kanser Enstitüsü ameliyathanesinde çalışan Libyalı hemşireler arasında işle ilgili stres ve mesleki stres faktörleri sıklık ve şiddet açısından araştırılmıştır.

Yöntem: Çalışmanın popülasyonu, Misurata Kanser Enstitüsü ameliyathanesinde çalışan Libyalı Hemşireler grubudur. Araştırmacı, Misurata Kanser Enstitüsü ameliyathane hemşiresi olarak çalışan tüm Libyalı Hemşirelerin katılımcı olarak tanımlandığı amaçlı örnekleme kullanmıştır. Hali hazırda bu kurumda çalışan 14 Libyalı Hemşire bulunmakta olup, anket çalışmasına tümü dahil edilmiştir.

Bulgular: Mesleki stresörlerin en sık görülen alt boyutu “iş yükü” iken, mesleki stresörlerin en şiddetli alt boyutu olarak “diğer hemşirelerle çatışma”, ardından “iş yükü” ve “yetersiz hazırlık” gelmektedir. En sık işaretlenen mesleki stresör maddesi “Hemşirelik bakımı için gerekli ilaç ve ekipman eksikliği” iken, en şiddetli mesleki stresör maddesi ise “yönetici ile çatışma” olup ardından sırasıyla “hastaların ağırlı olarak deneyimledikleri işlemleri yapma” “bir hekim tarafından eleştirme” ve “iyileşmeyen bir hasta durumunda çaresiz hissetmek” gelmektedir.

Sonuçlar ve Öneriler: Elde edilen bulgulara göre, Libyalı hemşirelerin sosyal ve psikolojik açıdan kendilerine daha fazla özen göstermeleri gerektiği sonucuna varılmıştır. Bu durum için uygun çözüm yolları bulunmalı ve hemşirelerin stres düzeyini iyileştirmek için etkili stres yönetimi programları tasarlanarak onların daha iyi hasta bakım hizmeti sunmaları sağlanmalıdır.

Anahtar Kelimeler: Değerlendirme; Kanser Merkezi; Misurata; Hemşirelik; Stres; Başa Çıkma Mekanizması.



INTRODUCTION

The terms job-related stress, organizational stress, job stress, and occupational stress, are used interchangeably because occupations, jobs, companies and workers are almost undistinguishable concepts (Vokic & Bogdanic, 2007). Job stressor has become one of the most dominant health limitations worldwide as they occurred in any occupation (Lu et al., 2003). Occupation stressors should reduce the quality

of life, they cause many health problems such as hypertension, heart problems, immunity weakness, and contribute to substance abuse and mental and physical disorders (Bhatia et al., 2010).

The occupational stressor is much prevalent in health care professionals, it can be occurred due to psychological and emotional reflection, when the nurse's stabilities and resources cannot identify with the demands for these requested of their work (Nakasis & Ouzouni, 2008; Brunero et al., 2006). A recent study had shown that nurses' jobs are accompanied by the high rate of occupational stressors due to some causes, which include individual, social, environmental and organizational factors (McGrath et al., 2003). In general, nursing work is characterized by stress due to the nature of the work (Baba & Jamal, 2000).

Operating rooms are different from other units of hospitals in terms of working conditions and ergonomic features. They have stressful and complex working environments where there is a variety of medical equipment and the staff needs to have special education and technological knowledge and skills (Gök ve Koçbilek, 2022). Nurses in the operating room have unique characteristics in the work environment. They have a high workload due to the growing number of surgeries, long hours of operation, and personnel loss. Also, they have to provide continuous service and be highly concentrated throughout the procedures to ensure patient safety, in lest of the occurrence of adverse events (Li et al., 2022). Meanwhile, they are at high risk for biological, accidental, and chemical occupational exposures due to their direct contact with patients' blood and body fluids, as well as exhaust gases produced during operations (Wang et al., 2022).

Several studies have shown that, a significant negative correlation between the nurse's profession with stress level and efficacy (Nakakis & Ouzouni, 2008). It has been stated that a higher level of job stress among nurses, results in increasing rates of assignments and leaving their jobs (Sveinsdottir et al., 2006). Due to high levels of job stress, which reduced the quality of nursing work (Kawano, 2008), should threaten patients' health and life (Shader et al., 2001). Suzuki et al. (2004) stated that, the high error rates have detected when nurses are stressed and under abnormal pressure of work, while Olofsson et al. (2003) reported that, nurses have stress-related diseases and high-tranquility profession levels.

Alanaas (2005) entitled "Work Stress and Its Effect on Performance" deals to link work stress levels with the psychological health of employees at General Electricity Company in Misurata, Libya. It appeared that, a significantly different was found regarding employer position, work pressure, monthly salary, engorgement incentives, size of work and job stability, and also the most pressures are administrative occupations and then leaders and technicians. This study aimed to identify the common sources of job-related stress among Libyan nurses working in the

operating room at Misurata Cancer Institute in addition to determining coping mechanisms commonly used among Libyan Nurses in the operating room.

MATERIALS AND METHODS

Research Design: This is cross-section study on the hospital base approach. The design adopted was the descriptive method of research in this study. According to Polit & Beck (2008) quantitative and description study involves some points such as prevalence, incidence, size and measurable attributes of a phenomenon. This is used to identify the prime sources of job-related stress among Libyan Nurses working Operating Room.

Participants and Setting: The population study targeted Libyan Nurses, who work in the operating room in Misurata Cancer Institute. The purposive sampling wherein all Libyan Nurses who had been working as operating room nurses in Misurata Cancer Institute were defined as participants. There were 14 Libyan Nurses currently working at Misurata Cancer Institute, which all respondents participated

Research Instrument: The study instrument was involved structured questionnaire, this was the main instrument to gather data. The researcher adopted the research instrument tool that has been stated by Gray-Toft & Anderson (1981) but some modifications were done. Changes made with the inclusion of Part I and Part III of the questionnaire. The questionnaire is divided into three parts: part 1 is the participant's socio-demographic data which includes personal information such as age, gender, years in service, marital status, work status and years in service. Part II is the Nursing Stress Scale (NSS) in which it consists of 34 items that described the conditions, which have been detected as main source of stressor regarding nurses. It need two likert kind for responses: First is 'frequency' of stressors, which is ranged from 0 (Never) to 2 (Often) and second for 'severity' of stressors which is ranged from 0 (Not all) to 4 (Extremely stressful) according to their perception. The higher scores on the Nursing Stress Scale indicate more frequently experienced stress. The NSS has 7 level, which including struggle with physicians, death and dying, short of support, insufficient preparations, inter conflict with nurses, workload and uncertainty related to treatment (Gray-Toft & Anderson, 1981). This technique has 9 factors located in three various environments. The first one is physical environment, which consist of job overload and machine destruction. The second is psychological and emotional environment, which consist of death, insufficient preparation, pain and suffering, short of support, mistakes. The third is social environment, which includes tranquility related to struggle with physicians and other nurses and inadequate knowledge and struggle with job supervisor. The third part of the questionnaire is the coping mechanisms perceived by the participants helpful with the stressors. The frequency of the last part will be rated as 'often', 'sometimes' and 'never'.

Gray-Toft & Anderson (1981) were conducted survey on stress of nurses work in intensive care units. They found out internal consistency coefficients ranging from 0.79 to 0.89. In recently studies, Cronbach alpha was as follows: 0.89-0.92 (Abu AlRub, 2006), 0.89 (Mohammed et al, 2011), 0.70 (LeSergenta & Haney, 2005), and 0.64-0.77 for the levels (Healy & McKay, 2000).

Data-Gathering Procedure: The researcher personally gathered the data from the respondents with the use of an approved adopted NSS questionnaire. Letter was sent to the Medical Director of Misurata Cancer Institute to obtain the approval for Libyan nurses at the operating room as participants. The three parts of the NSS questionnaire was explained, its content and how it should be answered accordingly. The questionnaire was collected daily over one week period. After the NSS questionnaire has been accomplished, data obtained has been tabulated, analyzed and interpreted.

Ethical Consideration: Medical Director, Head nurse of the operating room and the participants were informed about the about the anonymity of respondents, privacy, confidentiality and the right to withdraw from participation. The bias should be reduced by protection of data, only the authors and the supervisor had access to the interview information and software data obtained from the questionnaire. This was approved by ethical committee of faculty of health sciences.

Statistical Treatment and Data Analysis: The data gathered were sorted, classified, tabulated and analyzed. The researcher used frequency, percentage distribution as statistical tool. It is used to find out the common sources of Job-related stress among Libyan nurses working at the operating room in Misurata Cancer Institute. Tables and graphs were utilized to describe the characteristics gathered by survey. Researcher utilized Microsoft Excel in processing the data.

RESULTS

General information

The first aim of current study is to identify the socio-demographic characteristics. It includes several variables: gender (male, female), age groups (19-30, 31-40, 41-50, 51-60), years in service (<1 year, >15), marital status and work status (part-time, full-time).

In table 1, the data displayed that, a total of 57.14% were men and 42.86% were women in the total sample (n = 14). Age varied between 19 to 60 years old. About 42.86% of respondents were age 30-40, while young (19-30) and old (41-50) shares the same percentage with 28.57%. Majority of the nurses are working between 1-5

years holding 64.28% of the participants and only 7.14% of nurses had an experience of less than a year and similarly 7.14% of nurses with the most experience of more than 15 years which indicates that most of the Libyan nurses working at the operating room in Misurata Cancer Institute is middle-aged. Most of the Libyan Nurses (50%) are single and the other half are married (50%). Half of the respondents are still single and the other half were married. Most of the nurses are working Full-time with 78.57% yet only 21.43% are working as part-timers.

Table 1. classification of participants according to demographic characteristics

Variable	Definition	Frequency	Valid Percent
Gender	Male	8	57.14%
	Female	6	42.86%
Age group	19-30	4	28.57%
	31-40	6	42.86%
	41-50	4	28.57%
Years in service	<1year	1	7.14%
	1-5	9	64.28%
	6-10	3	21.42%
	11-15	0	0
	>15	1	7.14%
Marital Status	Single	7	50%
	Married	7	50%
Work Status	Part-time	3	21.43%
	Full-time	11	78.57%

Prevalence of perceived common Job-related stressors

In table (2), the most frequency of job stressors appeared to be “Workload” (mean = 0.65) followed by “Tranquility related to treatment” (mean = 0.5) and “Struggle with physician” (mean = 0.47). The least frequent subscale of occupational stressors is “Death and Dying” (mean = 0.19). Also it shows that the most severe subscale of occupational stressors appears to be “Conflicts with nurses” (mean 1.86) followed by “Workload” (mean = 1.70) and “Insufficient Preparation” (mean = 1.69). The least severe frequent of job stressors is “Short of support” (mean = 1.31).

Table 2. Means of job stressors by Nursing Stress Scale.

Subscale	Frequency		Severity	
	Mean	Rank	Mean	Rank
Workload	0.653	1	1.704	2
Tranquility Related to Treatment	0.5	2	1.657	5
Struggle With Physician	0.471	3	1.557	6
Short of Support	0.452	4	1.309	7
Conflict With Other Nurses	0.446	5	1.86	1
Insufficient Preparation	0.404	6	1.69	3
Death and Dying	0.193	7	1.663	4

In table 3 was shown, the much frequency of job stressors item appears to be “Lack of medications and tools, which needed for nursing care” (mean = 1.00), followed by “Too many non-nursing tasks required such as clerical work” (mean = 0.86) and then “Insufficient feedback from a medical staff regarding the health situation of a patient” (mean = 0.79). The least three frequent item of perceived occupational stressor are “Watching a patient suffer” (mean = 0.14) followed by “Disagreement concerning the treatment of a patient” (mean = 0.21) and then “The death of a patient” and “Feeling insufficiently prepared to be inappropriate treatment for a patient” both items with (mean = 0.29).

In table 3, the result revealed that the most severe job stressors item appears to be “Conflict with supervisor” (mean = 2.15), followed by “Performing procedures that patients experience as painful” and “A physician not being present in medical emergency” both with (mean = 2.00) and then, “Feeling helpless in the case of a patient who fails to improve” (mean = 1.93). The least items of perceived severe occupational stressor is “Lack of an opportunity to express to other personnel on the unit my negative feelings towards patients” (mean = 1.07) followed by “Fear of making a mistake in treating a patient” and “listening or talking to a patient about his or her approaching death” both stressors with the same (Mean = 1.21) and “Disagreement concerning the treatment of a patient” with a (Mean = 1.29).

Table 3: Means of occupational stressors by NSS items

Statement	Frequency		Severity	
	Mean	Rank	Mean	Rank
Shortage of medications and tools required for nursing care	1	1	1.785	6
Too many non-nursing tasks required, such as clerical work	0.857	2	1.785	6

Insufficient feedback from a physician regarding the health condition of a patient	0.785	3	1.5	9
Shortage of staff to adequately cover the unit	0.714	4	1.642	8
Being asked a question by a patient for which I do not have a satisfactory answer	0.714	4	1.5	9
Feeling insufficiently prepared to help with the emotional needs of a patient's family	0.642	5	1.857	4
Not enough time to provide emotional support to a patient	0.642	5	1.642	8
Conflict with a supervisor	0.571	6	2.145	1
Performing procedures that patients experience as painful	0.571	6	2	2
Conflict with a Physician	0.571	6	1.785	6
Fear of making a mistake in treating a patient	0.571	6	1.214	13
Making a decision concerning a patient when the physician is unavailable	0.571	6	1.5	9
Unpredictable staffing and scheduling	0.571	6	1.785	6
The death of a patient with whom you developed a close relationship	0.571	6	1.5	9
Lack of an opportunity to talk openly with other unit personnel about problems on the unit	0.5	7	1.5	9
Lack of an opportunity to express to other personnel on the unit my negative feelings towards patients	0.5	7	1.071	14
Not knowing what a patient or a patient's family ought to be told about the patient's condition and its treatment	0.5	7	1.5	9
Feeling helpless in the case of a patient who fails to improve	0.428	8	1.928	3
Criticism by a Physician	0.428	8	2	2
Difficulty in working with a particular nurse/s outside the unit	0.428	8	1.785	6
Criticism by a supervisor	0.428	8	1.642	8
Breakdown of computer/machine/equipment	0.428	8	1.785	6
Uncertainty regarding the operation and functioning of specialized equipment	0.428	8	1.642	8
A physician not being present in medical emergency	0.428	8	2	2
Listening or talking to a patient about his/her approaching death	0.357	9	1.214	13
Physician not being present when a patient dies	0.357	9	1.857	4
Lack of opportunity to share experiences and feelings with other personnel on the unit	0.357	9	1.357	11
Difficulty in working with a particular nurse/s on the unit	0.357	9	1.857	4
Not enough time to complete all of my nursing tasks	0.357	9	1.5	9

A physician ordering what appears to be inappropriate treatment for a patient	0.357	9	1.642	8
The death of a patient	0.285	10	1.428	10
Feeling insufficiently prepared to help with the emotional needs of a patient	0.285	10	1.714	7
Disagreement concerning the treatment of a patient	0.214	11	1.285	12
Watching a patient suffer	0.142	12	1.814	5

Do you use any of the following to help you coping with the stressors you have face?

Aerobic exercises: Among 14 participants who answered to this question, 42.86% of Libyan Nurses didn't use aerobic exercises and 50 % sometimes used it and 7.14% often used it as coping ways to stress. Thus illustrated in fig. 1.

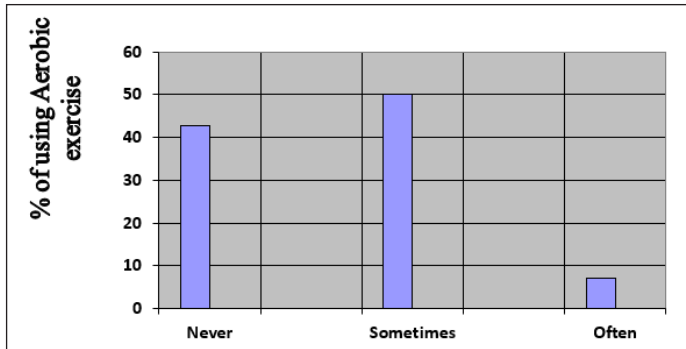
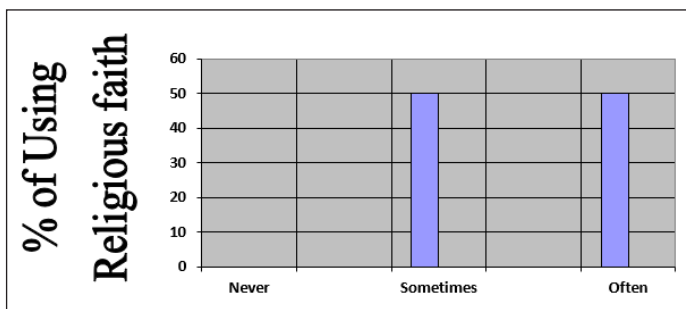


Figure 1: Frequency of reportedly using aerobic exercises by Libyan nurses to cope with stress.

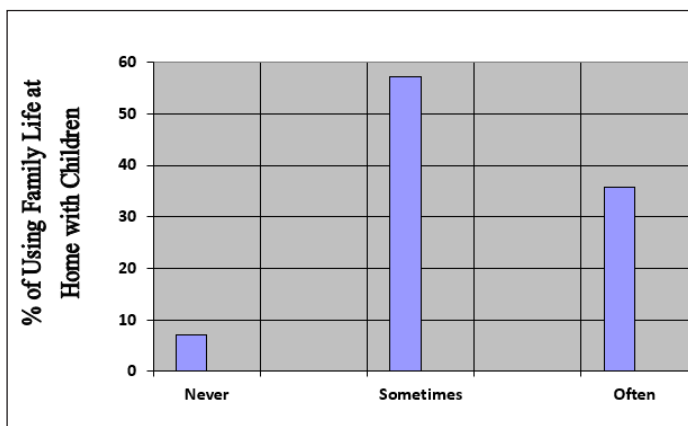
Religious Faith: Among 14 participants who responded to this question, 0% of Libyan Nurses didn't use faith, 50% sometimes used it and 50% mostly used it as coping ways with stressors. Thus shown in fig. 2.



Using Religious faith by Nurses

Figure 2: the frequent subscale of religious faith by Libyan nurses to coping with stressors.

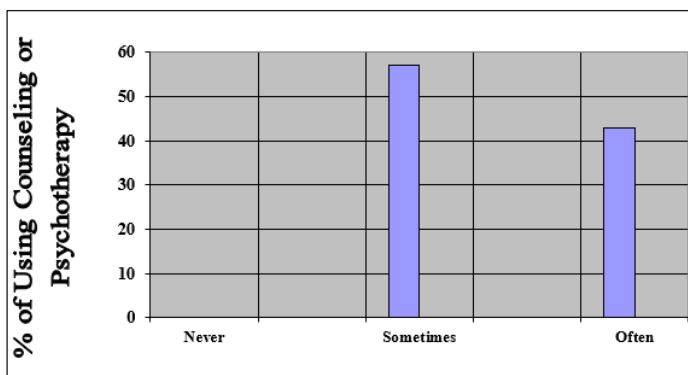
Family life: Among 14 participants who responded to this question, 7.14 % of Libyan Nurses did not use family life, 57.14% sometimes used this condition and 35.71% often used this condition as coping ways with stress. This is illustrated in fig. 3.



Using family life by Nurses

Figure 3: The frequent subscales for whose using family life by Libyan nurses to coping with stress.

Counseling or psychotherapy: 14 participants who responded to this question, 0% of Libyan Nurses never use counseling or psychotherapy, 57.14 % sometimes used it and 42.85% often used it as coping ways to stress. As illustrated in fig. 4.



Using Counseling or psychotherapy by Nurses

Figure 4: Frequency of those practiced counseling or psychotherapy by Libyan nurses to coping with stress.

Other ways of coping: 14 Libyan nurses who responded to this question, 33.33% of them, whose used 'common social activities', 6.67% used 'reading or writing', 20% used 'stay alone and/or crying', 26.67% used 'watching TV' and 13.33% used 'Sleep and/or eat much'. Fig. 5 illustrates this.

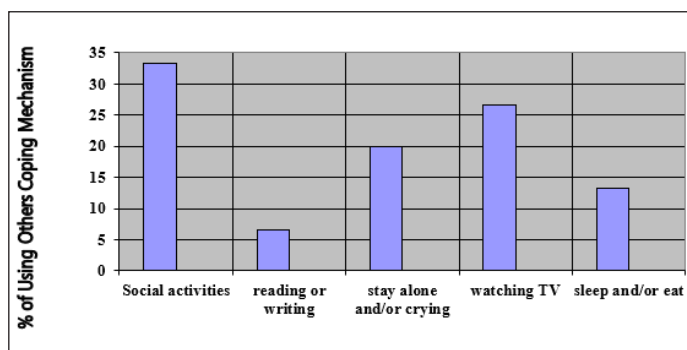


Figure 5: Frequency of reportedly using Others; (Please specify) (e.g. watching T.V, reading books) by Libyan nurses to cope with stress.

DISCUSSION

This study was conducted to investigate job related stressors for nurses, who work in Misurata Medical Centre, where nurses are more vulnerable to stress. It is important to classify of the participants according to socio-demographic characteristics. The findings of this study revealed that, job related stressors appeared to be workload, tranquility concerning treatment, short of support, insufficient preparation and struggle with physicians. Similarly, Çam et al. (2020), reported that about half of the operating room nurses participating in their study experienced in-team communication problems, conflicts with the team individuals and were exposed to aggressive behaviors. He also stated that, operating rooms are areas where team communication is important and the problems that the operating room nurses have with their team members are one of the factors affecting job satisfaction. Clearly, some items and materials related to job stressors such as lack of medications, insufficient feedback from physician regarding patient health status have been investigated. Gümüşkaya (2010) reported that the nurses had problems in the operating room due to the high workload and lack of materials. Also, nurses are able to solve existing problems and they suggested that measures should be taken to address institutional problems. The material shortage is an institutional barrier and standard precautions of employees cause non-application (Akkaya &

Karadağ, 2021). some studies reported that the social encouragement by coworkers will increase job performance and decreased the professional stressors level. Nurse directors should developed an organizational culture characterized by social integration, cooperation, teamwork and networking among nurses (AbuAlRub, 2004).

The literature offers various suggestions for health professionals to gain resilience against work stress. Some of these recommendations is that predictors of resilience, such as during university education, adaptability, positive identity, coping skills, family encouragement, cognitive ability, spiritual connection, ability to find meaning in adversity, can be learned by educational activities (Yilmaz, 2017).

CONCLUSIONS AND SUGGESTIONS

This study was concluded to investigate job-related stressors among Libyan nurses, those working at the operating room in Misurata Cancer Institute. The exploration of occupational stressors in terms of frequency and severity were considered. Also, it has tried to stablish good technique, with which the stressors running in the Libyan nurses' life and work was geared in stress reduction programs.

From these findings conclude that Libyan nurses need more attention to dealing with their psychological states. Nursing seniors and personnel leaders are in good position to help nurses, specifically when nurses state various sources of stress. The formal stress management program to nurses should be appreciated, particularly if this program can be tested for its effectiveness. Any future research into occupational-related stress among Libyan nurses, it required to emphasis basically on effective intervention in order to reduce stress.

Conflicts Of Interest

We have no conflicts of interest.

Authorship Contribution Statement

Design of Study: FHE (%40), ABM (%40), BT (%20)

Data Acquisition: FHE (%60), ABM (%40)

Data Analysis: ABM (%40), FHE (%40) BT (%20)

Writing Up: FHE (%40), BT (%30), ABM (%30)

Submission and Revision: BT (%80), ABM (%20)

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