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Effectiveness of an instructional program on compassion fatigue among nurses

Thoalfokar Mohammed Abdul Hussein
MSN student at University of Kufa/ College of Nursing/ Adult Nursing
Corresponding author email: thoalfokarm.khader@student.uokufa.edu.iq

Dr. Jihad Jawad Kadhim
Asst. Prof. Ph. D. at University of Kufa/ College of Nursing/ Adult Nursing
Email: jihadj.alsudani@uokufa.edu.iq

***Abstract*---**As health problems acuity increased in health care settings particularly in critical care units, it is not surprising that effective educational approach regarding Compassion fatigue (CF) can become one of the most important aspects in nursing profession. CF among critical care nurses is a secondary response that occurs as a result of repeated trauma and heightened emotional stress. Nurses who give care and may not be known of their own levels of physical and emotional stress, which has an influence on their professional and personal health and well-being. In order to minimize the impact of CF on staff and to maximize quality staff and patient care, it is vital to be aware of the risks and techniques for preventing the beginning of CF on nurses who provide nursing care for critically-ill patients. The purpose of this study is to evaluate the effectiveness of an instructional program regarding compassion fatigue and to determine the relationship between demographic variables of participants with compassion fatigue. A pretest-posttest quasi-experimental design is adopted and using purposive sample of (N=60) critical-care nurses in Critical Care Units of three general hospitals (Al-Sadr Medical city, Al-hakem General Hospital and Al-Furat Al-Awaste General Hospital through the period from 20th October 2021 to 23th may 2022. The ProQOL scale (30 items) was used as data collection instruments. The study findings indicated that most of critical care nurses' knowledge were at moderate level during pre-test assessment, immediate post-test and post-test is moderate for all items except compassion fatigue items which was low level. There is statistically significant relationship in compassion fatigue and Professional Quality of Life at (P>0.0001) and there is a significant relationship between professional quality of life and compassion fatigue with Nurses' demographic data (e.g., Economic status and level of education) at p-value less than 0.05. The study results indicated that the instructional program was effective in

reducing level of compassion fatigue and enhancing professional quality of life by increasing the level of nurses' knowledge.

***Keywords*---**compassion fatigue, critical care nurses, instructional program.

Introduction

Nurses who work in critical care units need to be highly qualified and competent in order to minimize the adverse event of nursing procedures and maximize the benefits to achieve best patients' outcomes. Critical-care nurses may feel unsatisfied with their work place without knowing the exact cause. Many studies indicated that nurses who work in critical care units suffering from many problems such as burnout, job dissatisfaction and compassion fatigue. These could be a main cause that make nurses refuse to work in those areas and prefer less stressful workplace. However, according to the American Association of Critical-Care Nurses (AACN, 2017), compassion fatigue (CF) has a significant impact on the emotional, psychological, and professional well-being of critical care nurses. Moreover, physical symptoms, emotional symptoms, triggering causes, and ways to avoid compassion fatigue were identified as four themes in a meta-synthesis on compassion fatigue in nursing (1) .

Compassion fatigue can result from an accumulation of negative variables that induce compassion from an individual in a variety of circumstances. For example, the workplace, relationships, or caregiving responsibilities. Compassion fatigue is defined as emotional, physical, and spiritual depletion generated by caring for others. CF is defined as "witnessing and absorbing the problems and suffering of others" while engaging with traumatized people (2). Nurses who work by the bedside of critically sick patients have seen a lot of pain. Patients with illnesses and circumstances that are often sudden, permanently damaging, and life threatening are cared by the nurses with compassion. Although nurses receive professional satisfaction in their work, their frequent exposure to the aftermath of severe illness puts them at risk for compassion fatigue. CF is a condition associated with symptoms that are comparable to posttraumatic stress disorder (3). Nurses usually face multiple challenging at their healthcare sittings. For example, nurses who work in critical-care areas need to provide care not only for patient with physical health problems but also provide emotional and psychological support to patients and their families. Nurses who witness devastating health condition may feel depressed or regret that repeatedly makes them in deep compassion fatigue. Furthermore, compassion fatigue has a severe negative influence on critical-care nurses which may produce physical and emotional strains that could lead to nurses quitting their jobs and profession prematurely (4). CF affects nurses' levels of involvement and generates emotional estrangement from their work, posing a threat to ethical nursing practice, as indicated by absenteeism, tardiness, and retention of staff nurses in critical care areas, healthcare institutions are encountering recruiting issues, which is a secondary consequence of CF (5).

Methodology

Study Design: The research adopted a pretest-posttest quasi-experimental design to evaluate the effectiveness of an instructional program on compassion fatigue among critical care nurses.
The Setting of the Study: The study has been conducted in the critical care units at Al-Najaf Al-Ashraf City which included three hospitals: Al-Sadr Medical city; Al-Hakeem General Hospital and Al-Furat Al-Awaste General Hospital. These hospitals contain Intensive Care Units (ICUs), Critical Care Units (CCU), Respiratory Care Unit (RCU) and Emergency Department.
Study Sample: A non-probability purposive sample of 60 critical care nurses that work in direct contact with patients in critical care units and who were working in the day and night shifts. Participants of 30 were selected from the morning staff and 30 from the night shift.
The Study Instrument: The tool consists of two parts:
To determine the effectiveness of an instructional program on compassion fatigue among critical care nurses, the researcher has adopted an assessment tool from the Center for Victims of Torture, 2018. Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5(ProQOL). After surveying the relevant literature in order to achieve each of the study objectives (Appendix D). There are two parts to the study tool:

Part I: Socio-Demographic Data

A socio-demographic datasheet contains (11) items, including Age, gender, address, economic status, marital status, level of education, shift, total experience as a nurse, total experience in the current hospital, total experience in critical care unites (CCU, RCU, ICU, ER), and the last question (Have you attended any training session/education program regarding compassion fatigue)? In preparation for data analysis, these variables are coded.

Part II: Clinical variable

The ProQOL-5 (Stamm, 2010) scale is the second section of the questionnaire and consists of thirty items, five of which are Likert-style questions in which the subject is asked to evaluate on positive and negative aspects of their present work environment during the last thirty days.

Instrument Description

The scale is composed of thirty questions that allow participants to reflect on and rate the frequency and severity of compassion fatigue in their everyday job**.** The ProQOL includes the domains of compassion satisfaction, burnout, and secondary traumatic stress. A low level in each area is indicated by a score of 22 or less in that category. A moderate level is indicated by a score of 23 to 41 in that area. A score of 42 or above in that category indicates a high degree of proficiency. The ProQOL measure has been used to quantify the amount of compassion fatigue experienced by health-care workers in connection to the negative and positive aspects of their jobs (Heritage et al., 2018). Individuals are questioned on a variety of topics, including the influence of their experiences on their mental well-being

and their job satisfaction (Stamm, 2016).This instrument has been demonstrated to be valid and reliable (Cronbach's = 0. 90) across all nursing disciplines, resulting in an increase in its use in the research of compassion fatigue (6).

Data collection

After the researcher obtained all the required approvals, the process of data collection began on 12 November 2021 to 20 February 2022. Sixty Critical Care Nurses whose data were collected from three hospitals (Al-Sadr Teaching Hospital, Al-Hakim General Hospital, and AI-Furat Al-Awsat Hospital) from each hospital twenty samples. The participants were chosen as follow: ten from the day and ten from the night shifts included all Critical Care Units (C.C.U, R.C.U, and I.C.U). The purpose of the study was explained to all participants and discussed that participation in this is voluntary as well as participants were made aware that they were allowed to discontinue participation in the study at any time.

Participants were asked to read the questionnaire and ask the researcher if they had questions. The time was required for each participant to fill out the form approximately 10-15 minutes. This was a pre-test then the program is presented in the form of a PowerPoint for about half an hour and from 5 to 10 minutes, explaining and applying some exercises within the program. After the program is presented to the participants filled out the same questionnaire that were distributed to the same participants. In addition, after two weeks has passed from the presentation of the program this is called intermediate as for the post-test, it is done in the same way as well, but after one month has passed from the pre-test.

Results of the Study

Table (4.1) the Socio-Demographic data related to the study

Socio-Demographic data	Rating interval	Freq.	%
Age	<= 25	26	43.3
	26 - 30	29	48.3
	31 - 35	4	6.7
	36+	1	1.7
Gender	Male	36	60.0
	Female	24	40.0
Address	Urban	58	96.7
	Rural	2	3.3
Economic status	insufficient	4	6.7
	Barely sufficient	10	16.7
	sufficient	46	76.7
Marital status	Single	29	48.3
	Married	31	51.7
Level Education	Nursing high school	8	13.3
	Diploma in Nursing	19	31.7
	BSc Nursing	31	51.7
	Master in Nursing	2	3.3
shift	Day Shift	30	50.0

	Night Shift	30	50.0
Total Experience as a Nurse	Less than one year	23	38.3
	1 – 3 years	16	26.7
	4 – 6 years	9	15.0
	More than 6 years	12	20.0
Total Experience in Current hospital	Less than one year	25	41.7
	1 – 3 years	17	28.3
	4 – 6 years	9	15.0
	More than 6 years	9	15.0
Total Experience in critical units	Less than one year	32	53.3
	1 – 3 years	15	25.0
	4 – 6 years	6	10.0
	More than 6 years	7	11.7

Table (4.1) represents the socio-demographic distribution of the study. The study results indicate that the highest percentage of the age (48.3%), within (26-30) are years old , gender are meals has the majority percentage (60%), Urban residents (96.7%), Economic status (76.7%) sufficient, marital status of the study samples (51.7%) were married, followed by (48.3%) who were single. The high percentage of education level (51.7%) was those with a bachelor's degree in nursing sciences. The results in this table show (50%) of nurses working in the nightshift and (50%) in the day shift. The findings of the table one also represents (38.3%) of nurses who have Less than one year of Total Experience as a Nurse. As Total Experience in Current hospital, it was (28.3%) from 1 – 3 years. The last thing shown in the first table is the Total Experience in critical units and it was (53%) of those who worked for Less than one year.

Table (4.2) Effectiveness of an instructional program among critical care nurses

period of measurement	Mean	SD.	F	Sig
Pre- Satisfaction	37.70	5.86	3.369	0.06
Immediate-Satisfaction	37.60	5.86		
Post Satisfaction	36.77	6.56		
Pre-Burnout	28.62	5.36	1.315	0.27
Immediate -burnout	28.78	5.20		
Post Burnout	29.00	5.47		
Pre-Compassion Fatigue	29.83	7.15	109.00	0.0001**
Immediate - Compassion Fatigue	28.45	6.76		
Post-Compassion Fatigue	21.10	5.61		
Pre-Professional Quality of Life	32.05	2.54	99.07	0.0001**
Immediate- Professional Quality of Life	31.61	2.51		
Post- Professional Quality of Life	28.96	2.62		

**significant at p=0.01

Table (4.2) the study result show there is statistical significant relationship in compassion fatigue and Professional Quality of Life at (P>0.0001).

Table (4.3) Table of the relationship between compassion fatigue and Nurses' demographic data

Demographic Data	Rating And Intervals	Mean	SD.	F	Sig.
Age	<= 25	29.27	7.53	1.60	0.20
	26 - 30	31.17	6.59		
	31 - 35	23.25	6.99		
	36+	32.00	.		
Gender	Male	29.92	7.03	0.01	0.91
	Female	29.71	7.48		
Address	Urban	30.05	7.15	1.64	0.21
	Rural	23.50	4.95		
Economic status	insufficient	35.50	.58	3.17	0.05*
	Barely sufficient	33.10	7.74		
	sufficient	28.63	6.95		
Marital status	Single	30.41	7.46	0.37	0.55
	Married	29.29	6.93		
Level Education	Nursing high school	25.50	7.17	3.22	0.03*
	Diploma in Nursing	32.53	5.06		
	BSc Nursing	29.87	7.43		
	Master in Nursing	21.00	9.90		
shift	Day Shift	29.97	7.32	0.02	0.89
	Night Shift	29.70	7.10		
Total Experience as a Nurse	Less than one year	29.91	7.52	0.60	0.62
	1 – 3 years	29.13	8.33		
	4 – 6 years	32.56	4.00		
	More than 6 years	28.58	6.82		
Total Experience in Current hospital	Less than one year	29.92	7.20	0.28	0.84
	1 – 3 years	29.88	8.34		
	4 – 6 years	31.22	4.66		
	More than 6 years	28.11	7.42		
Total Experience in critical units	Less than one year	29.75	7.09	0.31	0.82
	1 – 3 years	29.60	9.06		
	4 – 6 years	32.33	5.24		
	More than 6 years	28.57	4.50		

Significant $P < 0.05$.

Table (4.3) shows that There is a significant relationship between compassion fatigue and Nurses' demographic data (economic status and degree of education)

at p-value less than 0.05, but a non-significant relationship with the other demographical data at p-value more than 0.05.

Discussion

Discussion of the Demographic Data Related to the critical care nurses

Table (4.1): In this study, the demographic characteristics discussed are included age, gender, address, economic status, marital status, level of educational or qualification, shift , total experience as a nurse and total experience in current hospital . However, our study findings indicate that the highest percentage of the age are (48.3%), within (26-30) years old. Same result is found in a study conducted by (7) which appeared that the greater percentage of age (61.8%)are within (21-30) years old.

Concerning the gender, the study results revealed that the majority of the participants are males (60%)and the remaining(40%) are females .This result is compatible with (8) who found that males participants (67.3%)are males and (32.7%)are females .In Al-Najaf City, there is a little difference between number of male and female who work in healthcare facilities specifically in critical-care area because the nature of this work needs more effort from nurses and longtime duty there for the numbers of males greater than females.

Regarding residency, the study results indicate that most of the study participants(96.7%) are urban residents and same this result comes with (9) that found that the most of study participants (81.6%) of them are urban resident. This result may come due to the majority of Al-Najaf population distributed in urban residential areas than rural ones and the study conduct in the center of Al-Najaf City therefore, the researcher facing more participants in urban residential area.

Concerning the socio-economic status, most of the study participants are presented with (76.7%) sufficient or intermediate socio-economic status. This result is in the sane line with (10), whose their results indicate that the majority of study participants' is sufficient to some extent and also the same of this result comes with (9) which found(72.4%) of his study participants the socio-economic status was from “enough to some extent”. This could be the reason behind more nurses prefer to study nursing in order to have secure life in recent years. Regarding marital status, the study results shows that the majority of the study participants (51.7%) are married. These results agree with(11), whose results indicate that the majority study subjects is married The reason behind this is that most people tend to find stability after hard and tiring work.

Concerning educational level, the results show that the majority of the study subjects are(51.7%) was those with a bachelor's degree in nursing sciences ,This result agrees with(12)whose study results indicate that most participants are bachelor science in nursing(91.3%) and the causes behind this is The opening of many governmental and private institutions that support students to obtain certificates in broad and specialized fields, and the demand for these colleges and universities has increased in recent times.

Regarding shift the results show that the equals percentage between day and night shifts (50%) of nurses working in the nightshift and (50%) in the day shift and this result come with previous arrangement of researcher plan to conduct this study. As for the other studies, it is the percentage varies from one study to another, and also the percentages are according to the design of the study and the opportunities for providing the sample, for example the study that was conducted in Iraq in the governorate of Hilla in the year 2018 by the researcher (8) , under title of "Compassion Fatigue among Health Care Professionals Working In Intensive Care Units In Al-Hilla City" who revealed that the majority of health care professionals (46.8%) working in day shift. These results were inconsistent with study title in "Predicting the Risk of Compassion Fatigue: An Empirical study of Hospice Nurses" which carried out by (13) who found the majority of participants were (32.2%) consist of day and night shift.

Concerning total experience as a nurse the study results shows that the majority of the study sample represents (38.3%) of nurses who have Less than one year of total experience as a nurse and most of the studies about this topic do not mention this aspect of great importance , but takes total experience of the nurse in critical units and total experience in the current hospital are extensively taken. ,therefore the highest percentage of the total experience in current hospital for this study it was 1-3 years and represents about (28.3%) from the table of findings (4.1) ,This result agrees with (14) .

Regarding total experience in critical care units, the study results reveals that the most of participants (53%) of those who worked for Less than one year. The reason behind this is that most of the study sample was from the newly appointed category and This result agreed with study carried out by (3) who found that the majority of participants had (1-3) years of experience . In addition to, study title in "The effect of education on Compassion Fatigue as Experienced by staff Nurses" conducted by (15) who reported that majority of participants (38.89%) had (1-5) years of experience. While the study that disagreed with this study was by (Gardner, 2015) found that the majority of participants (32.6%) had (31-35) years of experience.

After application of an instructional program through the current study, the study indicates that there are significant differences in the level of compassion fatigue and professional quality of life throughout three periods of measurements (pre-test, immediate and post-test), this result signifies that the level of compassion fatigue improved among the study participants that's mean application of this program is an effective way to prevent and reduce level of compassion fatigue. This study is supported by (Duarte & Pinto-Gouveia, 2016) they studied "Effectiveness of a Mindfulness-Based Intervention on Oncology Nurses' Burnout and Compassion Fatigue Symptoms: A Non-Randomized Study " According to the findings, nurses who participated in the intervention saw substantial reductions in compassion fatigue, burnout, stress, and experiencing avoidance, as well as improvements in life satisfaction, mindfulness, and self-compassion, with medium to high effect sizes. These factors showed no significant changes in the comparative group of nurses. The findings also indicated a high level of acceptance. As the results of this study are timely and provide preliminary evidence that mindfulness-based interventions may be efficacious in reducing

oncology nurses' burnout, compassion fatigue and stress levels and increase their overall well-being.

Discussion of the effectiveness of an instructional program among critical care nurses

Table (4.2): After application of an instructional program through the current study, the study indicates that there are significant differences in the level of compassion fatigue and professional quality of life throughout three periods of measurements (pre-test, immediate and post-test), this result signifies that the level of compassion fatigue improved among the study participants that's mean application of this program is an effective way to prevent and reduce level of compassion fatigue, This study is supported by (16) they studied "Effectiveness of a Mindfulness-Based Intervention on Oncology Nurses' Burnout and Compassion Fatigue Symptoms: A Non-Randomized Study ".

In regard to Table (4.3): The study results of the present study revealed that there is a significant relationship between compassion fatigue and Nurses' demographic data (Economic status and level of education) at p-value less than 0.05, while there is a non-significant relationship with the other demographical at p-value more than 0.05, These results disagreed with (Al-Razaq et al., 2018) Which showed through his study some difference in the socio-demographic characteristics (gender ,age and years of experience) and he found that the female healthcare professional experience compassion fatigue more than male .

Conclusion

The study concluded that the instructional program was effective in reducing level of compassion fatigue and professional quality of life. Overall assessment of professional quality of life among critical care nurses during an instruction program shows moderate assessment for pre-test and immediate test of the study subjects, post-test is also moderate assessment for all items except compassion fatigue is low assessment. Most socio-demographic characteristics of critical care nurses have no impact on level of compassion fatigue and professional quality of life except the socio-economic status and level of education.

Recommendations

The awareness of nurses should be increased about the warning signs of the compassion fatigue to help them using effective coping strategies before they develop compassion fatigue and the level of compassion fatigue experienced in the workplace should be reduced, the nurses in critical care units should participate in training programs that include compassion fatigue recognition, coping mechanisms, managing stress, relaxation techniques, and self-care interventions. This is especially important for those who are younger in age and have less years of experience.

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Conflict of Interest: None to declare.

Ethical Clearance

All experimental protocols were approved under the University Of Kufa-Faculty of Nursing and all experiments were carried out in accordance with approved guidelines.

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