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Research Article

Level of Compassion Fatigue and Associated Factors Among Nurses Working at Comprehensive Specialized Hospitals in Northwest Amhara Region, Ethiopia 2022

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Abstract

Introduction: Nurses are the largest and most important professionals' group in the health care sector, and are at risk of developing compassion fatigue. Gaining a better understanding of compassion fatigue and what drives it helps to promote intervention programs aimed at reducing the occurrence of compassion fatigue among nurses. Compassion fatigue is common among nurses, and there are a number of reasons that contribute to its occurrence. Identifying these elements will aid in the development of effective preventative mechanisms.

Materials and Methods: Institutional based cross sectional study design was conducted among nurses working at Comprehensive Specialized Hospitals in Northwest Amhara region. A simple random sampling method was used to select participants. A structured self-administered questionnaire was used for data collection. Data was entered using Epi info version 7.2.5 software, then exported and analyzed using SPSS version 25. The outcome variable of the study was compassion fatigue transformed into low, medium and high level. Ordinal logistic regression was fitted. Variables with a p value < 0.25 at the bivariable regression analysis level were included in the final multivariable regression model. The model fitness was tested using deviances -2loglikhood ratio reveals p-value= 0.000 and goodness of fit was tested by Pearson and deviances chi-square which reveals p-value= (0.269) and (0.278) respectively. Parallel line test result revealed (p-value= 0.211).

Result: Out of 423 nurses 410 participants were involved in this study with the response rate of 97%. About 112 (27.3%), 164 (40%) and 134 (32.7%) had low, medium and high level of compassion fatigue respectively. Working shift, training, current working unit, work experience, and work place bullying were associated with compassion fatigue.

Conclusion: This study showed that nurses experience high level of compassion fatigue. Nurses who had less working experience, working in night and morning shift, training, working in emergency and medical unit and work place bullying were among variables which were significantly associated with level of compassion fatigue. Findings of this study give insights into what should be done to improve the workplace of nurses in northwest Amhara.

Keywords: compassion fatigue; nurse; level

Introduction

Nurses are the largest and most important professionals' group in the health care sector who provide care to meet the complex needs of patients in the increased workload in the health-care system, and are at risk of developing compassion fatigue which has negative consequences for their physical, mental, and, as well as patient care quality [1].

Compassion fatigue is defined as a state of physical or mental distress in carers that develops as a result of an on-going and snowballing process in a demanding interaction with needy people [2]. In nurses it can be explained as a cumulative and progressive absorption process of patient's pain and suffering formed from the caring interactions with patients and their families [3].

Although it is preventable, it is still a one of the problems in nursing area [4].

The prevalence of compassion fatigue has increased over time, which affects 25.24% of nurses worldwide [5]. The Asian region had the highest levels of compassion fatigue symptoms, while the Americas and Europe had the lowest levels and in African continent there is no adequate evidence [5, 6].

Conditions that lead to CF are frustration of not being able to avoid the patients' suffering or having to see them suffer, working in an environment where patients' deaths are a daily reality, a lack of time to be able to attend to patients in a comprehensive manner, and a scarcity of certain resources [7].

Other factors that predisposed to CF are exposure to others' suffering, high-stress workplaces, and continual self-giving [8].

Additionally work related and personal factors that contribute to CF are patient care, feeling responsible for the death of a patient, knowledge-skill level, lack of communication between interdisciplinary and multidisciplinary staff members, relationship with management, work environment conditions, role conflict with health team members, lack of social support, and increased patient density are all factors that cause compassion fatigue in nurses [9].

The physical, emotional, spiritual, social and organizational consequences of CF are so extensive that they threaten the existential integrity of the nurse and it happen to any nurse, at any time during the job course, though some nurses may be at greater risk to develop CF than other nurses [10].

Nurse's compassion fatigue may affect health systems, and job performance in many ways.

It hurts professionals, patients, and institutions, as well as providing issues for staff retention [11].

Furthermore, CF contributes to reduced nurses' job satisfaction, exhaustion, negativism, outbursts, and lower compassion toward co-workers; makes nurses' inability to separate work and home, intrusive thoughts about patient suffering, dependent nurse–patient relationships, emotions of hopelessness and sadness [12].

To prevent this devastating problem, effective mechanisms have been implemented at the international settings [8]. Notably developing clinical practice policies, education, and resilience training, support from family, co-workers, and administration; and management support for enhancing workplace agree-ability and emotional stability, such as participation in outdoor activities and an increase in social connection are all key elements to reduce CF [13].

Additionally, nurses' health well-being and satisfaction are all dependent on their work settings, and improvements in the workplace can help to avert negative consequences, as well as enhance patient and nurse health outcomes, reduce nurse turnover, and lower health care costs [14].

In sub-Saharan Africa nursing professionals faces complex demands from overburdened health-care systems, resulting in compassion fatigue [15].

As evidence showed, that there is a preoccupation with concerns about health system shortfalls, specifically staff absenteeism, medical malpractices, under-staffing, staff turnover, the availability, quantity, and quality of health services, and the workforce's poor working conditions [16].

However, there is lack of evidence showing the well-being of the health workforce of nurses in Ethiopia, particularly in study area.

Therefore, in order to provide base line information and highlight level of CF, the current study was conducted to assess the level of compassion fatigue and its associated factors in Northwest Amhara region Comprehensive Specialized Hospitals.

Materials and Methods:

Study Design, study area and study period

A hospital-based cross-sectional study design was conducted among nurses who are working in the northwest Amhara region comprehensive specialized hospitals. The study was carried out from May 15 to June 15, 2022. There are five comprehensive specialized Hospitals available in this area Debretabor comprehensive specialized Hospital, Debre Markos comprehensive specialized Hospital, Felege Hiwot comprehensive specialized Hospital, Tibebegion comprehensive specialized Hospital and University of Gondar comprehensive specialized Hospital.

Population

The study included all nurses who were worked at northwest Amhara region Comprehensive Specialized Hospitals and nurses who were worked at the study area and available during data collection period were considered as study population.

Inclusion and exclusion criteria

Those nurses who were full time workers and available during the study period was included and head nurses and matron nurses were excluded from the study.

Sample size determination and sampling procedure

The overall minimum sample size was determined by using single population Proportion calculation formula. (Was taken 50%) Then the final sample size n=423.

The researcher selected northwest Amhara region comprehensive specialized hospitals and taken all hospitals and allocate the total sample size of nurses in each comprehensive specialized Hospital by using the proportional allocation formula (the total sample size for each Hospital can be calculated by the total numbers of nurses for each Hospital multiply by the total sample size determined by using a single mean formula divided by the total number of nurses in five comprehensive specialized Hospitals), n=Nf x nt/Nt and lastly using simple random sampling method to select each participant from each Hospital.

Variables

Dependent variable

Levels of compassion fatigue (low, medium and high)

Independent variables include, Socio-demographic variables

- Age,
- Sex,
- Marital status,
- Monthly salary,
- Working hours per day,
- Educational qualification,
- Work experience

Personal factors

- Sleep quality

Work related factor (organizational factors)

- Work place bullying,
- Remuneration,
- Career enhancement opportunity,
- Management support,
- Working unit,
- Having training,
- Working shift

Operational definitions

Low compassion fatigue: refers to participants who scored ≤ 22 from compassion fatigue measuring scale [16].

Medium compassion fatigue: refers to participants who scored 23-41 from the compassion fatigue measuring scale [16].

High compassion fatigue: refers to participants who scored ≥42 from the compassion fatigue measuring scale [16].

Work place bullying: Is verbal, physical, social and psychological abuse by manager or another person. If one or more actions happen about once per week and over a period of at least one year, considered as Work place bullying is present [17].

Poor sleep quality: Based on the Pittsburgh sleep quality index tool, the score ≥ 6 points is considered as poor sleep quality.

Good sleep quality: When the Pittsburgh sleep quality index score is <6 points [18].

Data collection tools and procedure

The questionnaire has four parts, the socio-demographic characteristics, which were seven items. The second was adopted validated (Pittsburgh) sleep quality assessment tool which had nineteen items and seven components [19]. The third one was Work place related, adopted validated tool measuring work place bullying which had 43 items [20]. Additionally, there were other six work related questions.

Lastly compassion fatigue was measured with Adopted validated revised Stamm's ProQOL V-5 containing ten items which have a 5-point Likert scale of 1 to 5 [21].

Quality control

Four BSc and three MSc nurses were trained as data collector and supervisor respectively. Questionnaires was prepared in English and translated to Amharic and pre-tested was conducted on 21 nurses (5% of final sample size) at Dessie Comprehensive Specialized Hospital for its appropriateness two weeks before the actual data collection period. The internal consistency (reliability) of the tool was 0.869 for work place bullying and 0.779 for compassion fatigue with Cronbach's Alpha test. Half-day training was given to data collectors and supervisors on objectives, content and the rationale of the study, and also the rights of the participants. During the data collection time, the supervisors were closely following the day-to-day data collection process and corrections were made accordingly. All completed questionnaires were reviewed for its completeness.

Data processing and analysis

The data were entered using Epi info version 7.2.5 program, then, exported, checked, categorized, coded and analysed using SPSS version 25. Initially, the information was checked for missed data and outliers. The outliers were screened through visual evaluation for scattered plot graphs, Box Plot and histogram as well as Kolmogorov-spiro was utilized to test ordinariness. Categorical factors displayed by frequency and percentage. The data were presented using texts, tables and figures. Bivariable analysis was used to see the association between each predictor variable and the outcome variable by using ordinal logistic regression. The model fitness was tested using deviances -2loglikhood ratio reveals p-value= 0.000 and goodness of fit was tested by Pearson and deviances chi-square which reveals p-value= (0.269) and (0.278) respectively. Parallel line test result revealed (p-value= 0.211). The model was fitted well. All variables with P < 0.25 in the Bivariable analysis were included in the final model of multivariable analysis. Adjusted odds ratio along with 95% CI was estimated and P-value < 0.05 was considered as statistically significant.

Result

Socio demographic characteristics

Out of 423 nurses 410 participants involved in this study with the response rate of 97%. Among these 278 (67.8%) were age category between 24–34 years 216 (52.7%) were females, majority of participant 265 (64.6%) were married and 365 (89%) of nurses had first degree. About 192 (46.8%) participants had work experience of seven years and above. Regarding to average monthly salary 187 (45.6%) participants gets > 8000 Ethiopian Birr per month. About 208 (50.7%) participants were working above eight hours per day. (Table 1).

Variables	Categories	Frequency	Percent
Sex	Male	194	47.3
	Female	216	52.7
Age	< 24years	17	4.1
	24-34years	278	67.8
	35–45 years	97	23.7
	> 45 years	18	4.4
Marital status	Single	131	32
	Married	265	64.6
	Other	14	3.4
Educational qualification	Diploma	30	7.3
	BSc	365	89
	MSc	15	3.7
Experience	< 3 years	63	15.4
	4–7 years	155	37.8
	> 7 years	192	46.8
Average working time/day	<=8hr	202	49.3
	> 8hr	208	50.7

Table 1: Socio-demographic and characteristics of nurses working at Comprehensive Specialized Hospitals in Northwest Amhara region 2022 (n = 410).

Level of compassion fatigue among nurses

This study assessed level of compassion fatigue among nurses using professional quality of life assessment scale. Among 410 nurses about 112 (27.3%) 95% CI (22.7–31.5) was low, 164 (40%) 95% CI (35.6–45.4) was medium and 134 (32.7%) 95% (CI 28.3–37.3) was high level of compassion fatigue (Figure 1).

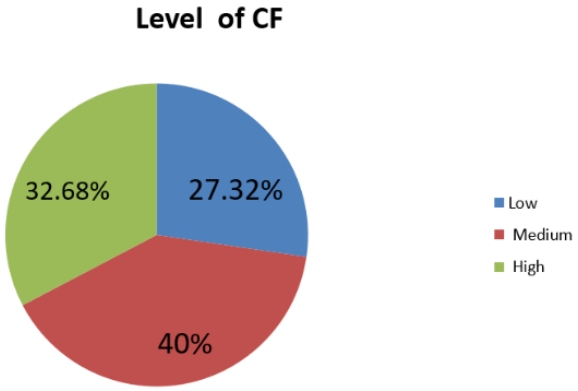

Figure 1: level of compassion fatigue among nurses (n=410)

Factors associated with level of compassion fatigue

On bi-variable analysis nine variables were eligible for multivariable analysis (p. value < 025). Monthly salary, management support, training, working shift, working unit, marital status working experience, working hours per day and work place bullying then included in multivariable analysis, working experience, training, working shift, working unit and work place bullying, were significantly associated with level of compassion fatigue (P-value < 0.05).

The odds of levels of compassion fatigue score decreased by 50.7% in nurses

who had work experience of less than 3 years than who had work experience of seven years and above Given that all variables constant [AOR 0.49, 95% CI (0.256–0.947), p 0.034].

The odds of levels of compassion fatigue score decreased by 46% in nurses who had work experience of 4–7 years than who had work experience of seven years and above Given that all variables constant [AOR 0.54, 95% CI (0.332–0.877), p 0.013].

The odds of level of compassion fatigue decreased by 46% among nurses working in the afternoon shift than those nurses who were working in night shift Given that all variables constant [AOR 0.54, 95% CI (0.314–0.93), p-value

0.025]. The odds of level of compassion fatigue decreased by 44.6%, in nurses working in morning shift than nurses who were working in night shift. Given that all variables constant [AOR 0.54, 95% CI (0.356–0.862), p value 0.008].

The odds of level of compassion fatigue decreased by 48% in nurses who were not got training than those nurses who had got training, given that all variables constant [AOR 0.52, 95% CI (0.315–0.85), p 0.01].

Regarding current working unit, nurses who were working in emergency unit 2.83 times more likely to have high level of compassion fatigue when compared to those nurses working at outpatient unit given that all variables constant [AOR 2.83, 95% CI (1.387–5.772), p 0.004].

The odds of nurses who were working in medical unit were 1.97 times higher level of compassion fatigue when compared to those nurses working at outpatient unit, given that all variables constant [AOR 1.97, 95% CI (1.098–3.54), p 0.023].

The odds level of compassion fatigue of nurses who had no work place bullying decreased by 80.4%, as compared to those nurses who had work place bullying, given that all variables constant 95% CI [AOR 0.196, (0.101–0.380), P.001] (Table 2).

Variable		Low	Medium	High	COR	AOR	P. value
Management support	No	96	134	103	0.66 (0.42,1.04)	0.78 (0.48,1.26)	0.304
	Yes	112	164	77	1.	.1	.
Training	No	96	136	101	0.60 (0.38,0.96)	0.52 (0.31,0.85)	0.010
	Yes	16	28	33	1.	.1	.
Work shift	Afternoon	29	36	27	0.54 (0.327,0.906)	0.54 (0.31,0.93)	0.025
	Morning	62	81	59	0.55 (0.36,0.85)	0.55 (0.35,0.86)	0.008
	Night	21	47	48	1.	.1	.
Work place bullying	No	28	11	5	0.18 (0.15,0.34)	0.19 (0.10,0.38)	0.001
	Yes	84	153	129	1.	.1	.
work experience	< 3 years	20	24	19	0.69 (0.41,1.16)	0.49 (0.28,1.94)	0.034
	4–7 year	53	54	48	0.66 (0.44,0.98)	0.54 (0.33,00.88)	0.013
	> 7 years	39	86	67	1.	.1	.
working unit	Emergency	6	19	21	2.28 (1.18,4.39)	2.83 (1.387,5.772)	0.004
	ICU	6	11	13	1.87 (0.87,3.99)	2.11 (0.95,4.70)	0.067
	Paediatric	28	34	21	0.86 (0.50,1.46)	1.18 (0.65,2.12)	0.589
	Medical	14	35	26	1.519 (0.874,2.637)	1.97 (1.10,3.54)	0.023
	Surgical	24	28	21	0.95 (0.55,1.65)	1.226 (0.68,2.208)	0.496
	Outpatient	34	37	32	1.	.1	.
monthly salary	< 6000	15	15	10	0.627 (0.333,1.180)	0.54 (0.27,1.10)	0.090
	6000– 8000	50	69	64	1.02 (0.702,1.49)	1.45 (0.89,2.35)	0.137
	> 8000	47	80	60	.1	.1	.
Marital status	Single	51	45	49	0.78 (0.54–1.14)	0.796 (0.52,1.18)	0.294
	Married	61	119	85	1	1	
Work hrs./day	≤ 8 hrs.	60	82	60	0.77 (0.54–1.11)	0.81 (0.56,1.19)	
	> 8 hrs.	52	82	74	1	1	

Table 2: Bi-variable and Multivariable logistic regression analysis of level and associated factors of compassion fatigue among nurses (n = 410).

Discussion

This study examined level of compassion fatigue and associated factors among nurses working at Comprehensive Specialized Hospitals in northwest Amhara region.

Findings of this study demonstrated that 27.3% 95% CI (22.7, 31.5) was low, 40% 95% CI (35.6, 45.4) was medium and 32.7% 95% CI (28.3, 37.3) was high level of compassion fatigue.

The finding was higher than the study conducted in America 18%, 21.57% and 10% [22–24] (all were medium level of CF), China 26.88% (medium level of CF) [25], Australia 49% (medium level of CF) [26], Canada, 25.8 (medium level of CF), (52%,48,0%) [14, 2]), Saudi 80% (medium level) [28],Spain 40.2% (medium level) [29], Filipino,16.53,61.98 and 21.49 [30] and Indonesia 34.6, 43% and 22.4% [31].

The possible reason may be different in sample size, study population, study setting and economic status of surveyed population and might be due to nurse's awareness level and preparedness for compassion fatigue challenge.

The main difference between this study and previous study conducted in United States of America on neonatal nurses was the tool they were used were Compassion Fatigue and Satisfaction Self-Test for Helpers (CFST) 66 item but in this study, tool was ProQOL measuring compassion fatigue, burnout and compassion satisfaction 30 item.

The other difference between this study and another study in United States of America was the sampling technique they were used purposive sampling for recruiting samples in this study the sampling technique was simple random sampling. In Australia, China, Spain and Indonesia the study was conducted in single hospital and single working unit but this study was conducted in different hospitals and different nursing units. The main difference between this study and a previous study conducted in Saudi and Filipino were sample size, study setting in Filipino they were conducted in medical surgical unit only 121 nurses were included in their study, in Saudi they were conducted in intensive care unit only and they were used purposive sampling method selection of participants and they were distributing their questionaries via email address this causes for possible bias.

But this finding was lower than study conducted in Ugandan nurses 21.27%, 29.62 and 49.11% [16], Greece 73.9% (high level of CF) [32] and Brazil 19.5,21.8, and 58.7 [33].

The possible reason may be due to different in study participant, study setting and the sample size surveyed.

In Uganda, the healthcare system in the study area was weak and in a state of recovery and created an unsuitable working environment for the health workforce particularly, the nurses who are tasked with looking after critically ill patients [16].

The other possible reason is study setting this study was conducted on nurses

working in many different clinical areas but the previous study conducted in Brazil was on Critical care and emergence nurses are known to be more vulnerable to the impact of CF [34].

The main difference between this study and previous study in Greece may be due to sample size difference 121 in addition they were included midwifes in the study [32].

In this study work experience, working shift, training, current working unit and work place bullying were associated with compassion fatigue.

Regarding working experience nurses who had less than three years of working experience had lower level of Compassion fatigue than nurses who had working experience of seven and above years. This finding inconsistent with study conducted in Portugal [33].

Nurses who had longer working experience had lower level of compassion fatigue in Portugal but in this study those who had lower nursing experience had lower level of compassion fatigue, this inconsistency may be due the sample size of participants in Portugal they were only 87 participants were included.

The other variable associated with compassion fatigue was working shift nurses who were working in the afternoon and morning shift had lower level of compassion fatigue as compared to those nurses who were working in night shifts. This study supported by previous study conducted in Spain [35]. Night shift working often creates tensed environments at a nurse's home and family life and it interfere with person's circadian rhythm.

In this study nurses who were got training about compassion fatigue were vulnerable to it than those nurses who had not got training and awareness about compassion fatigue. This study inconsistent a previous study conducted in Slovakia [36] and China [37]. The possible reason may be the type of training and the aim of training to reduce CF must contain physical psychological, cognitive and behavioral [38].

In this study area nurses were got compassionate training rather than how to prevent compassion fatigue.

Regarding nurses working unit nurses who were working in emergency unit had high level of compassion fatigue than nurses who were working in outpatient departments this result supported by study conducted in Turkey [39]. The possible reason may be in emergency units there is life-threatening, terminal ill patients are taken care of. It is believed that increased compassion fatigue is observed during the times of long-term work with patients suffering in these units, long-term stress and frequent experience of patient deaths [40].

The other working unit factor that had significant association with high level of compassion fatigue was working in medical unit, nurses who were working in medical unit had high level of compassion fatigue as compared to those nurses who were working in outpatient unit. This study supported by previous study conducted in Spain [29].

The possible reason in medical unit there is many chronic illnesses like cancer, diabetic millets, cardiovascular disorders and renal diseases these conditions needs frequent care from nurses [41]. Regarding work place bullying nurses who faced workplace bullying were more likely to experience high level compassion fatigue compared to their counterparts who did not face workplace bullying.

This result supported by study conducted in Uganda [16], United States of America [42, 43]. This result is not surprising because workplace bullying is more frequently reported among nurses than people in other professions.

Exposure to bullying is linked to physical and mental health difficulties, as well as issues at work like a higher likelihood of leaving, a fall in commitment, and a lower level of job satisfaction, decreased motivation and performance (e.g., increased medical errors), decreased productivity, increased counterproductive work behaviour (e.g., absenteeism) and poor quality of care and patient safety, decreased teamwork, decreased staff morale and poor peer relationships, increased conflicts and communication bullying negatively affected the psycho-physical health and wellbeing of nurses and increase post-traumatic stress disorder and compassion fatigue [42].

Conclusion

This study showed that high level of compassion fatigue. This finding suggests that the nurses are exposed to traumatic materials of their patients experiencing distress. The presence of small acts of empathy, additional, the findings suggest that nurses may be lacking sufficient skills in coping with the traumatic experiences of their patients.

Nurses who had less working experience, working in night and morning shift, training, working in emergency and medical unit and being exposed to work place bullying were among variables which were significantly associated with level of compassion fatigue. The findings of this study give insights into what should be done to improve the workplace of nurses in Northwest Amhara region.

Abbreviations

AOR: Adjusted Odds Ratio

CF: Compassion Fatigue

CI: Confidence Interval

DMCSH: Debre Markos Comprehensive Specialized Hospital

DTCSH: Debre Tabor Comprehensive Specialized Hospitalet: Ethiopian Birr

FHCSH: Felege Hiwot Comprehensive Specialized Hospital

PROQL: Professional Quality of Life, RN: Registered Nurse

SD: Standard Deviation

TGCSH: Tibebe Gion Comprehensives Specialized Hospital

UoGCSH: University of Gondar Comprehensive Specialized Hospital

Declarations

Ethics Declarations

Ethics approval and consent to participate this study was approved by the ethics review committee of the school of nursing, College of medicine and health science, University of Gondar. Permission letters was gained from each hospital administrators after explaining the purpose and all the processes to set the appropriate data collection time by considering workload. Informed consent was taken from each respondent; the data collected from participants was kept confidential in addition, all participants were having the right to withdraw from the study at any stage. The entire study was conducted as per the Declaration of Helsinki's ethical principles for medical research.

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Authors' contributions

Mohammed Mechal was writing the main body of manuscript, Yeneabat Birhanu and Mekdes Tigabu were reviewed the overall parts of manuscript, Jemal Mohammed Bahiru was wrote the methodology parts of the manuscript and Adem Hussien Endris was wrote the abstract parts of manuscript.

Consent to publication

Not applicable

Availability of data and materials

The data sets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare no Competing interest.

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