

Original Article

Quality of Working Life in Relation to Occupational Stress, Anxiety and Depression of Workers in Primary and Secondary Healthcare Workplaces

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Abstract

Background: Healthcare professionals work in a demanding working environment, due to which they may develop high levels of stress, anxiety and depression.

Aims: To evaluate the working life quality of healthcare professionals and investigate the association between stress, anxiety, depression with the working life quality.

Methodology: A cross-sectional study was implemented in two primary healthcare centers and in a general hospital in Greece, between January to February 2020. A total of 248 healthcare professionals participated. The Depression, Anxiety and Stress Scale (DASS 21) as well as Professional Quality of Life Scale (ProQOL) were used.

Results: Healthcare professionals felt normal stress (10.11), depression (6.69), anxiety (5.10) and appeared to have moderate quality in their working life, which was found to be influenced by their educational level, which when it increases, occupational burnout ($p=0.015$) and secondary traumatic stress ($p=0.001$) decrease. Correlation of demographic characteristics of the sample and DASS-21 scale showed that when the level of education increases, depression, stress and anxiety decrease ($p<0.05$). Multivariable linear regression analysis demonstrated that increased depression, anxiety and stress were associated with high levels of occupational burnout and secondary traumatic stress. On the other hand, decreased depression, anxiety and stress were associated with growth of compassion satisfaction.

Conclusions: The study emphasized the significance of healthcare organizations management to achieve reduction of stress, depression and anxiety among healthcare professionals, in order to ensure a better-working life quality.

Keywords: Anxiety, burnout, depression, healthcare, occupational, quality of working life, stress, satisfaction, traumatic stress.

Introduction

Professional Quality of Life (ProQOL) is the quality one feels in relation to one's work as a helper. Healthcare professionals belong to the category of helping professions. ProQOL can

have a positive dimension (compassion satisfaction) or a negative one (compassion fatigue). The negative dimension consists of burnout and secondary trauma (Stamm, 2010). Studies, which have been conducted in

different care settings, including various healthcare professionals, have highlighted the relatively high prevalence rates of compassion fatigue, burnout and secondary trauma, which over time tend to increase (Branch and Klinkenberg, 2015; Cavanagh et al., 2020; Van Mol et al., 2015; Ruiz-Fernández et al., 2020; Xie et al., 2021). Organizational factors associated with the development of compassion fatigue, burnout and secondary trauma, include unhealthy work environment, poor communication, stigma, lack of time and resources to provide comprehensive care, poor collegial nurse-physician relationship as well as the decreased nurses' participation in hospital affairs (Kelly, 2020; Moisoglou et al., 2021; Pérez-García et al., 2021).

However, at the same time, the way in which healthcare professionals' working environment is organized, seriously affects their mental health. Some of the elements which have been associated with the development of depression, anxiety and stress reported to be workload, absence of organizational support, together with lack of adequate resources and inadequate, poor equipment (Elbay et al., 2020; Foster et al., 2021; Khamisa et al., 2015). Healthcare professionals who are exposed in high levels of work-related stress, depression and anxiety shall be at high risk in developing compassion fatigue (Barr, 2017; Duarte, 2017; Hegney et al., 2014) and will experience deterioration concerning the quality of their working life (Bakhshi et al., 2018; Eisapareh et al., 2022).

Therefore, healthcare professionals are often caught in a vicious work cycle, where one factor (stress, anxiety, depression) feeds the other (poor quality of working life) and vice versa. The effects of compassion fatigue are multidimensional, affecting their physical and mental health, their work performance together with the quality of care provided, while the likelihood of suicide shall arise (Haik et al., 2017; Kelly, 2020; Sorenson et al., 2017).

The management of health service organizations are invited to participate in finding ways to plan corrective changes for making better health professionals' working conditions, in order to remove those factors which contribute to the deterioration of their working life quality. In addition, in order to

reduce the likelihood of compassion fatigue, programs with self-care, mindfulness and resiliency have been successfully implemented targeting to the optimal management of compassion fatigue by the healthcare professionals themselves (Abernathy and Martin, 2019; Kestler et al., 2020; Klein et al., 2018).

The aim of this study was to assess the quality of working life of primary and secondary healthcare professionals as well as to measure their symptoms of depression, anxiety and stress. The possibility of existed association between the quality of working life and these symptoms was also investigated.

Materials and Methods

Study design and settings: A cross-sectional study was performed in a public hospital and two primary healthcare centers in a provincial city in Greece. The convenience sampling was used. A total of 300 self-completed questionnaires were distributed and a response rate of 82.7% was achieved (248/300). The duration of the study was from January 1st to February 29th 2020. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines were followed throughout the research process (Vandenbroucke et al., 2007).

Instruments

Professional Quality of Life Scale (ProQOL): The ProQOL Scale is a 30 item self-report questionnaire designed to measure two aspects of professional quality of life, the Compassion Satisfaction (pleasure you derive from being able to do your work well) and the Compassion Fatigue, which breaks into two parts, the Burnout (exhaustion, frustration, anger and depression related to work) and Secondary Traumatic Stress (feeling fear in relation to work-related primary or secondary trauma) (Stamm, 2010). The 30-item Likert scale used in ProQOL ranges from 1 (never) to 5 (very often). Each scale of the questionnaire (satisfaction, burnout, secondary trauma) consists of 10 items. Higher scores on the satisfaction scale represent a greater satisfaction related to one's ability to be an effective caregiver in one's job. Higher scores on the burnout scale, mean that the person is at a higher risk for suffering from burnout. Higher scores on the secondary

traumatic stress scale do not mean that a person has a problem, but there is an indication that may want to examine how the person feels about his/her work environment and may wish to discuss it with his/her supervisor, a colleague, or a healthcare professional.

DASS 21 questionnaire: Depression, Anxiety and Stress Scale (DASS-21) is a 21 item self-report scale designed to measure the emotional states of depression, anxiety and stress. The scale developed by Lovibond and Lovibond in 1995 (Lovibond and Lovibond, 1995). For the purpose of this study, the Greek version of the DASS-21 was used, which was translated and validated by Lyrakos et al (Lyrakos et al., 2011). DASS-21 uses four-point item responses (0 to 3), with the lowest scoring being "Did not apply to me at all" and the highest scoring being "Applied to me very much or most of the time." Higher scores indicating greater levels of distress. The DASS-21 has cut-off scores for conventional severity labels, as follows: Normal 0-9, mild 10-13, moderate 14-20, severe 21-27 and extremely severe >28. Furthermore, a number of demographic and occupational characteristics were collected, including sex, age, marital status, number of children, educational level, work setting, working position and years of work experience.

Data analysis: We used numbers and percentages to present categorical variables. Also, mean and standard deviation to present continuous variables. We used Pearson's correlation coefficient to assess the correlation between two continuous variables. To investigate the association between the DASS-21 scale and the ProQOL regression analysis was conducted after adjusting for demographic and job characteristics, i.e. sex, education level, family status, having children, working setting, working position, and working experience. Regarding multivariable linear regression analysis, we presented coefficient beta, 95% confidence interval, p-values and R^2 . All reported p values were two tailed. Statistical significance was set at $p < 0.05$ and analyses were conducted using SPSS statistical software (version 18.0).

Ethical Issues: Data collection from the participants were carried out in accordance with the Helsinki Declaration guidelines. The study questionnaire was accompanied by a

letter of information and consent, which provided researchers details, as well as the purpose of the study, assurance of anonymity and voluntary participation of the nursing staff. Hospital ethics committee and administration of 3rd Health Region Authority approved the study protocol, where both primary healthcare centers belong (No:15310/2019, No:53235/2019).

Results

The majority of healthcare professionals were women (70.2%). Sample mean age was 44.9 years (standard deviation; 8.3). Almost, 80% of the questionnaires were collected by the General Hospital, 55.6% belong to nursing staff, 29.4% were physicians while 14.9% were administrative staff. The mean years of experience was 16.4 (standard deviation; 9.8). Sample characteristics are presented in Table 1.

According to the results, most of healthcare professionals had indications of anxiety, stress, together with depressive symptoms. Scale measures have shown that healthcare professionals demonstrated normal stress (10.11), normal depression (6.69) and normal anxiety (5.10). Those regarding working quality of professional life, healthcare professionals appear to have moderate quality professional life as well as occupational satisfaction (37.47) and occupational exhaustion (24.26) together with secondary traumatic stress (23.09).

Correlation of demographic characteristics sample and DASS-21 scale showed that when educational level increases, depression, anxiety and stress decrease ($p < 0.05$). Divorced people, also presented to have a higher average rate of depression than unmarried, married, or widowed. Correlation between educational level and depression, anxiety accompanied with stress, are provided in Table 2.

Correlation of demographic characteristics sample with ProQOL revealed that when the level of education increases, occupational burnout and secondary traumatic stress decrease. Furthermore, when the years of healthcare professionals providing service increase, so does their secondary traumatic stress. ProQOL results, regarding the level of

education together with working life quality, are presented in Table 3.

Finally, the dimensions of ProQOL were correlated with those of DASS-21 and it was confirmed by the fact that when professional satisfaction increases, then depression ($r = 0.294$), anxiety ($r = -0.254$) and stress decrease ($r = -0.159$). Also, when occupational exhaustion increases, then depression ($r = 0.545$), stress ($r = 0.476$) and anxiety increase ($r = 0.424$) and as secondary traumatic stress increases, depression ($r = 0.431$), anxiety ($r = 0.381$) and stress

increases ($r = 0.504$). The results are given in Table 4.

Multivariable linear regression analysis, concerning working life quality being the dependent variable, is presented in Table 5. Multivariable analysis confirmed the results of correlation analysis. Increased depression, anxiety and stress were associated with increased occupational burnout and secondary traumatic stress. On the other hand, decreased depression, anxiety and stress were associated with high professional satisfaction.

Table 1. Sample characteristics

Characteristic	N (%)
Sex	
Women	174 (70.2)
Men	74 (29.8)
Age (years) mean, (SD)	44.9 ± 8.3
Degree	
University	80 (32.3)
Technical University	103 (41.5)
Two-year education	65 (26.2)
Postgraduate degree	
No	217 (87.5)
Master	27 (10.9)
PhD	4 (1.6)
Family status	
Unmarried	49 (19.8)
Married	171 (69.2)
Divorced	22, (8.9)
Widowed	5 (2.0)
Children	
None	24 (11.3)
One	43 (19.7)
Two	96 (45.1)
Three	36 (16.9)
Four	15 (7.0)
Working position	
Nurse	138 (55.6)
Physician	73 (29.4)

Administrator	37 (14.9)
Working Sector	
Primary Healthcare Center	50 (20.2)
General Hospital	198 (79.8)
Totals years of working experience, mean (SD)	16.4 ± 9.8

Table 2: Correlation between education and depression, anxiety and stress.

Level of education		Depression	Anxiety	Stress
Two-year education	Mean	8.34	11	6.8
	N	65	64	65
	Standard deviation	8.54	9.22	7.06
Technical University	Mean	8.06	11.18	6.02
	N	99	102	103
	Standard deviation	8.46	8.3	6.74
University	Mean	3.5	8	3.06
	N	76	79	80
	Standard deviation	4.7	6.78	3.8
P value		0.001	0.021	0.001

Table 3: Correlation between education and quality of working life.

Level of education		Professional satisfaction	Occupational burnout	Secondary traumatic stress
Two-year education	Mean	36.75	25.14	24.95
	N	64	64	63
	Standard deviation	7.26	5.29	7.49
Technical university	Mean	37.37	24.87	23.81
	N	103	102	100
	Standard deviation	7.49	5.44	6.63

University	Mean	39.08	22.76	20.65
	N	76	79	78
	Standard deviation	6.29	5.94	5.74
P value		0.121	0.015	0.001

Table 4: Correlation between quality of working life and depression, anxiety and stress.

ProQOL Scales		Depression	Anxiety	Stress
Professional satisfaction	Pearson correlation	-0.288**	-0.146**	-0.252*
	Sig. (2-tailed)	<0.001	<0.001	<0.001
	N	235	240	243
Occupational burnout	Pearson correlation	0.531**	0.427**	0.480**
	Sig. (2-tailed)	<0.001	<0.001	<0.001
	N	237	242	245
Secondary traumatic stress	Pearson correlation	0.406**	0.480**	0.347**
	Sig. (2-tailed)	<0.001	<0.001	<0.001
	N	233	238	241

** Correlation is significant at 0.01 level (2-tailed) * Correlation is significant at 0.05 level (2-tailed)

Table 5: Multivariable linear regression analysis with quality of working life as the dependent variable.

Dependent variable	Independent variable	Coefficient beta	95% confidence interval	P-value	R ²
Professional satisfaction					11%
	Depression	-0.32	-0.56 to -0.09	0.007	
	Anxiety	-0.15	-0.30 to -0.002	0.046	
	Stress	-0.22	-0.33 to -0.11	<0.001	
Occupational burnout					26%
	Depression	0.38	0.30 to 0.46	<0.001	
	Anxiety	0.37	0.26 to 0.47	<0.001	
	Stress	0.32	0.24 to 0.40	<0.001	
Secondary traumatic stress					22%

Depression	0.32	0.22 to 0.42	<0.001
Anxiety	0.49	0.01 to 0.24	0.04
Stress	0.26	0.16 to 0.35	<0.001

All models were adjusted for demographic and job characteristics.

Discussion

According to this study findings, healthcare professionals in Greece, although they experience normal levels of stress, anxiety and depression, nevertheless when experiencing them, a negative impact influences their working life quality. At the same time, correlation was found between the dimensions of working life quality and those of DASS-21. Regarding the impact of stress, anxiety and depression on working life quality and vice versa, our findings are consistent with those referred to the literature (Alharbi et al., 2022; Pang et al., 2020; Su et al., 2021). Employees' working life quality in helping professions, is determined by the satisfaction which professionals experience through offering to people, who receive their services. The compassion satisfaction is the positive aspect of working life quality and is extremely important to ensure the factors which promote it, because multiple benefits accrue.

In particular, low compassion satisfaction is associated with unacceptable behavior towards patients and colleagues, accompanied with early retirement desire (Dasan et al., 2015), non-compliance with hand hygiene (Zhou et al., 2021), poor performance and commitment to work (Sacco and Copel, 2018) as well as doubting of competence by healthcare professionals themselves (Clark et al., 2022).

In case of healthcare professionals, their constant contact with trauma and death on one hand, and, on the other hand managers' inability to ensure for them a healthy working environment, negatively impact their mental health, while they shall lead to a deteriorating working life quality. Research has highlighted the importance of being mentally healthy and its' impact on working life quality. However, it appears that little progress has been shown

towards removing the factors which burden healthcare professionals' mental health. As a result, high prevalence of mental health problems arises (Hill et al., 2022). Furthermore, in terms of working conditions, does not seem to have been carried out any evolution on improvement issues, concerning the reduce of compassion fatigue occurrence (Singh et al., 2020).

There are, however, demographic and occupational characteristics of healthcare professionals, which are predictors of stress, anxiety, depression and compassion fatigue. Findings of the present study highlighted the protective role of educational attainment, together with the aggravating one of years of work experience. These findings are consistent with those of other studies (Kelbiso et al., 2017; Khademian et al., 2021; Mangoulia et al., 2015; Olashore et al., 2022).

Regarding the educational level, presumably healthcare professionals with a bachelor's or master's degree, possess the knowledge to manage stressful situations much better, as well as the training to deal with difficult situations such as understaffing, workload or conflict management.

In terms of work experience, healthcare professionals, with many years in exposing themselves to a great amount of pain, death in combination with difficult working conditions, are more vulnerable to experience deterioration in their working life quality. Interventions by healthcare organizations management to improve working conditions, shall include providing opportunities for healthcare professionals to undertake continuing education, rotating staff to departments with lower workload and labor intensity, while ensuring all the resources needed to create healthy work environment.

The present study has a number of limitations. Firstly, it was conducted on a relatively small sample of healthcare professionals and therefore the results should be interpreted with caution. Also, it was carried out in one provincial hospital and two healthcare centers so the results cannot be generalized in total of healthcare professionals.

Conclusion: Employees, who work in helping professionals, feel the sense of pleasure through offering their services to individuals. However, difficult working conditions together with constant exposure to pain and death, shall remain the strong factors which lead to compassion fatigue and burnout. In the present study, healthcare professionals were found to experience moderate levels of stress, anxiety and depression, but these, statistically, seem to have significant impact on their working life quality.

The negative effects arising due to a degraded working life, making imperative any kind of improvement of healthcare professionals working environment. However, in case of implementing the appropriate interventions, working life quality shall be enhanced, both directly as well as indirectly when aiming to improve health professionals' mental health.

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