Research Article

EFFECTS OF COVID-19 ANXIETY AND COVID-19 QUALITY OF LIFE ON COVID-19 BURNOUT IN PSYCHIATRIC NURSES

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Abstract: *Nurses are key professionals in fighting the COVID-19 pandemic and they provide services beyond expectations. Although psychiatric nurses are suffering from anxiety and burnout they need to enhance and protect their quality of life. The major aim of the study was to investigate the effects of COVID-19 anxiety on COVID-19 quality of life and COVID-19 burnout, and the impact of COVID-19 quality of life on COVID-19 burnout on psychiatric nurses. The descriptive-relational design was used. The sample consisted of 159 nurses working in a state psychiatric hospital in İstanbul, determined by convenience sampling method. The data of the study was collected by using the socio-demographic form, COVID-19 Anxiety Scale, COVID-19 Life Quality Scale, and COVID-19 Burnout Scale. Statistically significant relationships were found between COVID-19 anxiety, COVID-19 life quality, and COVID-19 burnout. The increase in the anxiety of psychiatric nurses due to COVID-19 also increases the negative effect on their quality of life. COVID-19 anxiety positively affects burnout related to COVID-19. The increase in the negative effects of COVID-19 on the life quality of nurses causes an increase in burnout levels. The effect of COVID-19 on their life quality and the burnout based on COVID-19 was investigated in the research. Nurses are surpassing traditional boundaries, providing their services without constraints to confront the challenges posed by the COVID-19 pandemic. Their dedication knows no bounds as they work tirelessly to navigate through these difficult times, transcending conventional limits to offer essential care and support. Policymakers can alleviate the increasing physical and psychosocial burden of psychiatric nurses by providing financial and moral support. Additionally, medical, psychosocial, and legal resources should be provided to psychiatric nurses.*

Keywords: *COVID-19 anxiety, COVID-19 quality of life, COVID-19 burnout, psychiatric nurses*

1. Introduction

In the year 2020, healthcare workers (HCWs) found themselves at the forefront of an unprecedented global challenge—the COVID-19 pandemic [1]. HCWs serve as the bedrock of health systems, playing a pivotal role in advancing universal health coverage and bolstering global health security. Their dedication and professionalism have been seen by all, proving that they do extraordinary work throughout the pandemic. However, many of the HCWs have been infected, sickened, or died due to COVID-19. Who approximates that from January 2020 to May 2021, a staggering 80,000 to 180,000 HCWs may have lost their lives by the reason of COVID-19? This estimate implies that around 115,500 HCWs were potentially confronted with the risk of death during this period. [2]. The COVID-19

pandemic not only affected HCWs by death but also economic crisis; stress, a high unemployment rate, and physical and psychological health consequences were caused [3].

In such an environment, the anxiety levels of HCWs and the level of burnout are expected to increase, whereas their quality of life is expected to decrease. HCWs face increasing health issues including mental, such as anxiety, insomnia, depression, burnout, and poor quality of life [3].

Because of their close contingence with infected patients, HCWs are more vulnerable to compelling incidents like patient suffering and death. Anxiety has been prevalent among healthcare professionals who are directly associated with the management of affected patients during the pandemic [4].

It has been indicated that the anxiety percentage among nurses during COVID-19 varies between 22.2% and 27% globally [5]. The main reason for this was the fear of being infected or infecting others unknowingly [4].

As the number of patients infected by the pandemic increased, the burden on HCWs' who get a contact with patients increased. Stress, anxiety, and burnout can affect both their performance and status of health and decrease their quality of life [6].

The concept of "job burnout" was initially introduced by a clinical psychologist called Freudenberger (1974) and subsequently applied within the realm of mental health research [7]. It is a known fact that nurses hold a crucial and indispensable role in various facets of infection management, incorporating aspects such as preventing infections, implementing control measures, isolation practices, containment strategies, and promoting public health. There is a limited body of research examining the mental health challenges exposed by clinical medical workers amid the COVID-19 epidemic [8]. Changes in the quality of life and increased anxiety within the nurses could give rise to substantial challenges across individual, social, and occupational dimensions. These challenges have the potential to impact daily personal functions, including eating, sleeping, and overall health [9].

Nurses working in the psychiatry unit generally experience psychological distress and they often experienced workplace violence. Therefore, they constantly expressing anger, pity, fear, etc. Job burnout risk arises when they faced negative emotions [7]. For this purpose, this study aimed to investigate the effects of COVID-19 Anxiety (COV19Anxty) on COVID-19 quality of life (COV19QoL) and COVID-19 burnout (COV19Bo), and effects of COV19QoL on COV19Bo on psychiatric nurses. In this concept, a research model was created and presented in Figure 1.
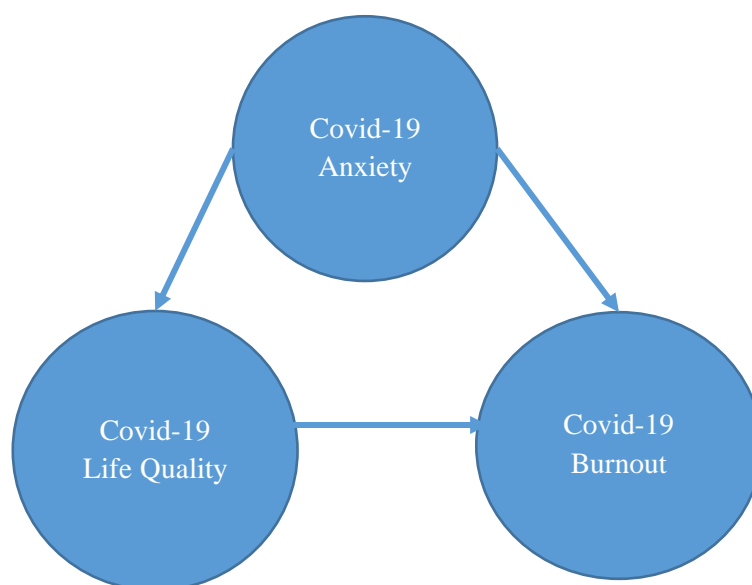

Figure1: Research Model

2. Material and Methods

2.1. Design

The study was structured using a descriptive-correlational design. This research approach aimed to describe and analyze the relationships between variables, providing a comprehensive overview of the studied phenomena without manipulating any variables.

2.2. Participants

Study data were gathered between June 2022 and August 2022. Convenience sampling method was used and aimed to reach the entire population. Out of the 200 nurses employed in the psychiatry clinics at a Psychiatry Hospital in Istanbul, 163 actively took part in the research. The analysis included the assessment of all 159 questionnaires received, resulting in a response rate of 79.5%. To meet the criteria for inclusion, participants were required to be currently employed in the psychiatry clinic of the relevant hospital and willingly express their desire to participate in the study. No specific exclusion criteria were applied, ensuring an inclusive approach to gather insights from all eligible participants in the psychiatry clinic.

2.3. Instruments

The data was collected by using personal information form (8 items), COV19 Anxiety Scale (7 items), COVID-19 Life Quality Scale (6 items), and COV19BO Scale (10 items).

2.3.1 Personal Information Form

The survey encompassed eight inquiries covering demographic aspects, including age, gender, marital status, education level, professional position (nurse supervisor or service nurse), general work shifts, specific work location, and the number of years of professional experience.

2.3.2 COVID-19 Anxiety Scale

Turkish adoption of the scale was conducted by Ladikli, Bahadır, Yumuşak, Akkuzu, Karaman and Türkkan [10]. The scale's internal consistency was 0.82. Furthermore, the test-retest reliability analyzed for the data and it was found 0.72. Answers by the participants given to the items are rated on a 5-point Likert type scale. Scale items are scored range from 1-5. High score indicates high anxiety. There is no reverse item in this scale. The Cronbach alpha for this study was 0.82.

2.3.3 COVID-19 Quality of Life Scale

Turkish adoption of the scale conducted by Sumen and Adibelli [11]. The survey employs a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to assess the feelings and thoughts of individuals over the last seven days. The scale, consisting of a single factor and comprising six items, gauges the impact of the pandemic on one's quality of life. A higher cumulative score on the scale indicates a more significant influence of the pandemic on the respondent's overall quality of life. The design of the scale is structured to capture the nuanced experiences and perceptions of individuals within the specified timeframe. The Cronbach alpha for this study was 0.91.

2.3.4 COVID-19 Burnout Scale

Burnout level related with COVID-19 scale validated by Yılmaz and Solmaz [12]. It consists of 10 items. Each item of the scale is evaluated using a 5-point Likert scale, ranging from 1 (indicating "never") to 5 (indicating "always"). To derive a total score, one can sum the values assigned to all 10 items, resulting in a score range between 10 and 50. A higher cumulative score signifies elevated levels of burnout associated with the impact of COVID-19. In essence, the total score serves as an indicator,

with an increase reflecting a higher degree of burnout experienced in relation to the challenges presented by the COVID-19 situation. The Cronbach alpha for this study was 0.92.

2.4. Procedure

The scales used in the present research was created by reviewing the scales in the literature to evaluate the effect of COVID-19 features of the psychiatric nurses. Before we started our research ethical committee approval and permission to conduct study in a public hospital from Ministry of Health have been gathered. Before the data collection, a pilot study was undertaken involving a social worker, two psychiatric nurses, and two psychiatrists to solicit expert evaluations and assess the clarity of the questions and items. The data were gathered via Google Forms. A researcher with firsthand experience in psychiatric clinics (holding a bachelor's degree) conducted interviews with the participants. The researcher extended invitations to potential participants and shared the survey link with those willing to volunteer. This approach ensured the refinement of the survey instrument and the collection of valuable insights from individuals with expertise in the relevant field.

2.5. Statistical analysis

In this study to analyze the data SPSS 20 and SPSS AMOS 22 package program were used. There is no missing data in the data set. Descriptive statistics, Pearson correlation analysis, confirmatory factor analysis, and path analysis were used to analyze the data. The confidence interval was assumed to be 95% at a significance level of <0.05.

Ethical Approval

Approval from the ethical committee of Istanbul University Cerrahpaşa was obtained (decision date: May 06, 2022; decision number: 2022/28) before initiating the study. The research adhered to the principles outlined in the 1964 Helsinki Declaration and complied with the ethical standards set by the National Research Committee.

3. Results

The research was carried out with 159 psychiatric nurses. Median age of participants is 27±6.33. Of the participants 76.73% were women, 53.46% not willing to work during COVID-19 (for details see Table 1).

Table 1. Socio-demographic and COVID-19 related characteristics

Variables		N	%
Age	Median=27±6.33		
Gender	Female	122	76.73
	Male	37	23.27
Willingness to work during COVID-19	Yes	33	20.75
	No	85	53.46
	Not Sure	41	25.79
With whom s/he lived	Alone	39	24.53
	With partner	28	17.61
	With partner and children	35	22.01
	Friend/s	19	11.95
	Relative/s	38	23.90

Table 1. Continued.

Variables		N	%
Treated confirmed COVID-19 patients	Yes	112	70.44
	No	47	29.56
Working time in the institution	Less than 1 year	9	5.66
	1-5 years	100	62.89
	6 years and more	49	31.41

Mean scores of COV19Anxty, COV19QoL, and COV19Bo scales were 3.21±1.00, 3.32±0.66, and 30.14±7.59 respectively (Table 2). These data indicate that anxiety, related to COVID-19, negative effects of COVID-19 on quality of life and COV19Bo levels are all above the average scores on psychiatric nurses.

Table 2. Descriptive statistics and reliability values of the scales

Scales	n	Cronbach's Alpha	Mean	SD
COVID-19 Anxiety	159	0.92	3.21	1.00
COVID-19 Quality of Life	159	0.74	3.32	0.66
COVID-19 Burnout	159	0.91	30.14	7.59

Based on the Pearson correlation results (see Table 3), a statistically significant and positive relationship was detected between COV19Anxty and, COV19QoL (r=0.372, *p*< 0.05). In this context, as COV19Anxty increases, negative effects of COVID-19 life quality increases. Additionally, increase in COV19Anxty results in increase in COV19Bo, because there is positive and significant relationship between these variables (r=0.639, *p*< 0.05). Lastly, there is also positive and significant relationship found between COV19QoL and COV19Bo (r=0.686, *p*< 0.05).

Table 3. Relationship between scales

Scales	COVID-19 Anxiety		COVID-19 Burnout	
	r	p	r	p
COVID-19 Life Quality	.372[**]	.000	.686[**]	.000
COVID-19 Anxiety			.639[**]	.000

Note: ** Correlation is significant at the 0.01 level (2-tailed).

The evaluation of model fit evaluated based on multiple statistics to test for both the measurement and structural models, as relying on a single statistic would not provide sufficient evidence of model adequacy [13]. The indices employed in this research included the $\chi 2$/df ratio, Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA). A low and statistically insignificant $\chi 2$ value below 5 indicates an acceptable fit, while a value below 3 suggests a good fit. However, it should be noted that $\chi 2$ is sensitive to sample size [14]. RMSEA value less and 0.08 or less is indicative of a good fit, while values of 0.10 or less, indicate an acceptable fit. Furthermore, Hu and Bentler [13] recommended threshold values for NFI, TLI, and CFI of 0.90 or greater for acceptable fit, and 0.95 or greater for good fit. Based on the results of the confirmatory factor analysis (CFA), all fit indices for the measurement model demonstrated a good fit to the data (Chi-square/df:1.689; GFI:0.856; NFI:0.868; TLI:0.930; CFI:0.941; RMSEA:0.066). Due to the limited number of universes, we studied, perfect fit values could not be achieved, but they are statistically acceptable. The findings indicate that the proposed model demonstrated a satisfactory fit to

the data. While the GFI value of 0.86 fell slightly below the 0.90 threshold, all values were within the range of recommended standard [15, 16].

In this model, we tested 3 hypotheses:

- H_1: COV19Anxty has significant effect on COVID-19 life quality
- H_2: COV19Anxty has significant effect on COV19Bo
- H_3: COVID-19 life quality has significant effect on COV19Bo

The results obtained from the model are compatible with the data and the model fit index values are obtained within the desired limits. According to the results, the path coefficient of COV19Anxty and life quality related with COVID-19 was statistically significant (β=0.53, p=0.00). Therefore, hypothesis H_1 was confirmed. The increase in the anxiety of psychiatric nurses due to COVID-19 also increased the negative effect on their quality of life. Increase in the level of COV19Anxty in nurses also resulted in increased level of burnout. COV19Anxty positively affects burnout (β=0.34; p=0.00; H_2 confirmed).

The increase in the negative effects of COVID-19 on the quality of life of nurses causes an increase in burnout levels. Therefore, a positive and statistically significant effect was detected (β=0.67, p=0.00; H_3 confirmed).

In summary, the model indicated that COV19Anxty has a positive effect on COVID-19 life quality and COV19Bo. When anxiety increases related with COVID-19, negative effects of COVID-19 on life quality in psychiatric nurses increases. In the same way, when anxiety increases, level of burnout increases in participants. Additionally, a negative effects of life quality related with COVID-19 increases; COV19Bo level of nurses increases ($p<0.05$)(Table 4).

Table 4. Results of Path Analysis

Hypothesis	Independent Variable	Dependent Variable	β	Direct Effect		Information
				CR	P-Value	
H1	COVID-19 Anxiety	COVID-19 Life Quality	0.53	4,26	0.00*	Supported
H2	COVID-19 Anxiety	COVID-19 Burnout	0.34	4,46	0.00*	Supported
H3	COVID-19 Life Quality		0.67	4,61	0.02*	Supported

β: Beta   CR: Critical Ratio   *: p <0.05

4. Discussion

The aim of the study is to figure out the effects of COV19Anxty on COV19QoL and COV19Bo, and effects of COV19QoL on COV19Bo on psychiatric nurses. The SEM approach was employed to test the model to investigate if COV19Anxty has significant effects on COVID-19 life quality (H_1) and COV19Bo (H_2). In the SEM approach lots of regression analysis could be done in the same time. In the model authors also tested if there is a significant effect COV19QoL on COV19Bo (H_3). According to results all hypothesis (H_1, H_2 and H_3) accepted.

In a research study involving 2,014 frontline nurses in Wuhan, the results revealed that 288 individuals (14.3%) reported experiencing moderate levels of anxiety, 217 nurses (10.7%) reported moderate levels of depression, and a significant proportion of 1,837 nurses (91.2%) reported high levels of fear. This findings indicated up to 45% of the nurses exposed of anxiety or depression [17]. In a study carried out by Bayrak et al. on nurses, 80.7% of nurses were found to have high anxiety levels during COVID-19 pandemic [18]. Results of the study indicated that the anxiety level of nurses is above the average, parallel with the literature.

The first hypothesis of the research examines the effect of COV19Anxty on COV19QoL. Fazeli et al. In a study conducted by 1512 nurses, it was determined that there was a moderate negative correlation between Anxiety and life quality [19]. In a cross-sectional study examining in Iran, a substantial negative association was observed between COV19Anxty and the quality of life. This relationship remained statistically significant, indicating a considerable effect size (partial r = -0.515, p < 0.001). The findings underscored that heightened COV19Anxty among nurses is linked to a notable decrease in their quality of life. Furthermore, the authors reported that for each unit increase in the mean anxiety score, there was a corresponding reduction of 0.81 units in the quality of life score. [9].

According to the findings, the COV19Bo levels of the participants were found above the average. In a study carried out with the participation of 2707 health professionals in 60 countries 51% of respondents reported 60 reported burnout in 2020. in the country. 33 countries reported burnout of 60 countries [20]. These results show that COVID-19 increased burnout level of health professionals. In another study conducted with 375 clinical nurses in Saudi Arabia, moderate burnout was detected in nurses [21]. In another research carried out, the burnout level of nurses was determined quite high [22]. It has been concluded that the findings show that burnout level of psychiatric nurses above the average in parallel with the other researches. Studies show that the COVID-19 outbreak has left many psychological effects, especially on health professionals [23]. The high level of burnout brings many mental health problems in HCWs. A study has shown that high levels of burnout result in insomnia [24, 25].

The results indicated that anxiety due to COVID-19 had a significant and positively correlated with COV19 Bo and had an indispensable variable in the path analysis model for the variable of burnout [26]. In our study we also found a positive effect of anxiety on burnout.

According to research, HCWs on the frontline, particularly those engaged in diagnosing and treating patients with COVID-19, have reported elevated levels of burnout. This burnout is linked to various symptoms, including insomnia, depression, and anxiety [27]. In our study, about 70% of psychiatric nurses treated people who were officially diagnosed with COVID-19, and their burnout levels were found to be high. Çemeçe and Menekay (2020) stated that moderate and positive correlation between anxiety and burnout was found [6]. In parallel with the results of our study.

The anxiety of nurses can result in depression and decrease their quality of life. A study of nurses in China supports this idea.[28] The findings of the researchers also confirm that the effects of COVID-19 on the quality of life of nurses are noticeably high. According to the results of a study, a high and negative correlation was detected between COV19Bo and COV19QoL [6]. The life quality of nurses scale used in this study was designed based on the effects of COVID-19, and the higher score indicated the lower the quality of life.

5. Limitations

Major limitation of this study is that it has conducted in a one center. The sample was limited to voluntary online participants. No assessment was made of the severity of COVID-19 in the sample group. Presence of mental problems did not include a clinician's assessment; it was based on the participants' self-assessment. Since COV19Anxty, COVID-19 Life Quality and COV19Bo items has ambiguity maybe common method bias can be considered as other limitations of this research.

6. Conclusion

Coronavirus has brought about changes in the lives of many of us since it entered our lives, but health professionals who have to constantly struggle with this disease have faced more difficulties than anyone else. During the COVID-19 pandemic, nurses faced increased workload, lack of support, fatigue

and risk of infection. This situation they faced has increased their COV19Anxty level. The reason why, the effect of COVID-19 on their quality of life and the burnout due to COVID-19. While nurses are extending their services beyond traditional limits to help us overcome the challenges of the COVID-19 pandemic, it's crucial to note that psychiatric nurses, despite their dedication, are grappling with anxiety and burnout. The challenging experiences of psychiatric nurses during the COVID-19 outbreak may cause a decrease in the quality of service they provided. This may harm both themselves and the quality of health services. It also may result in layoffs. The present investigation, alongside existing studies in the literature, underscores the lasting repercussions of negative pandemic experiences. It emphasizes the critical need for swift provision of comprehensive medical, psychosocial, and legal support to health professionals, especially psychiatric nurses. Timely access to these resources is imperative to effectively deliver the required treatment and care for psychiatric nurses grappling with the challenges presented during the COVID-19 outbreak. Policy makers can alleviate the increasing physical and psychosocial burden of psychiatric nurses by providing financial and moral support.

In the light of the findings obtained from the research, it would be beneficial for the hospital management to provide a resilience development program in addition to psychological support services.

Acknowledgments

Ethical Approval

Approval from the ethical committee of Istanbul University Cerrahpaşa was obtained (decision date: May 06, 2022; decision number: 2022/28) before initiating the study. The research adhered to the principles outlined in the 1964 Helsinki Declaration and complied with the ethical standards set by the National Research Committee.

Conflict of interest

No conflict of interest declared.

Author's Contributions:

Author's contributions to the study are equal.

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