Health Problems of Civilization
eISSN: 2354-0265, ISSN: 2353-6942

ORIGINAL PAPER

ORYGINALNY ARTYKUŁ NAUKOWY

RELATIONSHIP BETWEEN TYPE D PERSONALITY AND COMPASSION SATISFACTION, BURNOUT AND COMPASSION FATIGUE IN SURGICAL NURSES

ZWIĄZEK MIĘDZY OSOBOWOŚCIĄ TYPU D A ZADOWOLENIEM ZE WSPÓŁCZUCIA, WYPALENIEM ZAWODOWYM I ZMĘCZENIEM WSPÓŁCZUCIEM U PIELĘGNIAREK CHIRURGICZNYCH

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Gün M, Tekin YE. Relationship between Type D personality and compassion satisfaction, burnout and compassion fatigue in surgical nurses. Health Prob Civil. https://doi.org/10.5114/hpc.2024.143672

Tables: 4

Figures: 0

References: 36

Submitted: 2024 Aug 29

Accepted: 2024 Oct 1

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Health Problems of Civilization
eISSN: 2354-0265, ISSN: 2353-6942

Summary

Background. This study aimed to determine the relationship between Type D personality and professional quality of life (ProQoL) in surgical nurses.

Material and methods. The study's sample consisted of 316 nurses working in surgical units. The socio-demographic characteristics form, ProQoL Scale and Type D Personality Scale-14 were used. After verifying the data's normal distribution, t-test, ANOVA and Pearson Correlation Analysis were performed.

Results. Among the nurses, 32.9% had the Type D personality. The mean scores of the Type D Personality Scale sub-dimensions were negative affectivity 12.57±6.8 and social inhibition 9.26±5.64. The mean scores of ProQoL Scale sub-dimensions were compassion satisfaction 34.95±10.03, burnout 17.12±7.36, and compassion fatigue 13.97±7.96. While there was a moderate positive correlation between the Type D personality sub-dimensions and burnout and compassion fatigue, a low negative correlation was found between compassion satisfaction.

Conclusion. There is a relationship between the Type D personality and ProQoL. High Type D personality scores have a negative effect on ProQoL.

Keywords: Type D personality, compassion fatigue, job satisfaction, burnout, nurses

Streszczenie

Wprowadzenie. Niniejsze badanie miało na celu określenie związku między osobowością typu D a jakością życia zawodowego (ProQoL) u pielęgniarek chirurgicznych.

Materiał i metody. Próba badawcza składała się z 316 pielęgniarek pracujących na oddziałach chirurgicznych. Zastosowano formularz charakterystyki społeczno-demograficznej, Skalę ProQoL i Skalę Osobowości Typu D-14. Po sprawdzeniu normalności rozkładu danych przeprowadzono test t, ANOVA i analizę korelacji Pearsona.

Wyniki. Wśród pielęgniarek, 32,9% miało osobowość typu D. Średnie wyniki podwymiarów skali osobowości typu D to negatywny afekt 12,57±6,8 oraz zahamowanie społeczne 9,26±5,64. Średnie wyniki podwymiarów skali ProQoL to zadowolenie ze współczucia 34,95±10,03, wypalenie 17,12±7,36 i zmęczenie współczuciem 13,97 ± 7,96.

Podczas gdy istniała umiarkowana dodatnia korelacja między podwymiarami osobowości typu D a wypaleniem zawodowym i zmęczeniem współczuciem, stwierdzono niską ujemną korelację między zadowoleniem ze współczucia.

Wnioski. Istnieje związek między osobowością typu D a ProQoL. Wysokie wyniki osobowości typu D mają negatywny wpływ na ProQoL.

Słowa kluczowe: osobowość typu D, zmęczenie współczuciem, satysfakcja z pracy, wypalenie zawodowe, personel pielęgniarski

Introduction

Interpersonal communication skills and an empathic approach are among the fundamental structures of nursing roles and have essential roles in helping others [1,2]. Through empathy, nurses try to understand patients' value judgments and concerns, and can be motivated to be compassionate [1]. Compassion is a complex process involving emotional interest, feeling

close to the patient, humility and humanity to take action to reduce the pain and suffering of the patient [3]. However, nurses' extended sense of compassion and excessive empathic approach may cause stress. When they cannot manage stress, this condition may become chronic, and compassion fatigue (CF) may occur [2,3].

CF in its most general definition, is the emotional, psychological and spiritual damage seen in people who work with suffering people. Although symptoms such as distress, depression, anger and inability to provide care are seen in nurses who experience CF, they continue to provide care. They are most commonly seen in those working in units with critical patients, such as hospice, oncology, community health, intensive care and emergency [2]. This situation may lead to decreased patient satisfaction, increased medical errors, failure to provide safe care and the inability of the nurse to make the right decisions [4]. CF can be found together with burnout (BO), but they are different concepts [1].

BO is a condition of emotional and cognitive exhaustion due to the individual's reduced capacity to manage daily life [1]. CF is a unique form of BO due to people's sensitivity in caring professions [2]. In this context, it is necessary to consider compassion satisfaction (CS) as one of the main components of BO [1].

BO, CF and CS are considered within Professional Quality of Life (ProQoL) [5]. ProQoL is a concept that includes satisfaction and perception of working life. It includes the individual's feelings about the job [2,6]. It has different names in literature as 'Professional Quality of Life' and 'Occupational Quality of Life'. Among its sub-dimensions, CS is used instead of occupational satisfaction. CF is used instead of secondary traumatic stress [7-9]. Patients under the care of surgical nurses are exceptional due to their trauma history or surgeries they have undergone, and their postoperative process can change rapidly. This situation causes surgical nurses to be exposed to heavy workloads, long working hours and stressful working environments [2]. Working with surgical patients who have had traumatic experiences due to

their profession for a long time may cause nurses to feel negativity about their profession [10]. Negative working conditions decrease nurses' ProQoL [2,6].

In Stamm's studies about the ProQoL, it was observed that people working as helpers are at risk of exposure to traumatic stressors in their professional lives; as a result of these stressors, negative symptoms, including post-traumatic stress disorder, depression and BO, can develop [11,12]. This situation is seen to occur more in nurses who cannot protect their empathic skills and professional boundaries in working environments with a heavy emotional load, such as intensive care, hospice, emergency services, internal and surgical units, who have inadequate coping and communication skills and are affected by individual characteristics, such as education [2,5,10]. Therefore, nurses' personality characteristics affect ProQoL [2].

Personality can be defined as personal differences in which each individual has unique characteristics [13]. However, personality characteristics are an essential determinant of individuals' occupational attitudes [14,15]. While some people have positive and strong personality traits, others may have negative and weak personality traits, which may cause them to show positive or negative behaviors related to their occupations [16].

In general terms, personality types are categorized into four classes: A, B, C and D. Among these, Type D individuals have high anxiety and low self-esteem. They also have higher BO, work stress, problems with colleagues and managers, absenteeism, a low sense of achievement and a negative perception of working conditions [17]. Type D personality is reported in 23-38.6% of nurses [18-20]. It is known that the increase in Type D personality in nurses leads to a decrease in ProQoL and higher BO [19,20]. In literature, studies examine the relationship between Type D personality and ProQoL with nurses working in hospice, intensive care, pediatric, emergency, internal medicine and surgical services. These studies show that Type D personality affects ProQoL [18-20].

By clarifying the relationship between these two factors for nurses working in surgical units with high BO levels, early intervention measures can be developed for nurses with different physical and mental health conditions. This situation has not been reported upon in previous studies. Teaching nurses the symptoms of CF and BO can improve communication and support skills.

Aim of the work

This study was conducted to determine the relationship between Type D personality and ProQoL in surgical nurses.

Material and methods

Participants and procedure

The population of this study consisted of approximately 1,700 nurses working in the Surgical Units of 29 State Hospitals on the Istanbul European side. Accordingly, it was aimed to reach at least 314 nurses with a 95% confidence level and 0.5 confidence interval. To collect the data, the supervisor nurses in the surgical units of each hospital sent the questionnaire to the service nurses. The study sample consisted of 316 nurses who agreed to participate and completed the questionnaire between February 2021 and August 2021. Nurses over 18 who had worked in surgical units of hospitals for at least six months were included in the study.

Data collection tools

This study used the socio-demographic characteristics form, ProQoL Scale and Type D Personality Scale-14 (D14).

Demographic characteristics form

The demographic characteristics form, which was designed by the researchers based on literature, included 21 questions about age, gender, marital status, professional experience, shift and having a chronic disease [2,20].

ProQoL Scale

The scale was developed by Stamm in 2005, and its Turkish validity and reliability were conducted by Yeşil et al. [21]. The scale had three sub-dimensions: CS, BO and CF and was scored on a 6-point Likert-type scale (0: never to 5: very often). The scale had no total score. In this study, the Cronbach's Alpha value of the scale was found to be 0.845 [12,21].

D14 Scale

The validity and reliability of the scale, which was developed by Denollet in 2005, was carried out by Öncü and Vayısoğlu [22]. The 5-point Likert-type 14-item scale, each consisting of 7 items, included items measuring negative affectivity and social inhibition. Each statement was scored as 'wrong, partially wrong, undecided, partially right, right' as 0-4 points. The subscales could take values between 0 and 28. The scale had no total score. The cut-off point

of the subscales was ≥ 10. In this study, the Cronbach's Alpha value of the scale was found to be 0.802 [22].

Data analysis

The analysis was performed using SPSS 28.0 statistical software at a statistical significance level 0.05. Parametric statistical analysis was used due to the normal distribution of the data. Correlation analyses analyzed the relationship between the two scales. T-test, One-Way Analysis of Variance (ANOVA) and post hoc (Tukey, LSD) analyses were used to examine the differences in scale levels according to the descriptive characteristics of the nurses.

Results

The majority of the nurses (69%) were under the age of 25, 79.1% were female and 80% were single. Approximately half of the nurses (50.3%) had been working for 1-3 years and worked the day shift (42.1%). About 13.6% of the nurses had a chronic disease (Table 1). Approximately half of the nurses stated that they did not do any activity after work, and 84.5% were not satisfied with their income. The relationship between the descriptive characteristics of the nurses and the scale scores is shown in Table 1.

Table 1. Distribution of descriptive characteristics of nurses according to the relationship between D14 Scale and ProQoL Scale (N:316)

Groups	N	%	Negative affectivity	Social inhibition	Compassion satisfaction	Burnout	Compassion fatigue
			x̄±ss	x̄±ss	x̄±ss	x̄±ss	x̄±ss
Age							
25 and below	218	69.0	12.303±6.881	8.982±5.411	36.748±9.677	16.427±7.204	13.142±7.984
26-30	37	11.7	13.378±6.664	10.487±5.485	31.757±9.864	17.811±7.145	15.784±8.463
31-35	37	11.7	14.081±6.946	9.865±6.097	31.919±10.508	17.865±8.357	15.189±6.903
Over 35	24	7.6	11.500±5.927	9.042±7.135	28.292±7.849	21.292±6.335	16.833±7.671
F=	-	-	1.094	0.912	8.849	3.526	2.792
***p*=**	-	-	0.352	0.435	**0.000**	**0.015**	**0.041**
Tukey	-	-	-	-	1>2, 1>3, 1>4 (*p*<0.05)	4>1 (*p*<0.05)	4>1 (*p*<0.05)
Gender							
Female	250	79.1	12.220±6.755	8.596±5.396	35.708±9.851	16.864±7.224	13.752±7.803
Male	66	20.9	13.924±6.857	11.803±5.879	32.106±10.273	18.121±7.865	14.803±8.578
t=	-	-	-1.817	-4.214	2.619	-1.234	-0.953
***p*=**	-	-	0.070	**0.000**	**0.009**	0.218	0.341
Marital status							
Married	68	21.5	12.177±6.232	9.897±6.196	30.265±9.702	19.265±7.514	16.412±7.608
Single	248	78.5	12.686±6.957	9.093±5.483	36.242±9.751	16.540±7.232	13.302±7.949
t=			-0.546	1.041	-4.483	2.729	2.883
***p*=**			0.585	0.299	**0.000**	**0.007**	**0.004**
Professional experience							
Less than 1 year	60	19.0	12.400±7.868	8.383±5.046	36.317±9.577	16.200±7.376	12.100±7.521
1-3	159	50.3	12.855±6.701	9.503±5.713	36.409±10.070	16.742±7.041	14.013±8.087
4-6	35	11.1	12.086±7.106	8.686±4.581	33.257±9.516	17.914±8.417	14.486±8.726
7-10	30	9.5	12.433±6.185	10.367±6.294	30.100±10.714	17.533±7.431	15.100±7.924
Over 10	32	10.1	12.188±5.585	9.344±6.738	31.594±8.508	19.531±7.531	15.656±7.124
F=	-	-	0.150	0.814	4.179	1.326	1.379
***p*=**	-	-	0.963	0.517	**0.003**	0.260	0.241
Tukey	-	-	-	-	1>4, 2>4, 1>5, 2>5 (*p*<0.05)	-	-
Type of working							
Continuous daytime	133	42.1	11.774±6.495	8.519±5.461	36.925±8.936	16.023±7.402	13.602±8.419

Day and night	183	57.9	13.159±6.974	9.809±5.727	33.525±10.553	17.929±7.257	14.240±7.637
t=	-	-	-1.792	-2.016	3.013	-2.286	-0.703
***p*=**	-	-	0.074	**0.045**	**0.002**	**0.023**	0.483
Chronic disease							
Yes	43	13.6	14.977±7.239	8.977±5.440	35.116±11.354	20.256±8.724	17.023±8.855
No	273	86.4	12.198±6.665	9.311±5.684	34.930±9.830	16.634±7.022	13.491±7.728
t=	-	-	2.511	-0.361	0.113	3.035	2.729
***p*=**	-	-	**0.013**	0.718	0.910	**0.012**	**0.007**

Notes: F – ANOVA Test; t – Independent Groups T-Test; Post Hoc – Tukey, LSD; $p<0.05$.

When the scores obtained by the nurses from the scales were examined, it was found that the mean of negative affectivity was 12.57±6.8, the mean of social inhibition was 9.26±5.64, the mean of CS was 34.95±10.03, the mean of BO was 17.12±7.36, and the mean of CF was 13.97±7.96 (Table 2).

Table 2. Mean D14 and ProQoL Scale scores (N:316)

Scale sub-dimensions	x̄	ss	Min	Max
Negative affectivity	12.576	6.801	0.000	26.000
Social inhibition	9.266	5.644	0.000	26.000
Compassion satisfaction	34.956	10.032	1.000	50.000
Burnout	17.127	7.367	0.000	41.000
Compassion fatigue	13.972	7.969	0.000	41.000

The Type D personality of nurses was 32.9% (Table 3).

Table 3. Type D Personality frequency (N:316)

Type D personality	n	%
Yes	104	32.9
No	212	67.1

When the correlation analyses between the sub-dimensions of the scales were examined, it was found that there was a relationship between negative affectivity and social inhibition and CS, BO and CF (p<0.001). Accordingly, a moderate positive correlation was found between Type D personality sub-dimensions (negative affectivity and social inhibition) and BO and CF. On the contrary, a low-level negative correlation was found between Type D personality sub-dimensions and CS (p<0.001) (Table 4).

Table 4. Relationship between Type D personality and ProQoL (N:316)

Scale sub-dimensions		Negative affectivity	Social inhibition	Compassion satisfaction	Burnout	Compassion fatigue
Negative affectivity	**r**	1.000	-	-	-	-
	p	<0.001	-	-	-	-
Social inhibition	**r**	0.491	1.000	-	-	-
	p	<0.001	<0.001	-	-	-
Compassion satisfaction	**r**	-0.338	-0.333	1.000	-	-
	p	<0.001	<0.001	<0.001	-	-
Burnout	**r**	0.602	0.438	-0.645	1.000	-
	p	<0.001	<0.001	<0.001	<0.001	-
Compassion fatigue	**r**	0.520	0.348	-0.319	0.679	1.000
	p	<0.001	<0.001	<0.001	<0.001	<0.001

Discussion

Surgical nurses maintain safe surgery by providing quality care to the surgical patient by taking a close interest in the patient throughout the entire process of the patient, including before, during and after surgery. Due to the increase in the number of patients to be operated on and the workload, nurses working in the surgical field have to work under more challenging conditions, and their quality of work life decreases [10,23]. These situations are more common in nurses with negative personality traits [2,5]. To improve the ProQoL of the surgical nurse,

the factors known to be directly related to this condition, the determination of the Type D personality rate and the factors that have not yet been determined should be considered. The vital points of our study include determining the relationship between Type D personality and CS, BO and CF in surgical nurses and clarifying the relationship with sociodemographic characteristics. This finding has not been reported in earlier research.

In our study, the prevalence of Type D personality was 32.9%. This rate was also similar in two studies conducted in the general population [24,25]. The rate of Type D personality in nurses working in surgical and internal wards was reported to be 23% [20]. Other studies conducted in intensive care, emergency, operating theatre and pediatric units show that it is between 29-38.6% [18-20,26]. This result shows that the rate of Type D personality in nurses is similar to that of the general population. In a study, it was shown that the rate of Type D personality in patients undergoing vascular surgery increased over time, starting from the preoperative period [27]. This result shows that Type D personality changes according to the conditions. Although a relatively stable state characterizes Type D personality, nurses' personalities can change with demographic characteristics such as working environments, working years and exposure to stress. Therefore, the rate of Type D personality can be reduced or eliminated with appropriate strategies. Since individuals with Type D personalities tend to experience BO, absenteeism and a low sense of achievement, nurse managers should pay more attention to these types [17]. Type D personality should be considered as a normal personality characteristic rather than a pathological condition, and strategies to improve their work efficiency and psychological health should be considered rather than excluding people with this characteristic.

Our study found that the negative affectivity score was 12.57±6.8, and the social inhibition score was 9.26±5.64. In previous studies, the negative affectivity score was lower than in our study, while the social inhibition score was similar [25,26]. In our study, Type D

personality sub-dimensions and nurses' ProQoL were related to demographic characteristics. Type D personality consists of negative affectivity and social inhibition components. Accordingly, negative affectivity was found to be associated with chronic disease, while social inhibition was found to be associated with gender and work shift. Type D personality scores were higher in those with chronic disease, males and those working day and night shifts (Table 1). Although not included in the table, according to our study results, Type D personality was also found to be related to alcohol/smoking, physical activity, monthly income, living environment and the presence of psychological disorders. In early studies, very few studies examined the relationship between demographic characteristics and Type D personality. These studies found a relationship between age, marital status, education level, occupation and working years [26,28]. Studies have more frequently investigated the relationship between Type D personality and life satisfaction, teamwork [28], BO [20], depression, anxiety, stress and trauma [29].

ProQoL consists of components such as CS, BO and CF. ProQoL indicates the individual's perception of working life [6]. In our study, the mean scores of CF, BO and CS were found to be 13.97±7.96, 17.12±7.36 and 34.95±10.03, respectively. When the studies using the same scale were analyzed, the CS score was similar to literature, while the BO and CF scores were considerably lower than in literature [7-9,30,31]. A meta-analysis found that the CS score was between 10.77-37.7, the BO score was between 47.3-77.5, and the CF score was between 47.15-83.98 in oncology nurses [6].

In our study, the CS sub-dimension was related to factors such as age, marital status, experience and working shift. CS was lower in the younger age group, females, singles, those with 0-3 years of work experience and continuous daytime workers. Similarly, studies have shown that CS is related to working hours, shifts and being specialized in the working unit [7-9]. Crabtree-Nelson et al. [7] reported that those who worked less than 35 hours a week had

higher levels of CS. The same study observed that the CS of those working in intensive care units was higher than those working in surgical units [7].

In our study, BO was related to age, marital status, work shift and chronic disease. In previous studies, it was reported that being male, higher education level, higher income, being single, long working hours, poor physical health, clinical experience and job satisfaction were related to BO, as was found in our study [7,32,33]. Knowing these factors will contribute to the development of new methods for BO intervention.

In our study, CF was related to age, marital status and chronic disease. It is thought that the higher level of CF, especially in those with chronic illness, is due to the high level of empathy with one's own illness. Empathy is known to cause CF [1]. Studies have reported that CF is related to gender, excessive workload, job satisfaction, income satisfaction, working area and working hours [7-9]. Accordingly, in addition to our research, studies show that many factors are related to CS. In our study, it was found that negative affectivity and social inhibition, which are determinants of Type D personality, have a moderate significant relationship with CF, BO and CS. Therefore, Type D personality and ProQoL are related. The results are quite similar in literature. However, there is no research investigating this relationship in surgical nurses. Similar to our study, Kim et al. [26,34] found a moderately significant relationship between Type D personality and CF, BO and CS. Other studies' results investigating the relationship between Type D personality and ProQoL in intensive care nurses and health students are similar to ours [19,35], and the Type D personality characteristic has a direct effect on BO [20,36].

If a nurse has high CF and BO levels and low CS levels, the possibility of developing a Type D personality should be evaluated. Type D personality alone does not affect work stress, but it is related to CF, BO and CS, and therefore, work-related stress increases. When making

interventions to decrease CF and BO and increase CS, appropriate interventions should be made by considering the nurse's Type D personality.

Conclusions

Type D personality and ProQoL are related not only by demographic characteristics but also by each other. In light of this basic knowledge, recognizing occupational dissatisfaction, BO and CF is the first step to improving nurses' working lives. To prevent and improve Type D personality, it is recommended to increase communication skills, teach relaxation techniques, provide administrative support and provide mindfulness education. Studies on innovative interventions, such as mindfulness-based stress reduction programs, may be effective in this context.

Disclosures and acknowledgements

The article was based on the master's thesis "The relationship between type D personality structure and compassion failure of nurses working in surgical units" by Müslüm Gün, supervisor: Yasemin Eda Tekin, Arel University (Istanbul, Türkiye).

The authors declare no conflicts of interest with respect to the research, authorship, and/or publication of this article.

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

The study was approved by the Social and Human Sciences Research Ethics Committee of İstinye University, Istanbul, Türkiye (date: 25.02.2021, number: 2021/3). Informed consent

was obtained from all nurses. The study was conducted according to the Declaration of Helsinki.

Artificial intelligence (AI) was not used in the creation of the manuscript.

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