Study on professionals working in palliative care and oncology departments: The relationship between personality factors, professional events and burnout syndrome

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Abstract: The aim of the study is to identify the level of burnout among professionals working in oncology and palliative care departments. Material and methods: 65 healthcare professionals were included in the research. Socio-demographic, medical and job-related data were gathered. Two psychological instruments were included: the Maslach Burnout Inventory in order to measure the burnout dimensions (depersonalization, personal accomplishment and emotional exhaustion) and the Big Five Inventory, used to identify personality factors. Data were processed using SPSS v.21. Results*:* 1/3 of participants have high scores on Emotional Exhaustion, 1/10 on the Depersonalization scale, and for Personal Accomplishment subscale, 16.7% obtained low scores. 38.5% of subjects declared that they often got attached to their patients. Doctors seemed to be more emotional exhausted compared to nurses ($t(46) = 2.49$, $p = 0.01$). Most of the participants believed that their job in oncology or palliative care departments changed their vision on life. Job-related issues were also presented in the research. Conclusion*:* Professionals working in palliative and oncology departments scored high on

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burnout dimensions. Personality factors were found to be strongly correlated with burnout dimensions. Hospital policies should take into consideration the presence of burnout among medical professionals, especially for doctors, given the fact that they were found to be more prone to emotional exhaustion.

Keywords: physicians, nurses, burnout syndrome, personality factors

INTRODUCTION

Burnout syndrome is a wide-spread problem among medical professionals. The presence of this syndrome was related to a number of factors: job-related tasks, type of department, relationships with colleagues and patients, social problems, personality factors, family support, length of employment, critical-decision duties, long shifts etc (Brečka et al. 2018; Hannan et al. 2018; Escribà-Agüir, Martín-Baena, & Pérez-Hoyos 2006; Embriaco et al. 2007; Li et al. 2003; Adriaenssens, de Gucht, & Maes 2015; de Paiva et al. 2017; Lee et al. 2015). Numerous research have shown that the presence of high levels of emotional exhaustion and depersonalization, associated with low levels of personal accomplishment (indicating a high level of professional burnout) brings about a plethora of negative effects on professional, personal, family and social life, generating increases in the number of medical errors, difficulty in establishing good relationships with patients, colleagues and clinical staff, suicide thoughts, alcohol and drug addiction and depression (Tarcan, Tarcan, & Top 2017; Petrie et al. 2019; Cheung & Yip 2015; Gander et al. 2007; Fahrenkopf et al. 2008; West et al. 2009; Bell et al. 2017).

Among medical professionals, some departments seem to be more prone to have employees with high levels of burnout. Most of the studies on this topic identified that surgery departments, obstetrics and gynecology specialty and emergency units are more often at risk of having professionals with a high level of burnout (Imo 2017; Medisauskaite & Kamau 2019; Newbury-Birch, Walshaw, & Kamali 2001; Kumar & Basu 2000; Kenna & Wood 2004).

Gender and length of employment were also related to a high level of burnout, meaning that being a woman and having less experience (residents compared to senior doctors or specialists) increases the risk of having higher scores on all burnout dimensions (Dyrbye et al. 2017; Shanafelt et al. 2010; West et al. 2009; Gallagher, Studdert, & Levinson 2007; Iorga et al. 2017).

The main purpose of the study is to identify the level of burnout syndrome among healthcare staff working with patients hospitalized in

palliative care departments. Secondly, the research focuses on the relationship between personality factors and the presence of the syndrome. Thirdly, the study analyzes the thoughts and attitudes (related to patients and job-related events) of medical professionals working in these demanding departments.

This research is related to a previous study conducted on forensic physicians by the same research team. Previous results conducted on Romanian physicians showed that there is a high level of burnout syndrome among doctors working in emergency units, in forensics or in obstetrics and gynecology departments (Iorga, Soponaru, & Ioan 2016; Iorga et al. 2015). As international studies showed that surgery, obstetrics and gynecology, surgery and emergency doctors were more prone to show high levels of burnout, the present study intended to identify variables that influence this syndrome among medical professionals working in palliative care departments (Kenna & Wood 2004; Dyrbye et al. 2017; Shanafelt et al. 2010; West et al. 2009; Gallagher, Studdert, & Levinson 2007).

MATERIAL AND METHODS

Participants

The study was conducted between January and April 2019 in oncology-palliative care clinics. 100 printed questionnaires were distributed to doctors, nurses and healthcare staff. A total of 80 self-administrated questionnaires were returned to the researchers and only 65 of them were included in the research.

The inclusion criteria were questionnaires returned before deadline and documents fully completed. The response rate was 65%.

Medical professionals from six counties who responded voluntarily to the questionnaires were informed about the purpose of the study, about the confidentiality of data and were assured that the results would only be used for research purposes.

Instruments

The instrument was constructed specifically for this study and had three sections. The first one gathered socio-demographic data like gender, age, level of education, profession, length of experience in the medical field, marital status, number of children and the presence of a chronic disease from participants.

The second part comprised questions regarding the experience of working in palliative/oncology care: what impresses them, attachment

to patients, patients confiding in them, patients' emotions, and patients' view of the responsibility of their disease, participants' self-disclosure, participants' life view and their opportunity to change their workplace.

The third section of the questionnaire used two psychological tools in order to identify personality traits (Big Five Inventory) and burnout syndrome (Maslach Burnout Inventory) among participants.

Personality traits were assessed using the Big Five Inventory (BFI) elaborated by John et al. in 1991 (John, Donahue, & Kentle 1991). This instrument evaluates five dimensions of personality: extraversion (E), agreeableness (A), conscientiousness (C), neuroticism (N), and openness (O). The questionnaire has 44 items rated on a 7-point Likert scale. Neuroticism characterizes individuals with low self-esteem, pessimistic attitudes and irrational beliefs. Individuals high in Extraversion are sociable, have numerous friends and are gregarious. Openness is characteristic for people who need variety, novelty and change. Agreeableness characterizes individuals who are willing to defer to others suing interpersonal conflict. Finally, Conscientiousness describes a strong sense of purpose and high levels of aspiration (McCrae & Costa 1999).

The burnout syndrome was evaluated using the Maslach Burnout Inventory (MBI), a measure considered to be reliable, valid and easy to administer (Maslach & Jackson 1986). The instrument is divided into three subscales: Emotional Exhaustion (nine items), Depersonalization (five items) and Personal Accomplishment (eight items). Emotional exhaustion (EE) refers to the individual's feeling that emotional resources are reduced and, consequently, they are unable to emotionally invest in their work. Depersonalization (D) describes negative and cynical feelings and attitudes towards people subjects work with. The burnout syndrome implies low personal accomplishment (PA), meaning that individuals tend to evaluate themselves in a negative manner regarding their work. Higher mean scores on the first two subscales and lower scores on the last subscale correspond to higher degrees of the burnout syndrome.

Cronbach's alpha scores for the five subscales of BFI were the following: 0.704 for extraversion, 0.665 for agreeableness, 0.684 for consciousness, 0.807 for neuroticism and 0.732 for openness. Regarding the MBI, Cronbach's alpha scores were: 0.905 for emotional exhaustion, 0.701 for depersonalization and 0.795 for personal accomplishment.

Statistical analysis

The analysis of data was performed using *Statistical Package for Social Sciences*, version 21. Percentages, means and standard deviations were used for the descriptive analysis. Comparative analysis was done using Independent Samples t Tests and One-Way ANOVAs with the purpose of identifying significant differences between participants. Finally, Pearson correlations were performed in order to identify the relationships between burnout dimensions and other variables of the study (personality factors or age).

RESULTS

Socio-demographic data

More than half of the medical professionals working in oncology-palliative care departments were female (72.3%). This is a normal percentage for workers in medical departments. The distribution of participants considering profession was the following: 52.3% (N=34) nurses, 26.2% physicians (N=17) and 21.5% (N=14) other healthcare staff. Half of them were from Iasi County, while the rest were from five other counties in North-Eastern Romania (Neamț – 23.4%, Bihor – 21%, Botoșani, Vaslui, and Vrancea – 1.6% each).

Regarding their educational level, the distribution is the following: 45.3% had college degrees, 40.6% had university degrees, and 14.1% graduated high school. Participants' age ranged from 23 to 64, with an M = 37.73 ± 9.78. Regarding marital status, most of them were in a relationship (70.8%) and more than half of them (68.3%) had children: 26.7% had one child, 31.7% had two children, 6.7% had three and 3.3% had four children. Regarding their health status, nine (13.8%) participants declared they had a diagnosis of chronic disease. Subjects were asked about the length of their experience in the field. Their work experience ranged from 0 to 38 years with an M = 9.18 ± 9.71.

Personality factors and burnout results

Means and standard deviations for all the scales of the BFI and MBI are presented in Table 1.

Table 1. Means and standard deviations for the dimensions of the BFI and MBI

	Domains	Total	Male	Female
BFI	Extraversion	31.12 ± 5.07	30.66 ± 5.19	31.32 ± 5.08
	Agreeableness	37.42 ± 5.46	37.22 ± 6.44	37.52 ± 5.00
	Consciousness	37.10 ± 5.48	37.64 ± 6.43	37.29 ± 5.12
	Neuroticism	19.30 ± 6.35	18.76 ± 6.52	19.51 ± 6.35

	Openness	36.19 ± 6.10	34.52 ± 6.03	36.90± 6.06
MBI	Emotional Exhaustion	18.91±14.80	22.05 ± 15.56	17.63± 14.47
	Depersonalization	4.96 ± 5.77	5.77 ± 8.17	4.62 ± 4.49
	Personal Achievement	37.90 ± 8.78	37.94 ± 9.11	37.88 ± 8.76

Results show that 30.6% of participants have high scores on Emotional Exhaustion, while 52.2% have low scores and 14.5% have moderate scores. On the Depersonalization scale, 9.8% of the participants in our sample scored high, 16.5% had moderate scores and 73.8% had low scores. Concerning Personal Accomplishment subscale, 16.7% of our participants obtained a low on this scale, 31.7% of them had moderate scores and 51.7% had high scores (see Table 2).

Table 2. The level of Emotional Exhaustion, Depersonalization and Personal Accomplishment (%)

	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Low	52.2%	73.8%	16.7%
Moderate	14.5%	16.5%	31.7%
High	30.6%	9.8%	51.7%

Comparative analyses showed no significant difference between male and female participants for none of the MBI or BFI's scales. A significant difference was identified between doctors and nurses regarding emotional exhaustion ($t(46) = 2.49$, $p = 0.01$): doctors had higher scores ($M = 27.76$) compared to nurses ($M = 15.51$).

The experience of working in palliative/oncology care

Some items were developed in order to identify work-related habits and events linked to patients' behaviors (see Table 4). One item questioned the respondents about what impressed them the most in patients; half of the participants chose psychological trauma (51.6%), while the rest chose physical trauma (48.4%).

Participants were also asked if they got attached to their patients. A number of 23 (35.4%) declared that this rarely happened and 25 (38.5%) claimed that they often got attached to patients. More than half of the participants considered that patients often confided in them (56.9%), while a lower percentage (6.2%) believed patients never confided in them. Regarding the type of problems patients discussed with them, health-care professionals mentioned that their patients

usually shared with them medical (45.2%), family (38.7%), professional (8.1%) and religious (8.1%) problems.

When they talked to patients, participants identified a series of feelings: worry (43.1%), fear (34.4%), resignation (12.5%) and revolt (9.4%). When it came to blame someone for their disease, medical professionals observed that half of the patients placed the blame on themselves or on others (36.7%) and God (6.7%).

Participants were asked to whom they share professional problems they are preoccupied with. Half of the participants talked to colleagues about their patients, 29.7% declared that they talked to nobody, 12.5% saw a psychologist and 7.8% claimed that they talked to family members. A large majority of participants believed that their job changed their vision on life (84.6%). Also, 76.6% of the participants declared that they would not change the department they worked in.

Table 3. The distribution of answers to the items regarding the experience of working in palliative/oncology care

Items	Answer	%
What impressed me the most in patients is:	physical trauma	48.4
	psychological trauma	51.6
I get attached to patients	never	7.7
	rarely	35.4
	often	38.5
	always	18.5
Patients confide in me	never	6.2
	rarely	20.0
	often	56.9
	always	16.9
Patients shared with me their problems patients talk to me about are:	medical	45.2
	professional	8.1
	family	38.7
	religious	8.1
When I talk to patients, I observe:	fear	34.4
	resignation	12.5
	worry	43.1
	revolt	9.4
Patients blame their disease on:	themselves	50.0
	others	36.7
	God	6.7
Do you think your workplace changed your vision on life?	yes	84.6
	no	15.4
If you had the opportunity, would you change your job?	yes	23.4
	no	75.6

Pearson correlations revealed no association between socio-demographic characteristics (age, professional experience, and number of children) and personality characteristics or burnout dimensions (see Table 5). Negative correlations were identified between Emotional Exhaustion and three of the BFI scales: Extraversion (R = -0.588, p = 0.000), Agreeableness (R = -0.427, p = 0.001), Conscientiousness (R = -0.549, p = 0.000), and one positive correlation with Neuroticism (R = 0 .597, p = 0.000). The more participants are emotionally exhausted, the less extroverted, agreeable, conscientious and more neurotic they are.

Significant correlations were revealed between Depersonalization and Agreeableness (R = -0.454, p = 0.001), Conscientiousness (R = -0.517, p = 0 .000), and Neuroticism (R = 0.503, p = 0.000). The more subjects have a sense of depersonalization, the less agreeable and conscientious they are, but also more neurotic. Finally, Personal Achievement is correlated either positive or negative to four of the BFI scales: Extraversion (R = 0.590, p = 0.000), Agreeableness (R = 0 .552, p = 0.000), Conscientiousness (R = 0.618, p = 0.000), and Neuroticism (R = - 0.635, p = 0.000). The more subjects have a sense of personal accomplishment, the more extroverted, agreeable, and conscientious and less neurotic they are.

Table 4. Correlations between burnout dimensions and personality factors

Variables	Emotional exhaustion	Depersonalization	Personal achievement
Extraversion	*R = - 0.588, p = 0.000*	R = - 0.165, p = 0.217	*R = 0.590, p = 0.000*
Agreeableness	*R = - 0.427, p = 0.001*	*R = - 0.454, p = 0.001*	*R = 0.552, p = 0.000*
Conscientiousness	*R = - 0.549, p = 0.000*	*R = - 0.517, p = 0.000*	*R = 0.618, p = 0.000*
Neuroticism	*R = 0.597, p = 0.000*	*R = 0.503, p = 0.000*	*R =- 0.635, p = 0.000*
Openness	R = - 0.102, p = 0.455	R = 0.205, p = 0.129	R = 0.209, p = 0.125

Factors associated with burnout domains

Concerning the MBI scales, the results of the Independent Samples t-test showed a statistically significant difference between single participants and those who are in a relationship on EE (t(60) = -2.25, p = 0.02). More specifically, participant who are not in a relationship

score higher on the EE dimension of the MBI (M = 25.10) compared to those who are (M = 16.18).

One significant difference emerged when comparing individuals who are impressed by physical suffering to those impressed by the psychological one. Concretely, the results of the Independent Samples t-test point to a difference in the Depersonalization scores of the MBI (t(58) = -2.96, p = 0 .005). Individuals who are impressed by the psychological aspect of trauma score higher on this scale (M = 6.81) compared to those who are impressed by the physical trauma (M = 2.88).

When comparing participants who would change their job and those who wouldn't, differences emerge on two scales: EE (t(59) = 2.10, p = 0.04) and PE (t(58) = -2.93, p = 0.03). Concretely, those who would like to change their job score higher on Emotional Exhaustion (M = 25.93) and lower on Personal Achievement (M = 32.21), compared to those who wouldn't (M = 16.91, M = 39.63, respectively).

One-Way ANOVA analyses revealed associations between education and EE (F(2.58) = 3.60, p = 0.03) and PE (F(2,56) = 4.35, p = 0.01). More concretely, college graduates have lower scores on EE (M = 14.77) and higher scores on PE (M = 40.64) compared to university graduates (M= 24.72, M = 34.28, respectively).

No association was identified between participant's attachment to their patients and any of the MBI scales.

Factors associated with personality factors

Concerning the BFI scales, no statistically significant differences were revealed between single participants and those who are in a relationship.

One significant difference was found when comparing individuals who are impressed by physical suffering to those impressed by the psychological one. Concretely, there is a difference between the two categories concerning the Neuroticism scale of the BFI (t(57) = -2.44, p = 0.01), meaning that subjects who are impressed by psychological suffering score higher on this scale (M = 21.18) compared to those who are impressed by physical suffering (M = 17.29).

When comparing participants who would change their job, two differences were identified: Firstly, there is a difference between these two categories concerning their scores on Extraversion (t(56 = -2.45, p = 0.01): those who would change their job score lower (M = 28.46) compared to those who wouldn't (M = 32.04). Secondly, there is a

difference concerning Neuroticism ($t(58) = 3.95$, $p<0.001$): those who would take the opportunity to change their workplace score higher ($M = 24.33$) compared to those who wouldn't ($M = 17.62$).

One-Way ANOVA analyses revealed associations between the level of education and Consciousness ($F(2,54) = 5.83$, $p = 0.005$). More specifically, participants with university degrees score lower ($M = 34.69$) than high-school ($M = 40.50$) or college ($M = 38.61$) graduates.

Several statistically significant differences were identified concerning the relationship between the level of participant's attachment to their patients and the BFI dimensions: Extraversion ($F(3,54) = 4.08$, $p = 0.01$), Agreeableness ($F(3,50) = 10.49$, $p<.001$), and Consciousness ($F(3,54) = 5.59$, $p = 0.002$). By inspecting the Multiple Comparisons table, it was found that participants who never get attached to their patients score lower on Extraversion ($M = 25.00$) compared to those who always get attached ($M = 34.57$); they also score lower on Agreeableness ($M = 28.20$) compared to those who rarely ($M = 38.15$), often ($M = 37.39$) or always ($M = 42.83$) get attached; finally, they score lower on Consciousness ($M = 29.00$) compared to those who rarely ($M = 37.00$), often ($M = 38.00$) or always ($M = 40.00$) get attached to their patients.

DISCUSSION

The results of the present research showed that participants had high levels for each of the burnout dimensions. These results are consistent with the scientific literature that usually identified higher level of burnout among medical professionals compared to nonmedical jobs.

The present study identified no significant difference between men and women on neither of the sub domains of burnout. Most of the studies found that women were more prone to higher levels of burnout syndrome. The scores obtained for medical professionals working in oncology and palliative care departments found no gender differences.

Some studies identified that family problems and children-related worries increased the risk for low personal accomplishment among female medical doctors (Bernard 2017; Linzer & Harwood 2018). The present study identified no relation between burnout and other considered variables.

The results showed that the more participants are emotionally exhausted, the less extroverted, agreeable, conscientious and more neurotic they are. These results are congruent with other studies. For example, de la Fuente-Solana et al identified, in 2017, that oncology

nurses with higher levels of neuroticism, anxiety and depression disorders are more likely to develop burnout and agreeableness, conscientiousness, extraversion and openness can protect oncology nurses against this syndrome (de la Fuente-Solana et al. 2017).

The present study identified that subjects who would like to change their job scored higher on Emotional Exhaustion and lower on Personal Achievement compared to those who wouldn't like to change their job, meaning that subjects who are not satisfied with their job and feel like they are no longer able to invest emotionally in their work are more prone to have high scores on burnout.

It was also found that subjects with university degrees scored lower than high school (or college graduates) on Consciousness. Investigating the relationship between education and both Emotional Exhaustion and Personal Accomplishment results showed that college graduates have lower scores for Emotional Exhaustion and higher scores for Personal Accomplishment compared to university graduates. So, subjects with a university degree are more prone to experience less personal accomplishment, higher emotional exhaustion and to experience higher levels of burnout. Medical professionals who are better educated have higher expectations regarding their personal fulfillment, less satisfied at their actual job and they tend to invest less in their job.

A strong relationship between personality factors and burnout domains was identified. That is why personality traits are extremely important when it comes to preventing burnout syndrome among medical staff. When medical units are extremely demanding, preventing burnout should be one of the goals of hospital management.

The present study has several limitations. On the one hand, the number of participants is low so results could not be generalized for all medical professionals working in palliative and oncology departments. On the other hand, psychological or psychiatric co-morbidities and job-related negative events were not registered in order to be linked to an increased risk for burnout syndrome.

CONCLUSION

Medical professionals working in oncology and palliative care units experience burnout syndrome. Personality factors associated with work conditions and job-related factors could increase the level of burnout in each of its dimensions (emotional exhaustion, depersonalization and personal accomplishment).

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