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ORIGINAL ARTICLE

Burnout Syndrome in Neurological Nursing

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Abstract

OBJECTIVE: Burnout Syndrome (BS) often occurs in Neurological Nursing where the Nurses find themselves in situations associated with suffering and death. This study sought to ascertain the incidence of Burnout Syndrome in Nurses working in Neurological Nursing.
DESIGN: For the diagnosis of Burnout Syndrome we used the questionnaire: *Maslach Burnout Inventory* (MBI). Respondents consisted of Nurses n=120, working in potential burnout conditions in the Neurological Department, in Hospital and Ambulances in Slovakia.
RESULTS: In our study, out of n=120 Nurses working at the Departments of Oncology 50.83% showed a high level of burnout with Emotional Exhaustion (EE). We found that the age of Nurses has an impact on the formation of Burnout Syndrome: in Nurses 31-40 years of age, 62.16% showed a high degree of burnout in depersonalization (DP); 64.86% showed a medium degree in Personal Accomplishment (PA). The relationship between seniority in neurological care and Burnout Syndrome is not confirmed; however, the relation between the total length of practice and the degree of burnout is confirmed.
CONCLUSIONS: Based on the findings, the management of Neurological and Oncological Nursing we can recommend more focus on possibilities of preventive measures in the field of burnout for Nurses.

Introduction

The concept of the term "burnout" begins to appear for the first time in 1970. Herbert Freudenberger who defined this term in 1974 is considered its Founder. Several authors clarified the definition; Edelwich and Brodsky (1980), Pines et al (1981), Sarros and Densten (1989), Glozier (2002), Kraft (2006) as a feeling of fatigue and exhaustion, or a whole range of physical symptoms ranging from recurring headaches, respiratory distress through gastrointestinal problems; to depression and insomnia. It not only effects the psychosomatic area but also the realms of Psychology and Behavior. Many authors among the helping professions have looked at Burnout Syndrome: Venglářová et al (2011), Vorlíček et al (2012), Klimeková (2007), Eliášová (2010), Sorková and Zvaríková (2003), Heftyová (2002) and others. Aronson and Lidzey (1985) differentiate between the burnout syndrome and exhaustion. Even though these phenomena are similar they may have different causes. The cause of exhaustion may lay in any prolonged stress (physical, mental, emotional). But, it does not mean that the situation of a completely exhausted person cannot be based

on a sudden change in life such as the result of some current trauma. The typical symptom of exhaustion is that the negative aspects of a person are permanently in predominance in relation to their positive aspects. The affected person feels unappreciated and worthless. Burnout Syndrome also is manifested by physical, emotional and mental fatigue; everything due to chronic stress associated with long-term commitment to other people. A helper, as described by Andrasiova (2006), defines a syndrome formed by combining the characteristic personality traits formed from social assistance and a rigid life discipline at the expense of one´s personal development. A helper is highly oriented to the ideal and one´s desire and capacity to offer help. This ideal, however, can only be sustained by a denial of reality, and in time, will necessarily result in feelings of frustration, failure and subsequent burnout. Burnout can be understood as a complete fatigue in one´s work which was previously perceived positively, but today only gives a sense of non or dissatisfaction and excessive sacrifice that comes to nothing.

The work of a Neurological Nurse in Oncology is very demanding in terms of mental composure and professionalism. As reported by Hnatova and Kovalcikova (2010) a Nurse constantly faces confrontation with suffering, dying and death which is one of the main causes of burnout. Patient care, especially in the last stage of life, is indeed stressful for Nurses, but may for some of them bring a sense of satisfaction.

Materials and methods

We used a standardized *Maslach Burnout Inventory* (MBI) questionnaire to map the neurological impact of the length of nursing practice; age of Nurses; workplace; and the prevention of the occurrence of Burnout Syndrome in the conditions of Neurological Nurses in Slovakia.

The sample consisted of n=120 respondents: 92.50% women and 7.50% men. The age of Nurses: under 30 years of age n =27 (22.50%); 31-40 years of age n=37 (30.83%); 41-50 years of age n=31 (25.83%); 51 years old and higher n=25 (20.84%). Regarding education: 25% secondary education; 15.83% secondary vocational education; 38.34% Bachelor (Bc.); 20.83% Masters Degree (Mgr.) of these 29.17% held Specialization and Certification Studies. Length of nursing practice under 10 years n= 61 (50.83%); 11–20 years n=50 (41.17%); 21–30 years n=5 (4.17%) and 31 years and over n=4 (3.33%). The sample consisted of Nurses working in the Inpatient Department of Neurology, Clinical and Radiation Oncology, Primary Care Clinics belonging to those Departments in Slovakia n=58 (48.33%) in Hospitals with Health Centers or Teaching Hospitals; n=62 (51.67%) from Specialized Institutes.

Tab. 1. Spot evaluation of MBI subscales.

FACTOR (dimension)	Level of burnout		
	low	medium	high
EE	0–16	17–26	27 and more
DP	0–6	7–12	13 and more
PA	39 and more	38–32	0–31

For diagnosis of Burnout Syndrome we used the *Maslach Burnout Inventory* (MBI), whose authors are Christina Maslach and Susan Jackson (1981, 1986). The questionnaire was modified three times; the last correction in 1996 and is used in this form (Maslach *et al.*1996; Bakker *et al.*2002; Bartošíková 2006). In the available databases we found several studies in which MBI was verified in helping professions including Kalliath *et al.*(2000), Gil-Monte (2005), Aguayo *et al.*(2011), Chirkowska-Smolak and Kleka (2011), Córdoba *et al.*(2011), Sabbah *et al.*(2012), Meszáros *et al.*(2014), Figueiredo-Ferraz, *et al.*(2013), Dyrbye *et al.*(2008), Chen *et al.*(2014) and others. This MBI questionnaire is according to Kebza and Šolcová (2003). Several studies have verified it in terms of psychometric properties including Leiter and Schaufeli (1996), Schutte *et al.*(2000), Rothmann and Vuuren (2002), Rothmann and Malan (2003), Campbell and Rothmann (2005), Córdoba *et al.*(2011), Aguayo *et al.*(2011) where many other parameters for EE (Emotional Exhaustion) moved the alpha coefficient from 0.81–0.92 for (Depersonalization) DP 0.57–0.82 and PA (Personal Accomplishment) from 0.50–0.86. According to Maslach and Jackson (1981, 1986), Maslach *et al.*(1996), Venglářova *et al.*(2011), Aguayo *et al.*(2011), Chen *et al.*(2014), the MBI questionnaire is made up of 22 questions divided by different categories into three subscales. The first subscale is focused on the Emotional Exhaustion (EE) characterized by emotional tension; inability to meet requirements; and is made up of nine questions. The second subscale consists of five questions that assess Depersonalization (DP), the feeling of a decrease in competence and poor performance. The third subscale is focused on Personal Accomplishment or Job Satisfaction (PA) and contains eight questions. It is characterized by numbness, impersonality, and negativism. Since BS is a complicated psychological construct, the various subscales are combined in order to affect as many areas as possible while the total score is not measured (Table 1).

In a statistical analysis, we used chi-square test of independence for the pivot table. According to Chráska (2007) this test of significance can be utilized in studies when deciding whether there is a correlation between two phenomena. We are reviewing the test by comparing values calculated and values from the table. Values from the table are detected thanks to the significance the level (α) and the degree of freedom (f): Significance Level (α) was at 0.05; Degree of Freedom "f" is calculated based on data from a pivot Table: it applies that

f=(r–1)*(s–1), where "r" is the number of rows and "s" is the number of columns of the pivot Table.

Results

Based on our statistical analysis, we present the data obtained in the individual components of the MBI (Tables 2 and 3): comparison by years of experience in the Oncology Department and overall experience (Tables 4–6); by type of workplace (Tables 7 and 8); age of Nurses (Tables 9 and 10).

Discussion

Aiken *et al.*(2001) reported results of a study conducted between 1998–1999 on a sample of 43,329 Nurses that showed the rate of burnout in emotional areas using MBI investigated geographically (from Pennsylvania, USA 13,471/43.2%; from Canada 17,450/36%; from England 5,006/36.2%; from Scotland 4,721/29.1%; and from Germany 2,681/15.2%). In our study of n=120 Nurses working in the Department of Neurology showed a high rate of burnout through Emotional Exhaustion (EE) - 50.83%. We agree with Mr. Kmet (2010) which states that the risks of emotional exhaustion and feelings of inner emptiness rise if the Nurse treats eight patients instead of four patients; the risk of BS increases by 23% allocated to each additional patient when Nurses are exposed to excessive physical and metal stress. Similarly, our finding compared (tab.5) with the Spanish study at the Departments of Intensive Care (Iglesias *et al.*2010, Preventing and Reducing Burnout, 2014), showed which Nurses had the highest rate (level) of burnout from Emotional Exhaustion; medium level in Depersonalization; and low level of Personal Accomplishment. Studies by Catalan *et al.*(1996) Balbay *et al.*(2011) compare the level of burnout among Oncology Professionals and Personnel working with HIV positive people: the Oncology Staff was found with a high level of burnout 4%, which was although less 4% than Working Staff with HIV positive patients indicates a high tendency at the Oncology Center for formation of Burnout Syndrome. We found that the type of health facility can affect the rate of burnout among Nurses (Table 7 & 8) where there is confirmed relationship between the monitored facility and the rate of burnout from Emotional Exhaustion: 33.33% of Nurses working in Specialized Institutions vs. 17.50% in the Hospital or University Hospital.

Length of service is an important factor in the process of burnout. According to Aronson and Lidzey (1985) with seniority in care of people, a sense of satisfaction from the work proportionally decreases. Dimunová and Nagyová (2012) studied the effect of the length of experience on BS. They examined a sample of 844 Nurses in their work. In the complete assessment, they didn't confirm the statistical significance of the relationship. Analysis of the various dimensions of the relationship with practice in the Neurology Department show (Table 4) where the highest rate of burnout through Emotional Exhaustion (22.50%) indicate Nurses aged 11–20 years; in (Table 5) we see that there is no relationship between the length of experience in

Tab. 2. Comparison of the degree of bournout in various dimensions of MBI.

Degree of burnout	EE		DP		PA	
	n	%	n	%	n	%
low	25	20.83	25	20.83	41	34.17
medium	34	28.33	44	36.67	58	48.33
high	61	50.83	51	42.50	21	17.50
Total	120	100	120	100	120	100

Tab. 3. Statistical dependence between dimensions MBI.

dimension	$\chi^2_{calc.}$	f	$\chi^2_{tab.0.05}$	Evaluation
EE, DP, PA	31.587	4	9.488	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$

Tab. 4. Experience in neurological nursing in relation with dimension MBI.

Years of experience		under 10 years		11–20 years		21–30 years		31+		Total	
		n	%	n	%	n	%	n	%	n	%
EE	Low	16	13.33	9	7.50	0	0.00	0	0.00	25	20.83
	Medium	19	15.83	14	11.67	1	0.83	0	0.00	34	28.33
	High	26	21.67	27	22.50	4	3.33	4	3.33	61	50.83
DP	Low	13	10.83	11	9.17	1	0.83	0	0.00	25	20.83
	Medium	24	20.00	14	11.67	2	1.67	0	0.00	40	33.34
	High	24	20.00	25	20.83	2	1.67	4	3.33	55	45.83
PA	Low	5	4.17	14	11.67	0	0.00	4	3.33	23	19.17
	Medium	31	25.83	20	16.67	3	2.50	0	0.00	54	45.00
	High	25	20.83	16	13.33	2	1.67	0	0.00	43	35.83

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Tab. 5. The statistical calculation in dependence of lenght of work in neurological nursing and MBI.

Dimensions	$\chi^2_{calc.}$	f	$\chi^2_{tab.0.05}$	Evaluation
EE	7.995	6	12.592	$\chi^2_{calc.} < \chi^2_{tab.\ 0.05}$
DP	8.921	6	12.592	$\chi^2_{calc.} < \chi^2_{tab.\ 0.05}$
PA	15.433	6	12.592	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$

Tab. 6. The statistical correlation between total length of nursing practice andMBI.

Dimension	$\chi^2_{vyp.}$	f	$\chi^2_{tab.0.05}$	Evaluation
EE	13.857	6	12.592	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$
DP	18.100	6	12.592	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$
PA	13.295	6	12.592	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$

Tab. 7. Comparison by type of workplace.

Type of institution		Hospital with out patiens clinic/ University Hospital		Specialized institutions		Total	
		n	%	n	%	n	%
EE	Low	15	12.50	10	8.33	25	20.83
	Medium	22	18.33	12	10.00	34	28.33
	High	21	17.50	**40**	**33.33**	**61**	**50.83**
DP	Low	15	12.50	10	8.33	25	20.83
	Medium	24	20.00	20	16.67	44	36.67
	High	19	15.83	32	26.67	51	42.50
PA	Low	23	19.17	18	15.00	41	34.17
	Medium	28	23.33	30	25.00	58	48.33
	High	7	5.83	14	11.67	21	17.50

Tab. 8. Statistical dependence according to workplace.

Dimensions	$\chi^2_{calc.}$	f	$\chi^2_{tab.0.05}$	Evaluation
EE	9.736	2	5.991	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$
DP	4.549	2	5.991	$\chi^2_{calc.} < \chi^2_{tab.\ 0.05}$
PA	6.973	2	5.911	$\chi^2_{calc.} > \chi^2_{tab.\ 0.05}$

Neurological Nursing and the measure of burnout in EE and Depersonalization (DP). Analysis of Personal Accomplishment (PA) confirmed this relation. We agree with the Iglesias *et al.*(2010) study which states that respondents with seniority of 10 years are more are prone to Emotional Exhaustion and Depersonalization. Analysis of Personal Accomplishment (PA) confirmed this relationship.

We agree with the study by Iglesias *et al.*(2010) which states that respondents with seniority of 10 years are more prone to Emotional Exhaustion and Depersonalization. We can say that if the Sister has over 10 years of experience she has increasing risk of BS. We verified that the age of Nurses will affect their BS. According Erickson and Grove (2008), in situations where she or he needs to cover up or evoke emotions that are appropriate to the situation, age plays an important role. Our survey sample, Nurses aged 31–40 years of age (30.83%) had the largest representation.

According to a study conducted on a sample of 843 Nurses in the United States, the age of Nurses has an effect on formation of BS. In this study, Grove (2008) divided Nurses by age into two groups, before 30 and more than 30 years. They focused on the survival of positive and negative emotions in relation to age and BS. They found that were no differences between age groups in experiencing positive emotion among Nurses before 30 years, significantly more reported experiences such as anger, frustration and agitation; therefore, these Nurses burned out earlier than their older colleagues who are more practiced in managing their emotions. The relationship between age of Nurses (31–40) and dimension of Emotional Exhaustion is not confirmed but has been shown in Depersonalization (62.16%) and of Personal Accomplishment (64.86%). Nurses over 51 years confirmed the relation in EE and the age and the relationship and of EE (72%) and age (52%). Therefore, the older a Nurse, the more the feeling of satisfaction disappears from her work. Of course, there are many external factors, e.g. the currently decreasing status of Nurses in society, and inadequate salary.

In comparison with our study of burnout in older Nurses, a study by Erikson and Grove (2008) claims that Burnout Syndrome in Nurses will be found until thirty years of experience. The result may be influenced by the varying social status of Nurses abroad compared with the status of Nurses in our country (Slovakia). According to Maslachova (Kebza and Šolcová, 2003) in Burnout Syndrome, we are dealing with personal issues rather than systemic issues, and occurrence of BS in employees signals something that is not good, or does not work well in the organization. Therefore, we

Tab. 9. Comparison by age of nurses.

Age		untill 30 years		31–40 years		41–50 years		51+		Total	
		n	%	n	%	n	%	n	%	n	%
EE	Low	9	7.50	7	5.83	6	5.00	3	2.50	25	20.84
	Medium	8	6.67	9	7.50	13	10.83	4	3.33	34	28.33
	High	10	8.33	21	17.50	12	10.00	18	15.00	61	50.83
DP	Low	9	7.50	4	3.33	5	4.17	8	6.70	26	21.67
	Medium	13	10.83	10	8.30	14	11.66	7	5.83	44	36.67
	High	5	4.17	23	19.17	12	10.00	10	8.30	50	41.66
PA	Low	11	9.17	10	8.33	15	12.50	5	4.17	41	34.17
	Medium	14	11.67	24	20.00	6	5.00	13	10.83	57	47.50
	High	2	1.66	3	2.50	10	8.33	7	5.83	22	18.33

wanted to find out how to preventively influence BS in Nurses through employer policies. Since the Slovak Labor Code obliges employers to provide employees working in the third risk group reconditional stays or reduced working time, we wanted to find out whether this regulation is observed in Neurological and Oncological Departments working with carcinogenic substances according to law change into a third risk group. Therefore, we considered reconditional stays an important factor in prevention in the formation and development of BS. n=120 of respondents (120) said that their employer provides reconditional stays. Of these, only 1.65% said that their employer offers any reconditional stay beyond the laws. 79.34% of respondents reported that they have reduced working hours and 76.86% additional leave.

For prevention, most Nurses, 90.08%, use various social activities and 82.65% recreational activities; 28.1% use or watch sport; 66.12% attend cultural events such as cinema or theater. According Andrášiova (2006), an important part of preventing burnout is adequate and regular rest; ability to relax; to purposefully eliminate stressors; and raise salutors. Employers should keep ready psychological support programs for staff in hazardous workplaces which would allow Health Professionals to cope with congested emotions; according to Andrášiova (2006) there is very low participation by workplaces and institutions. In statistical analysis, we confirmed the relationship between preventive measures and the rate of burnout in all three dimensions of the MBI questionnaire.

Tab. 10. Statistical differences according to age of nurses.

Dimensions	$\chi^2_{vyp.}$	f	$\chi^2_{tab.0.05}$	Evaluation
EE	10.735	6	12.592	$\chi^2_{calc.} < \chi^2_{tab.\,0.05}$
DP	16.078	6	12.592	$\chi^2_{calc.} > \chi^2_{tab.\,0.05}$
PA	18.808	6	12.592	$\chi^2_{calc.} > \chi^2_{tab.\,0.05}$

Conclusion

We can say that the risk of burn-out for Nurses will not only threaten, but according to the research, is really present, in this profession at different levels in all three dimensions. In agreement with other authors, we affirm that for Nurses in Neurological and Oncological Nurses the highest rate of burnout is through Emotional Exhaustion. An interesting finding was that even though we confirmed the relationship of age to the degree of burnout, Depersonalization and Personal Accomplishment had no effect on burnout at the emotional level. Preventing burnout is not just an internal matter but also has to be carried out at the level of organization to ensure balance between the level of competence, accountability and effective teamwork. We think that all the possibilities and forms of prevention that would be sufficient to protect against burnout are not being used. Therefore, in future, it would be appropriate to focus research on the possibilities and potentials of preventive measures in relationship to Burnout Syndrome.

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