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Burnout syndrome and empathy and altruism level among nurses - the preliminary study

Wypalenie zawodowe a poziom empatii i altruizmu u personelu pielęgniarstwa - pilotaż¹

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Abstract: The aim of the study was to verify the level of burnout severity in nursing staff working in various health care sectors that were not dedicated to providing health services to people with COVID-19 infection. The relationship between the level of empathy, altruism and depression and the intensity of individual burnout indicators was also analyzed. professional among the respondents. The study covered a total of 178 people - staff employed in psychiatric care (64 people) and in other health care sectors (114 people). The study participants completed five questionnaires: a sociodemographic and four clinical tests: Christina Maslach's Burnout Questionnaire, Beck Depression Scale, Balanced Emotional Empathy Scale, and Altruistic Attitudes Questionnaire. Using clinical tests, the following were assessed: the general index of occupational burnout and its three dimensions (emotional exhaustion, depersonalization and job satisfaction), the level of depression, altruism and emotional empathy. Nursing staff employed in psychiatric care was characterized by lower levels of emotional exhaustion and depersonalization, as well as professional satisfaction and altruism compared to the average medical staff employed in health care sectors other than psychiatric.

¹ Polska wersja: <https://stowarzyszeniefidesetratio.pl/Presentations0/2021-3-Tylec.pdf>

Moreover, a positive correlation was found between the severity of depression and the level of emotional exhaustion, depersonalization and general occupational burnout index in both study groups (psychiatric versus non-psychiatric nursing staff). Nursing staff representatives working in psychiatric health care units are characterized by a lower level of occupational burnout, altruism and job satisfaction than in the case of people employed in other medical sectors. A higher level of occupational burnout is associated with a greater intensity of depressive symptoms. Differences in the levels of individual dimensions of occupational burnout and altruism may result from the specificity of work in various medical sectors. It should be emphasized that the chronicity, recurrence of mental illnesses, the higher rate of rehospitalisation of patients with mental disorders or the delayed effect of the therapeutic process.

Keywords: mental health, nurses, professionals burnout syndrome

Abstrakt: Celem badania była weryfikacja poziomu nasilenia wypalenia zawodowego u personelu pielęgniarskiego pracującego w różnych sektorach ochrony zdrowia, które nie były dedykowane do udzielania świadczeń zdrowotnych osobom z infekcją COVID-19. Analizie poddano również związek pomiędzy poziomem empatii, altruizmu oraz depresji a natężeniem poszczególnych wskaźników wypalenia zawodowego wśród respondentów. Badaniem objęto łącznie 178 osób - personel zatrudniony w opiece psychiatrycznej (64 osoby) i w innych sektorach ochrony zdrowia (114 osób). Uczestnicy badania wypełnili pięć kwestionariuszy: socjodemograficzny oraz cztery testy kliniczne: Kwestionariusz Wypalenia Zawodowego Christiny Maslach, Skalę Depresji Becka, Skalę Zrównoważonej Emocjonalnej Empatii i Kwestionariusz Postaw Altruistycznych. Przy użyciu testów klinicznych oceniono: ogólny wskaźnik wypalenia zawodowego oraz jego trzy wymiary (wyczerpanie emocjonalne, depersonalizację i satysfakcję zawodową), poziom depresji, altruizmu i emocjonalnej empatii. Personel pielęgniarski zatrudniony w opiece psychiatrycznej charakteryzował się niższym poziomem wyczerpania emocjonalnego i depersonalizacji oraz satysfakcji zawodowej i altruizmu w porównaniu do średniego personelu medycznego zatrudnionego w sektorach ochrony zdrowia innych niż psychiatryczny. Ponadto wykazano dodatnią korelację pomiędzy nasileniem depresji a poziomem wyczerpania emocjonalnego, depersonalizacji i ogólnego wskaźnika wypalenia zawodowego w obydwu badanych grupach (psychiatryczny versus niepsychiatryczny personel pielęgniarski). Przedstawiciele personelu pielęgniarskiego pracujący w psychiatrycznych jednostkach ochrony zdrowia odznaczają się niższym poziomem wypalenia zawodowego, altruizmu oraz satysfakcji z wykonywanej pracy niż ma to miejsce w przypadku osób zatrudnionych w pozostałych sektorach medycznych. Wyższy poziom wypalenia zawodowego współwystępuje z większym nasileniem objawów depresyjnych. Różnice w poziomach poszczególnych dymensji wypalenia zawodowego oraz altruizmu mogą wynikać ze specyfiki pracy w różnych sektorach medycznych. Należy podkreślić na przewlekłość, nawrotowość chorób psychicznych, wyższy współczynnik rehospitalizacji pacjentów z zaburzeniami psychicznymi czy odroczone w czasie efekt procesu terapeutycznego.

Słowa kluczowe: opieka psychiatryczna, personel pielęgniarski, wypalenie zawodowe

1. Introduction

In the contemporary world, with its continuously rising life standards and growing pace, the professional burnout is becoming an increasingly frequent issue. The specialists such as Christina Maslach (social psychologist) and Herbert Freudenberger (psychiatrist) describe burnout syndrome as a multidimensional phenomenon, that is characterized by emotional exhaustion, depersonalization and reduced satisfaction from performed job (Maslach, Jackson, Leiter, 1996). The first of these indicators is associated with an excessive sense of fatigue, both physical and mental knowing as lack of energy to act, reduced feeling of positive emotions, irritability, and an attitude of resignation. Emotional exhaustion

translates into interpersonal relationships, deteriorating their quality. This is related to the second dimension of the model called depersonalization. Depersonalization is described as negative, often objective, and cynical approach to other people and distancing oneself from them, which is a certain form of defence against greater involvement of the individual. The reduced level of satisfaction with the profession is due to the feeling of incompetence, the inability to continue the current professional duties, and further professional development. The combination of burnout symptoms tends to affect the self-esteem of the sufferer and may lead to resignation thoughts.

There are many causes of burnout. Individual factors play a significant role: personality and temperamental traits, susceptibility to react with fear or other negative emotions (Zimmerman, Swider, Eun Woo, Allen, 2016), the strategy of dealing with stress (McCarthy, Gastmans, 2015), personal match with the performed job and the competence level (Bakker, Costa, 2014). These factors have a major impact on the individual reactions to external conditions such as workload, work requirements, adequacy of remuneration or conflicts in the workspace. Moreover, previous life experiences and the availability of social support network remain crucial (Hakanen, Bakker, 2017).

In response to the growing scale of the burnout phenomenon several analyses have been conducted to identify the most susceptible professional groups. Numerous sources indicate that the predominantly affected groups are those professionals whose work involves providing social support and help such as the medical professionals (doctors and nursing staff), social workers, teachers, and policemen (Maslach, Schaufeli, Leiter, 2001). These professions require well-developed communication skills such as empathetic listening, patience, exhibiting high interest, providing support, and having effective intervention strategies. There are several environmental factors that influence the individual performance and thus affect perceived effectiveness at work. These include the amount of service recipients and the difficulty of problems they present, as well as the capacity to effectively solve them with the available resources (Maslach, 2003).

In the healthcare sector burnout can yield significant negative consequences that affect the professionals themselves but also their families and their work environment (Huynh, Bowles, Yen, Phillips, Waller, Hall, Tu, 2018). It is one of the most prevalent reasons for early career termination and as a result directly contributes to the work force deficiencies in most of the European Union member states (Dimou, Eckelbarger, Riall, 2016). Professional burnout has an immense impact on mood, health, and the quality of performed job. A significant relationship between the burnout level of medical personnel and the amount of committed mistakes has been demonstrated (Trockel, Sinsky, West, Dyrbye, Tutty, Carlasare, Wang, Shanafelt, 2021). In the healthcare sector any form of negligence or mistake may have serious and irreversible consequences, hence it is of the uttermost importance to commence educational and preventive actions directed at medical professionals (Wei, Roberts, Strickler,

Corbett, 2019). White, Aiken and McHugh (2019) conducted a meta-analysis in the population of 61 168 medical professionals across 12 different countries. They demonstrated that professional burnout affects in total more than 25% of the participants with the highest burnout rates observed in Greece where it reached 78%. It has been also indicated that the place of employment and the field of specialization are crucial factors affecting the rate of professional burnout. A meta-analysis of 38 studies published up to 2018 (63% of researchers used MBI to assess burnout) found that 31% of nurses experienced emotional exhaustion, 24% had high level of depersonalization, and 38% had low level of personal achievement. The factors related to occupational burnout included work experience, psychological issues, and marital status (Molina-Praena, Ramirez-Baena, Gómez-Urquiza, Cañadas, De la Fuente, Cañadas-De la Fuente, 2018). Undoubtedly, the state of the COVID-19 pandemic has a negative impact on the occupational burnout of medical staff. A survey of over 12500 people, 52.3% of whom worked in designated hospitals for patients with COVID-19 infection, showed the presence of moderate emotional exhaustion in 39.3% of people, emotional exhaustion was greater in women working in departments of intensive care, in hospitals and wards designated to care provision to patients with COVID-19 (Chen, Sun, Chen, Jen, Kang, Kao, Chou, 2021).

To date, the total number of reports on professional burnout among individuals working in various healthcare sectors such as mental health care remains relatively limited. Therefore, this paper aimed to explore the differences in professional burnout rates of the mid-level medical staff working in mental health units as compared to the employees of other medical sectors. Furthermore, the levels of empathy, altruism, and depression among mid-level practitioners were assessed and investigated in relation to the burnout indicators.

2. Material and Methods

The participants of this study were nursing staff employees from the chosen health care units in the area of the Lubelskie voivodeship in Poland, who agreed to participate through a written consent. These health care units were not dedicated to providing health services to people with COVID-19 infection. In total, 199 anonymous questionnaires were collected from the mid-level medical practitioners hired in the following health care such as: university hospitals, specialized voivodeships hospitals, district hospitals (providing hospital healthcare services) and long-term healthcare units. The request to participate in the research was denied by the outpatient specialized unit.

The responses of participants who declared simultaneous employment in more than one facility (16 persons), or who handed in incomplete questionnaires (5 persons) were excluded from the analyses. In total the participants group consisted of 178 persons: 170 women (95.5% of the sample) and 8 men (4.5% of the sample) aged 23 to 64, working in the

following wards: psychiatric (59 persons), internal diseases (35 persons), surgery (17 persons), cardiology (14 persons), intensive care unit (13 persons), gynaecology and obstetrics (8 persons), pulmonology (7 persons), palliative care (2 persons) and in a general care unit (8 persons) and psychiatric health care centre (5 persons).

The participants were asked to fill out 5 self-report measures such as the sociodemographic questionnaire and four clinical measures as follows Maslach Burnout Inventory (MBI), Beck Depression Inventory (BDI), The Balanced Emotional Empathy Scale (BEES), and The Self-Report Altruism Scale (SRAS).

The authors' questionnaire consisted of closed questions regarding sociodemographic data including gender, age, marital status, education, employment, residence locations, seniority rate in the healthcare sector and in the mental health sector, and number of working hours per week. The Polish adaptation of the MBI by Pasikowski (2009) was used to assess occupational burnout. Due to its psychometric properties, it is the most frequently used questionnaire. Cronbach's alpha reliability coefficients (0.55 - 0.7925) are comparable to those obtained in the original studies by Maslach (1996). The first part of the MBI is used to assess occupational burnout, in which the participants provided "yes" or "no" answers to 22 statements across 3 scales: emotional exhaustion (9 items), depersonalization (5 items), and reduced satisfaction from professional achievements (8 items). Following the data collection, the raw results were standardized, and three indicators of the professional burnout were obtained: Indicator 1 regarding emotional exhaustion, Indicator 2 regarding depersonalization, and Indicator 3 regarding professional satisfaction level. Moreover, a general professional burnout rate was obtained which is an arithmetic mean of the three indicators of the professional burnout. The described data interpretation enabled to investigate both sub-scales (emotional exhaustion, depersonalization, feeling of professional failure) as well as a general professional burnout rate (Fengler, 2000).

The Beck Depression Inventory (1961) was used to assess the depression rate among the participants. It is a popular, standardized clinical measure that assesses the occurrence of 21 depressive symptoms within 30 days preceding the research.

The research also accounted for emotional empathy, understood as an indirect experience of the feelings of others and characterized as an indicator of an appropriately matured personality and reflecting positive interpersonal skills. It was measured with the BEES questionnaire, which has been demonstrated to be a scientifically useful and reliable measure. It enables to assess the magnitude of other people's feelings across 30 statements with a 9-grade scale indicating answers ranging from very strong disagreement to very strong agreement. The BEES questionnaire is a balanced measure of an indirect experience of other people's feelings and of the positive interpersonal skills (Mehrabian, 1997).

To assess the altruism level among the participants the SRA scale was applied. It is a self-assessment measure of the frequency of altruistic behaviours on a following scale: never,

one time, more than one time, frequently or very frequently. Depending on the selected method every answer is graded from 0 to 4 points (Rushton, Chrisjohn, Fekken, 1981).

3. Statistics

The statistical analyses were done using IBM SPSS Statistics 24 software. For the measurable attributes, the normality was evaluated with the Shapiro-Wilk test. The data with the distribution like normal were analysed with Student's t-test in the independent groups. For the data that violated the normality assumption the U-Mann Whitney test was applied. The analyses of the correlation were conducted using r-Pearson and rho-Spearman correlation coefficients. The significance level of $p < 0,05$ was applied.

4. Results

In the statistical analyses the participants were divided into two groups: The nursing staff employed in psychiatric healthcare sector were regarded as the experimental group ($n=64$) [62 women (96.9%) and 2 men (3.1%)], and the nursing staff working in other medical sectors was regarded as the control group ($n=114$) [108 women (94.7%) and 6 men (5.3%)].

16 participants declared higher education (Master's degree) [2 persons in the experimental group (3.1%) and 14 persons in the control group (12.3%)], 78 participants (43.8%) hold bachelor's degree in the nursing field [29 persons in the experimental group (45.3%) and 49 persons in the control group (43%)], and 84 participants (47.2%) graduated from the secondary school [33 in the experimental group (51.6%) and 51 persons in the control group (44.7%)].

146 participants (82%) were married [52 persons in the experimental group (81.3%) and 94 participants in the control group (82.5%)], 23 were single (13%) [5 persons in the experimental group (7.8%) and 18 persons in the control group (15.8%)], and 9 participants (5%) were widowed [7 persons in the experimental group (10.9%) and 2 persons in the control group (1.8%)].

112 participants taking part in the research (62.9%) lived in a city [40 persons in the experimental group (62.5%) and 72 persons in the control group (63.2%)], and 66 participants lived in a village (37.1%) [24 persons in the experimental group (37.5%) and 42 persons in the control group (36.8%)]. Most of the participants [177 persons (99.4%)] worked in a city.

The statistical analyses indicated that the participants in the control group worked more hours per week compared to the experimental group ($Z = -7.388$; $p < 0.001$) (Table 1).

Table 1. Characteristics of variables concerning employment in the examined groups.

Analyzed variables Group	Age	Seniority in the health care	Seniority in mental health care	No. of work hours a week
	Xm ± SD			
Examined	46.2±9.5	21.3±10.2	16.1±6.9	39.0±1.4
Control	48.0±9.2	23.0±10.0		40.9±2.6
Significance level	p = 0.481	p = 0.357		p < 0.001

The nursing staff working in the psychiatric healthcare sector was characterized by lower altruism level compared to the nursing staff working in other medical sectors ($Z = -4.509$; $p < 0.001$) (Table 2).

Table 2. Results of clinical tests (BDI, BEES, SRAS) in examined groups.

Analyzed variables Group	BDI	BEES	SRAS
	Xm ± SD		
Examined	6.6±9.4	29.0±25.3	42.0±13.3
Control	6±5.4	45.3±24.0	43.4±10.7
Significance level	p = 0.107	p = 0.076	p < 0.001

BDI - Beck Depression Inventory
 BEES - The Balanced Emotional Empathy Scale
 SRAS - The Self-Report Altruism Scale

The nursing staff working in mental healthcare sector was characterized by a lower level of emotional exhaustion ($Z=-2.545$; $p<0.05$) and depersonalization ($Z=-2.065$; $p<0.05$) rate and a higher rate of professional satisfaction compared to the control group ($Z=-3.371$; $p<0.001$) (Table 3).

Table 3. Results of a general professional burnout rate and its particular sub-scales in examined groups.

Analyzed variables Group	WWZ1	WWZ2	WWZ3	OWWZ
	Xmr ± SD			
Examined	0.096±0.062	0.020±0.042	0.138±0.052	0.085±0.038
Control	0.104±0.068	0.024±0.044	0.120±0.050	0.083±0.035
Significance level	p = 0.011	p = 0.039	p < 0.001	p = 0.741

WWZ1 - emotional exhaustion
 WWZ2 - depersonalization
 WWZ3 - professional satisfaction
 OWWZ - general professional burnout rate

In the control group there was observed a positive correlation between the depression rate and the emotional exhaustion rate (Pearson correlation coefficient $r=0.722$; $p<0.001$), depersonalization (Pearson correlation coefficient $r=0.626$; $p<0.001$), and the general professional burnout rate (Spearman's rank correlation coefficient $r=0.598$; $p<0.001$) (Table 4).

Table 4. Correlations between social and demographic data and results of clinic tests in the control group.

	Age	Seniority in the health care	No. of work hours a week	BDI	BEES	SRAS
Age	1	.826**	.179	.012	-.005	-.009
Seniority in the health care industry	.826**	1	.204*	.096	.124	.020
No. of work hours a week	.179	.204*	1	.106	.071	-.063
BDI	.012	.096	.106	1	-.212*	.062
BEES	-.005	.124	.071	-.212*	1	-.050
SRAS	-.009	.020	-.063	.062	-.050	1
WWZ1	-.061	.006	.323**	.722**	-.256*	.023
WWZ2	-.127	-.032	.186*	.626**	-.297*	.032
WWZ3	-.022	-.029	.153	.372	-.008	-.142
OWWZ	-.116	-.051	.107	.598**	-.261*	-.021

* $p<0.05$; ** $p<0.001$

BDI - Beck Depression Inventory
 BEES - The Balanced Emotional Empathy Scale
 SRAS - The Self-Report Altruism Scale
 WWZ1 - emotional exhaustion
 WWZ2 - depersonalization
 WWZ3 - professional satisfaction
 OWWZ - general professional burnout rate

Moreover, in the experimental group a positive correlation was observed between the depression rate and the emotional exhaustion rate (Spearman's rank correlation coefficient $r=0.846$; $p<0.001$), depersonalization level (Spearman's rank correlation coefficient $r=0.558$; $p<0.001$), and the general professional burnout rate (Spearman's rank correlation coefficient $r=0.477$; $p<0.001$) (Table 5).

Table 5. Correlations between social and demographic data and results of variables rated in the examined group

	Age	Seniority in the health care industry	No. of work hours a week	Seniority in the mental health (psychiatry) sector	BDI	BEES	SRAS
Age	1	.679**	-.036	.503**	.066	.018	.342**
Seniority in the health care industry	.679**	1	-.032	.734**	.068	-.104	.255*
No. of work hours a week	-.036	-.032	1	-.263	-.135	.022	.147
Seniority in mental health sector	.503**	.734**	-.263	1	.165	-.030	.316*
BDI	.066	.068	-.135	.165	1	-.088	.257*
BEES	.018	-.104	.022	-.030	-.088	1	-.253*
SRAS	.342**	.255*	.147	.316*	.257*	-.253*	1
WWZ1	.149	.205	-.033	.225	.846**	-.135	.347**
WWZ2	.211	.317*	.020	.238	.558**	-.009	.113
WWZ3	-.016	.073	.064	-.011	.032	.156	.141
OWWZ	.147	.283*	.049	.165	.477**	.096	.228

*p<0.05; **p<0.001

- BDI - Beck Depression Inventory
- BEES - The Balanced Emotional Empathy Scale
- SRAS - The Self-Report Altruism Scale
- WWZ1 - emotional exhaustion
- WWZ2 - depersonalization
- WWZ3 - professional satisfaction
- OWWZ - general professional burnout rate

Furthermore, a statistically significant positive relation between the emotional exhaustion rate and the number of working hours per week was observed in the control group (Pearson correlation coefficient $r=0.323$; $p<0.001$). In the experimental group a significant positive correlation between the altruism rate and the emotional exhaustion rate was observed (Spearman's rank correlation coefficient $r=0.347$; $p<0.001$), as well as the correlation between the altruism rate and the seniority in the mental healthcare sector (Spearman's rank correlation coefficient $r=0.316$; $p<0.05$).

Discussion

In the current research an innovative approach to professional burnout investigation was applied, which improved the assessment by exploring the empathy rates and the altruistic approach among the healthcare mid-level professionals. It was observed that the emotional exhaustion rate and depersonalization among the nursing staff employed in the mental healthcare sector were lower compared to the nursing staff working in other healthcare sectors. This finding may be explained by the employment specificity in other healthcare sectors than the psychiatric healthcare units. The working environment is characterized by the frequent deficiency of the staff, numerous and complicated procedures, need for immediate interventions (working under the time pressure), frequent encounters of life-threatening situations, and high disease comorbidity. All these factors contribute to increased stress levels and additionally when the resources are lacking, they can result in feelings of resignation, which in consequence leads to emotional exhaustion. Moreover, brief hospitalization periods and frequent rotation of patients in the non-psychiatric wards do not promote bond creation, familiarization and establishing therapeutic relations. In consequence, this can result in less attentive and non-individualistic approach to the patient (Szach, 2014). The higher rates of the professional burnout rates among the nursing staff working in non-psychiatric healthcare units may also arise from the declared higher number of working hours per week. The overload caused by the professional responsibilities is both a defining characteristic and a risk factor for the professional burnout (Yu, Raphael, Mackay, Smith, King, 2019).

In a group of persons employed in non-psychiatric units, a statistical trend was observed indicating the possibility of higher altruism and emotional empathy rates among those individuals. However, these results should be interpreted with carefulness and a further investigation of the observed trend, including the SARS-CoV-2 coronavirus pandemic, is required.

The current research indicated that the mid-level healthcare professionals working with persons suffering from mental disorders display a lower work satisfaction rate compared to other fields of the medicine. It has been hypothesized by the authors that this observation may result from the specificity of work with the patients suffering from mental disorders. Factors such as higher recurrence of the disorder, deferred interventions or lower effectiveness of the available therapeutic interventions compared to more immediate interventions like surgeries may affect perception of efficiency (C. I. Verret, Nguyen, C. Verret, Albert, Fufa, 2021), which is one of the most crucial predictors of work satisfaction (Arora, Diwan, Harris, 2013).

Furthermore, positive correlations were observed between the age and the seniority, and the altruism rate, as well as between the depression rate and the emotional exhaustion, depersonalization, and general professional burnout rates among the mid-level medical staff working at the mental healthcare units. The results acquired by the team of researchers are in line with the literature on the subject-matter (Naczenski, de Vries, van Hooff, Kompier, 2017). The depressive disorder frequently co-exists with alexithymia (i.e. disability to recognize, understand, and express emotions) (Hemming, Haddock, Shaw, Pratt, 2019).

In consequence, this can lead to a non-individualistic and impersonal approach to another human being, which is a component of the depersonalization that is one of the professional burnout indicators according to Maslach (1996). The higher focus on one's own somatic experiences and the attention focused inwards are related to the lower level of empathy. The meta-analysis by Wilkinson (2017) confirmed a negative correlation between the empathy rate and depersonalization and a general professional burnout factor among the medical staff.

Strengths and weaknesses are a recommendation for further research. Unquestionably, one of the strengths of this paper is the general relevance of the burnout issue. Moreover, this study provides an innovative contribution to the current state of knowledge about the mental healthcare sector, as well as the other healthcare sectors mid-level professionals by means of standardized and validated tools. However, its weakness is a relatively low number of the participants in the analysed groups. For the further research, it is recommended by the authors to conduct the analysis of burnout among mid-level healthcare professionals using the following group divisions: persons working in non-invasive treatment wards versus invasive treatment wards, and the staff from the non-invasive treatment wards should be further divided into persons working in the mental health wards versus other healthcare units. It is important to further notice, that in the context of the continuously increasing life expectancy, the issue of the medical care for the ageing society becomes increasingly relevant. The need for the long-term healthcare services is becoming increasingly more urgent. In consequence, it is directly related to professional burnout issue among the staff working in healthcare centres, residential care facilities or palliative care units. The authors encourage more research with the larger populations. It would provide a greater accuracy and would be a starting point for the development of precautionary measures aimed at the prevention of professional burnout among the medical staff and would increase the work satisfaction in this group.

Conclusions

The representatives of nursing staff working in the psychiatric healthcare sector are characterized by the lower rates of professional burnout, lower altruism level and

diminished satisfaction from performed job compared to the professionals working in other, non-psychiatric healthcare sectors. A higher level of professional burnout correlates with higher depression rates.

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