

Personal wellbeing and stress coping strategies among nurses working at the departments of anesthesiology and intensive care

Satysfakcja osobista i strategie radzenia sobie ze stresem u pielęgniarek pracujących na oddziałach anestezjologii i intensywnej terapii

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STRESZCZENIE

SATYSFAKCA OSOBISTA I STRATEGIE RADZENIA SOBIE ZE STRESEM U PIELĘGNIAREK PRACUJĄCYCH NA ODDZIAŁACH ANESTEZJOLOGII I INTENSYWNEJ TERAPII

Cel pracy. Ustalenie, jaka jest osobista satysfakcja pielęgniarek w odniesieniu do wybranych zmiennych. Identyfikacja tego, czy satysfakcja osobista ma wpływ na preferencje pielęgniarek w zakresie strategii radzenia sobie ze stresem.

Materiał i metody. Grupa była złożona z 509 pielęgniarek pracujących na oddziałach anestezjologii i intensywnej terapii. Wykorzystaliśmy kwestionariusz Personal Wellbeing Index – Adult (PWI – A) oraz kwestionariusz Coping Strategies (Brief COPE). Dane analizowano za pomocą metod statystyk opisowych i indukcyjnych.

Wyniki. Subiektywna ocena satysfakcji pielęgniarek kształtowała się na poziomie 60-70% (60,85; SD±12,47). Wiek i stan cywilny nie potwierdzały istotnego wpływu na satysfakcję osobistą pielęgniarek, w przeciwieństwie do stażu i edukacji. Najniższe zadowolenie osobiste wymieniały pielęgniarki w związku z ich obawami o przyszłość. Wykazano związek między strategiami radzenia sobie a osobistą satysfakcją, szczególnie w kwestiach satysfakcji z relacji osobistych i satysfakcji z życia w społeczności. Pielęgniarki stosowały zarówno adaptacyjne, jak i nieadaptacyjne strategie radzenia sobie.

Wnioski. Istotne jest monitorowanie osobistej satysfakcji pielęgniarek i stosowanie strategii radzenia sobie, które mogą mieć wpływ na wyniki pracy pielęgniarek, bezpieczeństwo i jakość świadczonych usług zdrowotnych.

Słowa kluczowe:

satysfakcja osobista, strategie radzenia sobie ze stresem, pielęgniarka, intensywna terapia

ABSTRACT

PERSONAL WELLBEING AND STRESS COPING STRATEGIES AMONG NURSES WORKING AT THE DEPARTMENTS OF ANESTHESIOLOGY AND INTENSIVE CARE

Aim. To investigate the personal wellbeing of nurses in relation to selected variables. Then to explore whether personal wellbeing has any impact on preference for stress coping strategies.

Material and methods. The sample consisted of 509 nurses working at the Department of Anaesthesiology and Intensive Medicine. We used the Personal Wellbeing Index – Adult (PWI – A) scale and coping strategies (Brief COPE) questionnaire. Data were analyzed using the methods of descriptive and inductive statistics.

Results. Subjective perception of personal wellbeing was assessed at the score 60-70% (60.85; SD±12.47). The research revealed that age and marital status had no significant impact on wellbeing in contrast to the length of work experience and education level. The lowest scores of personal wellbeing among nurses were detected in connection with their concerns regarding their future security. Nurses utilized both adaptive and maladaptive coping strategies. The study pinpointed the connection between coping strategies and personal wellbeing, in particular, in the domain of satisfaction with personal relationships and satisfaction with community connectedness.

Conclusions. Monitoring the personal wellbeing of nurses and utilizing stress coping strategies proved to be important, because these may have an impact on the work performance of nurses, personal safety, and quality of health work experiences they provide.

Key words:

personal satisfaction, coping strategies, nurses, intensive care

INTRODUCTION

The research on the working environment of the last decade has concentrated mainly on psychosocial risks at work, especially on stress, which was identified as one of the key factors in maintaining health and safety at work [1]. According to the WHO [2], work-related stress is a response people may experience when exposed to work demands and pressure that do not correspond to their skills and knowledge and which challenge their ability to cope with such work-related stress. Tomasina [3] states that work-related stress is accountable for the reduced quality of professional performance, satisfaction and wellbeing of individuals, as well as for the stagnation of their personal development, absences at work, and decrease in the quality of health services they provide. As for the working environment, departments of intensive care can be characterized as highly systematic, demanding and constantly changing [4]. They typically involve large numbers of patients who are in life-threatening conditions, unforeseeable circumstances, long working hours, a reduced period for care provision, deficiency of human and material resources, demands of family members and close contact with the process of death and dying [5-8]. In order to provide quality nursing care, nurses should be in good physical and psychological condition and are expected to cope well with the workload and work-related stress. Their ability to cope with stress can transpose to their satisfaction with life as a whole. Psychological wellbeing is usually considered to be a combination of positive affective states and functioning with optimal effectiveness [9]. Several studies investigated the impact of wellbeing of nurses working at the departments of intensive care in relation to various parameters of nursing care [10-13].

Response to workload and work-related stress varies from person to person. From the perspective of workload management, different coping strategies can be identified among nurses working in clinical practice which can be either problem-focused or emotion-focused [14,15]. Coping can be conceptualized as any cognitive or behavioral effort to master, minimize or tolerate circumstances which individuals perceive as potentially dangerous to their wellbeing [16]. The relation between coping strategies and wellbeing was tackled in some of the studies [17,18].

AIM

The primary aim of our study was to explore the personal wellbeing among nurses working at the departments of anaesthesiology and intensive care in relation to such variables as age, marital status, education and, length of work experience. Secondly, our objective was to explore whether personal wellbeing may have any impact on the preference for any stress coping strategy.

MATERIAL AND METHODS

The research sample included 509 nurses working at the departments of anaesthesiology and intensive medicine in the Slovak Republic. The selection of the research

sample was based on the following criteria: minimum one-year of work experience at the departments of anaesthesiology and intensive medicine, voluntariness and willingness to cooperate. From the total number of 509 nurses, women represented 94% (n=477) and men 6% (n=32). The average age of respondents was 42.12 (± 9.72) years. The average length of work experience of nurses was 16.22 (± 10.17) years. As regards the education of nurses, the sample consisted of 45% (n=227) nurses with completed secondary education and 55% (n=282) nurses with university education. In relation to the parameter of marital status, the research sample consisted of 47% (n=239) married nurses, 35% (n=178) single nurses, 14% (n=72) divorced nurses and widows represented the smallest part 4% (n=20).

The method of data collection involved two questionnaires: 1. Personal Wellbeing Index – Adult (PWI-A); 2. Coping Strategies scale (Brief COPE). Data collection also included sociodemographic variables, such as age, marital status, education level and length of work experience.

1. The measurement of personal wellbeing was grounded on the PWI – A scale. This scale separately assesses the global item that indicates the total satisfaction with life followed by eight items that correspond to the individual domains of life. The respondents assess their satisfaction within an individual domain making use of the 0-10 end-defined (0 represents no satisfaction with life at all; 5 represents neutral satisfaction and 10 represents completely satisfied with life) sentences. When the questionnaire is evaluated, the scores obtained within individual items are converted into the standard 0–100 scale format. The aim is to obtain a percentage of the maximum scale. We used a questionnaire in Slovak language. The Slovak version was elaborated by Džuka (2002) and is in the public domain on the website of the Australian Centre on Quality of Life [19]. Cronbach's alfa coefficient of the PWI – A scale in our research represents the value 0.734.
2. The Brief COPE scale is a revised and reduced version of the original COPE scale [20]; it consists of 28 items divided into 14 subscales where each scale comprises two items. The respondents choose their responses along a four-point Likert-type scale (1 – no; 2 – rather not; 3 – rather yes; 4 – yes). Hence, the higher the score on this scale, the higher the level of coping by the respondent. Subscales, or alternatively, coping strategies, are then divided into adaptive (problem-focused or emotion-focused) and maladaptive (avoidance-focused). We used a questionnaire in Slovak language. In order to ensure the correct translation of the methodology into Slovak, we asked a professional institution, the Department of English and American Studies of the Pavol Jozef Šafárik University in Košice, Slovakia for a double translation and a subsequent discussion. Cronbach's alfa coefficient in the Brief COPE scale in our research sample is 0.753.

The questionnaires were self-completed by the nurses online on the website of the professional organization of the Slovak Chamber of Nurses and Midwives after entering their registration number. Nurses were notified of the possibility to participate in the research by email messages delivered

to the official email addresses they have as members of the organization. Data collection was carried out during the period from July to December 2017. Data processing made use of the SPSS 24.0 program utilizing the methods of descriptive (means, standard deviation, absolute and relative frequencies) and inductive statistics (ANOVA test, Spearman's correlation test, Pearson's correlation test). The statistical significance was set at the 0.05 level.

RESULTS

Our analysis of the results was focused on the assessment of the personal wellbeing (Tab. 1). Subjective assessment of personal wellbeing of nurses fluctuated around 60-70 of the maximum 100% scale (60.85, SD±12.47). In relation to individual domains of satisfaction with life, the values for nurses averaged at about 70-80%, concretely, in the domains of personal health, achievement in life, personal relationships, community connectedness, religion and spirituality, total satisfaction with life.

Table 2. shows the relations between sociodemographic variables and individual domains of personal wellbeing. Our researched sample of nurses demonstrated statistically significant correlations only with regards to the length of work experience, education level and individual domains of PWI-A. Positive correlations were manifested between the length of work experience of nurses and satisfaction with health ($r_s=0.138$; $p<0.01$), achievement in life ($r_s=0.091$; $p<0.05$) and spirituality and religion ($r_s=0.118$; $p<0.01$). The findings manifest that satisfaction of nurses in individual domains increases in parallel with the length of work experience. A statistically significant negative correlation was detected between the domain of future security and the length of work experience ($r_s=0.149$; $p<0.01$), an education level ($r_s=0.094$; $p<0.05$). The satisfaction of nurses with their future security decreases with longer work experience and higher educational levels.

The following section was designed to determine whether personal wellbeing may have any impact on the preference for any stress coping strategy. The research sample of nurses revealed a statistically significant negative correlation between adaptive coping strategies and satisfaction with personal relations and instrumental support ($r=-0.103$; $p<0.05$). With the decreasing satisfaction in this domain of life, the tendency to prefer the coping strategy of instrumental support increases. Statistically significant negative correlations were discovered between life satisfaction with part of your community connectedness and coping strategies of active coping ($r=-0.090$; $p<0.05$) and planning ($r=-0.110$; $p<0.05$). With the decreasing satisfaction in this domain, nurses are more inclined to opt for coping strategies of active coping and planning. A significant negative correlation was observed between the coping strategy of humor and wellbeing in the domain of future security ($r=-0.010$; $p<0.05$) and religion and spirituality ($r=-0.102$; $p<0.05$). Nurses demonstrated a preference for this coping strategy with regards to the decreasing future security and satisfaction with spirituality and religion (Tab. 3).

■ Tab. 2. Correlations between sociodemographic variables and personal wellbeing

Domains of PWI	Age	Marital status	Education	Length of work experience
Standard of living	-0.063	-0.030	-0.053	-0.023
Health	0.005	-0.023	0.060	0.138**
Achievements in life	-0.047	0.002	-0.023	0.091*
Personal relationships	0.021	0.022	-0.005	0.046
Personal safety	-0.075	-0.018	-0.045	-0.062
Part of your community	0.007	0.003	-0.071	0.057
Future security	-0.022	-0.014	-0.094*	-0.149**
Religion and spirituality	-0.030	0.027	0.021	0.118**
Global life satisfaction	0.028	-0.001	-0.018	0.016
PWI total score	-0.034	0.002	-0.053	0.040

* $p<0.05$; ** $p<0.01$; Spearman's r ; PWI – Personal Well-being Index

■ Tab. 1. Well-being of nurses

Domains of PWI	Mean (± SD)
Standard of living	61.32 ± 23.97
Health	79.12 ± 21.03
Achievements in life	72.95 ± 18.12
Personal relationships	75.23 ± 19.78
Personal safety	68.07 ± 22.37
Part of your community	74.34 ± 18.64
Future security	36.50 ± 35.09
Religion and spirituality	70.33 ± 25.73
Global life satisfaction	70.61 ± 18.87
PWI total score	60.85 ± 12.47

SD – standard deviation; PWI – Personal Well-being Index

■ Tab. 3. Correlations between PWI personal wellbeing and adaptive coping strategies

Domains of PWI	Adaptive coping strategies							
	AC	RES	IS	PR	PL	HU	ACC	RS
Standard of living	-0.049	-0.026	0.002	-0.052	-0.023	-0.074	-0.053	-0.021
Health	0.004	-0.018	-0.032	0.007	-0.029	0.067	-0.074	-0.052
Achievements in life	0.030	-0.008	0.016	-0.044	-0.006	0.051	-0.003	-0.014
Personal relationships	0.005	0.029	-0.103*	-0.036	0.022	0.022	0.012	0.005
Personal safety	0.020	0.055	0.066	0.001	-0.041	-0.44	-0.015	-0.013
Part of your community	-0.090*	-0.020	-0.041	-0.085	-0.110*	0.053	-0.054	-0.048
Future security	-0.007	0.010	0.065	-0.071	-0.062	-0.010*	-0.034	0.024
Religion and spirituality	0.005	0.011	0.021	-0.017	-0.027	-0.102*	-0.005	0.081
Global life satisfaction	0.014	0.007	-0.024	-0.037	-0.017	0.024	-0.024	-0.050
PWI total score	0.001	0.001	0.005	-0.061	-0.064	-0.050	-0.040	0.012

* $p<0.05$; Pearson's r ; PWI – Personal Well-being Index;

AC – Active Coping; RES – Receiving Emotional Support; IS – Instrumental support; PR – Positive Reframing; PL – Planning; HU – Humor; ACC – Acceptance; RS – Religiosity and Spirituality

Considering the maladaptive coping strategies, statistically significant negative correlations were identified between satisfaction with personal relationships and coping strategies of substance abuse ($r=0.094$; $p<0.05$), disengaged behavior ($r=-0.098$; $p<0.05$), self-blaming ($r=-0.106$; $p<0.05$), which evidences the fact that with the decreasing satisfaction in this domain of life, the nurses' preference for workload and stress coping strategies increases. Self-blaming as a coping strategy is utilized by nurses demonstrating decreasing satisfaction with personal relationships ($r=-0.106$; $p<0.05$), community connectedness ($r=-0.91$; $p<0.05$), and PWI total score ($r=-0.101$; $p<0.05$) (Tab. 4).

■ Tab. 4. Correlations between PWI personal wellbeing and maladaptive coping strategies

Domains of PWI	Maladaptive coping strategies					
	SD	DE	SA	DB	VE	SB
Standard of living	-0.054	0.007	0.046	-0.044	-0.010	-0.037
Health	0.026	0.044	0.066	-0.027	-0.041	-0.017
Achievements in life	0.009	0.026	0.087	-0.079	0.005	-0.050
Personal relationships	-0.033	-0.037	0.094*	-0.098*	-0.002	-0.106*
Personal safety	0.014	0.073	0.045	0.015	0.028	-0.055
Part of your community	-0.11	0.034	0.042	-0.052	-0.032	-0.091*
Future security	0.053	0.024	0.020	-0.023	0.008	-0.064
Religion and spirituality	0.029	0.009	-0.087	0.053	0.005	-0.087
Global life satisfaction	-0.022	0.010	0.019	-0.066	0.002	-0.028
PWI total score	0.020	0.027	0.012	-0.035	-0.004	-0.101*

* $p<0.05$; Pearson's r ; PWI – Personal Well-being Index;

SD – Self-distraction; DE – Denial; SA – Substance Abuse; DB – Disengaged Behavior; VE – Venting; SB – Self-blaming;

DISCUSSION

Chronic and excessive stress appears to be an indispensable element of life in contemporary society [21]. The work of nurses in the departments of anaesthesiology and intensive medicine is very specific, physically and psychologically demanding. Our primary objective was to explore how nurses working in these departments perceived their personal wellbeing and which factors were decisive for their personal wellbeing. The relations between wellbeing and coping strategies were investigated separately.

The PWI global score in our researched sample of nurses represents 60.85 maximum in the 100% scale, which is much higher than the score for nurses working in the Intensive Care Units ($n=94$) in Slovakia detected six years ago 49.90% [14]. The lowest score of personal wellbeing 36.50 was identified in our sample of nurses in the domain of future security, similarly to the findings of other study [11-13]. These results appear to be alarming. The analyses study (Kwiecień-Jaguś et al., 2018)

confirm that high job dissatisfaction among the nursing staff is connected with bad internal organization of the workplace, conflicts with supervisors, and a lack of understanding between nurses and their supervisors [22]. Gurková, et al. [12] conducted an international cross-sectional study aimed at subjective wellbeing of nurses ($n=1055$) utilizing PWI-A scale and identified the score of satisfaction with life at 60-70% maximum of 100% scale which corresponded with our findings.

Our research revealed that length of work experience and education level appeared to be the factors that had an impact on PWI. The satisfaction of nurses with the domains of personal health, achievement in life and spirituality and religion grew concurrently with the length of work experience. Nurses with a higher level of education and longer work experience expressed their concerns for future security. The authors Gurková et al. [12] maintain that the personal wellbeing of nurses is negatively associated with the length of work experience (aging nurses consider the option of quitting their job and going abroad). Correlations between age and PWI in our research sample proved insignificant in comparison with the study of Burešová, Jarošová [11], in which satisfaction with life received the highest scores from the youngest nurses, and similarly, higher education correlated with the higher PWI.

The relation between coping strategies and wellbeing among nurses is analyzed in the study of Loukzadech, Baffroi [18]. Considering the fact that adaptive coping strategies are effective for the resolution of conflicts and work-related stress and maladaptive are connected with unfavorable health conditions, it is possible to evaluate coping strategies as effective. In a similar vein, the findings of the study by Lee et al. [17] point to the fact that adaptive coping strategies have a significant positive impact on the wellbeing of nurses. Authors Zhou, Gong [23] say that active coping was positively related to resource and environmental problems, and passive coping was positively related to workload and time pressure, and to interpersonal relationship and management issues. Our researched sample of nurses working in the departments of anaesthesiology and intensive medicine also showed correlation between coping strategies and personal wellbeing, in particular, in the domains of satisfaction with personal relationships and satisfaction with community connectedness. Nurses utilized adaptive coping strategies: active coping, planning, instrumental support and humor and maladaptive coping strategies of substance abuse, disengaged behavior and self-blaming.

The significance of the PWI assessment is also pinpointed by the study which comprised the sample of 2075 nurses [10]. The authors state that the lower the PWI score among the nurses, the more susceptible the nurses are to burnout syndrome and extreme fatigue. Meng et al. [24] confirm that the higher the wellbeing of nurses, the less susceptible the nurses are to burnout syndrome. The study of Yermilova et al. [25] arrives at the conclusion that psychological wellbeing plays a vital role in personal growth. It is a constituent part of the formation of motivation for self-realization. Positive wellbeing may improve the working environment of nurses which has a positive impact on the provision of quality nursing care [17].

Limitation of study

Certain limitations were inherent to the nature of our research. The size of the sample of nurses in relation to the total number of nurses in Slovakia can be considered a limitation of the study. The fact that the questionnaire was completed only by nurses, who were interested in the monitored issue, can also be considered a limitation

CONCLUSIONS

The research yielded several interesting findings. Subjective assessment of personal wellbeing of nurses fluctuated around 60–70%. In domains of PWI standard of living it was mean score 61.32 and personal safety, it was 68.07. Mean other domains of PWI such as global life satisfaction, religion and spirituality, part of your community, personal relationships, and achievements in life were from 70.61 to 75.23. The highest mean score of nurses reported the health domain. The lowest scores of personal wellbeing were detected among nurses in the domain of future security.

Selected sociodemographic variables, such as the age of nurses and their marital status, had no impact on the assessment of personal wellbeing in the research sample. Length of work experience and education level had a positive impact on the majority of domains of personal wellbeing.

The personal wellbeing of nurses influences the choice of adaptive and maladaptive coping strategies. In the domains of personal relationships, part of community connectedness and PWI total score, a significant relation was identified in connection to the use of adaptive coping strategies: active coping, planning, instrumental support and humor and maladaptive coping strategies: substance abuse, disengaged behavior a self-blaming.

The following implications arise on the basis of our findings:

1. Focus on personnel management, especially, on personal relations in the workplace (effective conflict resolution, teambuilding, coaching, and supervision);
2. Development and promotion of stress coping strategies among nurses at the workplace and also during vocational training of nurses (pre-graduate education);
3. Promoting discussion in the professional community and identification of the causes of subjectively demonstrated insecurity and concerns of nurses with regards to their future.

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Manuscript received: 08.11.2020

Manuscript accepted: 13.01.2021

Translation: Barbara Mitříková CJP – Language Training Center, Pavol Jozef Šafárik Univerzity in Košice, Slovakia