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B – Data Collection
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HEALTH CARE WORKERS STRATEGIES FOR COPING WITH STRESS

Jacek Łukasiewicz[A,C,D,G]
Bożydar L.J. Kaczmarek[A,D,E,F]
Institute of Psychology and Human Science, WSEI University, Lublin, Poland

SUMMARY

Background: Working as a doctor, nurse, and midwife is associated with great responsibility for the health and life of patients. It is a source of many burdens, which result in marked, chronic stress leading to professional burnout and related consequences affecting all spheres of life. The research aimed to analyze healthcare workers' preferred stress-coping strategies.

Material/ Methods: The study encompassed 134 healthcare workers practicing the profession of doctor, nurse, and midwife, working in the cities of Lublin in the period from May 2022 to February 2023. We employeda self-made questionnaire and the Stress Coping Inventory (Mini-COPE). The PS IMAGO 9.0 program was used for the calculations and analysis of the results.

Results: The strategies of coping with stress most often used by doctors, nurses, and midwives were based on active coping and planning. The three surveyed groups of healthcare workers differ statistically significantly in using the denial strategy. Nurses are more likely than physicians to use denial as a coping strategy. There were no statistically significant differences in the remaining strategies of coping with stress.

Conclusions: Healthcare workers in stressful situations often choose active ways of dealing with them, especially active coping and planning. An important factor that strengthens the choice of active strategies for coping with stress seems to be training aimed at improving the professional qualifications of healthcare workers.

Key words: doctors, nurses, midwives, overburden, stress

INTRODUCTION

The occupation of a doctor, nurse, and midwife, related to protecting and saving human lives, is exposed to various stressors. Constant stress may lead to professional burnout syndrome and cause numerous destructive effects for the individuals affected by this syndrome and their patients. Studies found that the strategies for coping with stress are related to the level of professional burnout. It has been shown that the most frequently used strategy is planning, and the least frequently used strategy is avoidance (Arjl, 2023; Payne, 2001). Many reports confirmed that coping with stress is a fundamental factor that affects the emergence and the form of burnout in the group of nurses. The problem-focused stress coping strategy and the task-oriented approach help to deal with stress and prevent professional burnout (Marcysiak, Dąbrowska, & Marcysiak, 2014; Markiewicz, 2019; Walkiewicz, Sowińska, & Tartas, 2014).

An analysis of ways of coping with stress in a group of 108 pediatric nurses showed that in difficult situations, they most often adopted constructive ways of coping with stress, namely making efforts aimed at solving problems through cognitive transformations or attempts to change the situation (Perek, Kózka, & Twarduś, 2007). Basińska and Andruszkiewicz (2010) examined 150 nurses from the surgical, internal medicine, and intensive care wards to explore their strategies for coping with stress. It turned out that the surveyed nurses who chose avoidance-resignation strategies more frequently used defensive ways of solving problems. On the other hand, those using the positive thinking strategies were more satisfied with life. Also, an in-depth analysis of stress coping strategies used by nurses and midwives performed by Kaźmierczak et al. (2019) showed that the most frequently used strategies were active coping and planning, problem-focused strategies, and seeking emotional support. On the other hand, the use of psychoactive substances was the least frequent strategy. Interestingly, the strategies used to cope with stress significantly differed in the group of nurses and midwives. However, along with longer work experience, healthcare workers tended to seek emotional support and blame themselves.

Other studies yielded similar results. Accordingly, stress coping most often used by surgeons were direct action and positive thinking, and the least frequently used was alcohol consumption. It was shown that older nurses and midwives more often used the negative strategy of self-blame to cope with difficult situations. Individuals using negative strategies try to distance themselves from stressful situations or accept them, believing they cannot change anything (Basińska & Andruszkiewicz, 2010). Also, anesthesiology nurses chose active coping strategies. The most frequently employed strategy was planning, positive reframing, and acceptance, while the least frequent were cessation of activities and the use of psychoactive substances (Kupcewicz, 2017).

The nurses from the surgical wards most often used active coping, self-distraction, acceptance, positive reframing and planning, and the least often they employed denial, behavioral disengagement, religious coping, or substance use (Czarniecka,

Podsiadły, & Locksmith, 2018). In turn, intensive care unit nurses most often choose task-focused styles, less often they adopt emotion-focused strategies, and the least frequently used strategy is avoidance (Kotarba, & Borowiak, 2018). The most frequently used stress-coping strategies among nurses working in public hospitals were planning and seeking social support. They were much less likely to use negative strategies (Kaźmierczak et al., 2019; Tesfaye, 2018).

The above-presented review suggests similarities and differences in the ways of coping with the stress of healthcare professionals of various professions. Therefore, we have put the following research questions:

1. What strategies of coping with stress are most often used by healthcare professionals?
2. Do healthcare professionals from different medical professions differ in terms of stress-coping strategies?

Accordingly, the following research hypotheses were formulated:

H.1. Healthcare workers often use active coping and planning while coping with stress.

H.2. Healthcare professionals from different medical professions differ regarding adopted stress–coping strategies.

H.3. Physicians are more likely than nurses to use the active coping strategy.

H.4. Nurses use the strategy of seeking emotional support less often than midwives.

MATERIAL AND METHODS

Participants

The study was conducted on 134 healthcare workers aged 23-67 (M=44.5, SD=10.51) in the Lublin Province. The vast majority were women (N=120, 89.6% of the respondents), while men constituted slightly more than 10% of the sample (N=14, 10.4%). The seniority in the profession of the respondents ranged from 1 to 43 years, with the average work experience amounting to 19.78 years. The number of jobs performed was between 1 and 7 (M=1.96). As for the place of work, the respondents indicated a hospital (76.1%), a clinic (12%), a private practice (6%), and others, such as a social welfare home, university, or school (5.9%). Detailed information is provided in the Tables 1.

The study group was divided into three groups according to the type of work performed. The first group (N=32) included physicians of various specialties, the second group consisted of nurses (N=68), and the third group encompassed

Table 1. Descriptive statistics for the age and seniority of the study group

• *Variables*	*N*	*Min*	*Max*	*M*	*MD*	*SD*
Age	134	23	67	44.48	46.00	10.51
Seniority	134	1	43	19.78	20.00	11.76

N – number of observations; Min - minimum value; Max - maximum value; M - mean; MD - median; SD - standard deviation

midwives (N=34). The division into three groups aimed at checking whether there is a difference in occupational burnout, stress coping strategies, and life satisfaction among employees of various healthcare professions.

Procedure

We used the Polish adaptation of Charles Carver's Stress Coping Inventory (Mini-COPE) to evaluate strategies for coping with stress by Juczyński and Ogińska-Bulik (2009). Mini-COPE is a shortened version of the COPE inventory containing 60 questions. The shorter version consists of 28 questions about typical human behavior in difficult situations. This tool measures typical ways of reacting and feeling in situations of experiencing strong stress. In total, the tool distinguishes 14 strategies for coping with stress: Active coping, Seeking instrumental support, Positive reframing, Planning, Seeking Emotional support, Venting, Humor, Acceptance, Religion, Self-blame, Self-distraction, Denial, Substance use, Behavioural disengagement. These strategies identified three factors: Problem – Solving Coping, Avoidance Behavior, and Emotion-Focused Coping. The analyses were performed with the use of SPSS software.

RESULTS

In order to find out what strategies of coping with stress are most often used by healthcare professionals, descriptive statistics of stress coping strategies were calculated for the entire study group, taking into account the division into occupational groups. The Shapiro-Wilk test showed that the distribution of the coping strategies was skewed. Table 2 shows that the highest mean can be observed in problem–solving strategies, including active coping (M=2.36), planning (M=2.36), and seeking instrumental support (M=2 .04). The lowest scores were noted in using psychoactive substances (M=0.53), sense of humor (M=0.88) and behav-

Table 2. Descriptive statistics and distributions of coping strategies

Stress coping strategy	*N*	*Min*	*Max*	*M*	*MD*	*SD*	*S-W*
Active coping	134	0	3	**2.36**	2.50	0.66	0.844***
Planning	134	0	3	**2.36**	2.50	0.66	0.847***
Positive reframing	134	0	3	1.96	2.00	0.77	0.922***
Accteptance	134	0	3	1.93	2.00	0.77	0.932***
Humor	134	0	3	0.88	0.75	0.76	0.895***
Religion	134	0	3	1.85	2.00	0.99	0.877***
Seeking emotional support	134	0	3	2.02	2.00	0.78	0.899***
Seeking instrumental support	134	0	3	**2.04**	2.00	0.66	0.911***
Self - distraction	134	0	3	1.74	1.50	0.79	0.945***
Denial	134	0	3	0.92	1.00	0.83	0.885***
Venting	134	0	3	1.49	1.50	0.73	0.946***
Substance use	134	0	3	0.53	1.00	0.85	0.682***
Behavioural disengagement	134	0	3	0.90	1.00	0.85	0.875***
Self-blame	134	0	3	1.50	1.50	0.86	0.940***

N – numer of observations ; *Min* - minimum value*; Max* - maximum value*; M - mean; MD - median; SD - standard deviation*; *S-W* –Shapiro-Wilk test; *p*- statistical significance. *** p<0.001

ioral disengagement (M=0.90). These results confirmed the assumption that healthcare workers most often use active coping and planning (hypothesis 1).

In the group of physicians (Table 3), as in the entire study group, the highest mean was observed in active coping (M=2.36), planning (M=2.31), and seeking instrumental support (M=1.95). The least frequent coping strategies among them were denial (M=0.63), substance use (M=0.66), and humor (M=0.75). In the group of nurses (Table 4), the highest mean scores were observed in the same strategies as in the group of physicians. Accordingly, the most frequent were planning (M=2.35), active coping (M=2.32), and seeking instrumental support (M=2.09). The least frequently used were substance use (M=0.48), behavioral disengagement (M=0.96), and denial (M=1.07). The highest scores among midwives (Table 5) are observed in active coping (M=2.46) and planning (M=2.41). Midwives, in addition to the most frequently used problem-oriented strategies, willingly use the strategy focused on emotions, which is seeking emotional support (M=2.19).

Table 3. Descriptive statistics and distributions of coping strategies in physicians

Stress coping strategy	*N*	*Min*	*Max*	*M*	*MD*	*SD*	*S-W*	*p*
Active coping	32	0	3	**2.36**	2.50	0.65	0.85	<.001
Planning	32	0	3	**2.31**	2.50	0.73	0.81	<.001
Positive reframing	32	0	3	1.94	2.00	0.87	0.91	.013
Accteptance	32	0	3	1.91	2.00	0.72	0.93	.032
Humor	32	0	3	0.75	0.50	0.69	0.86	<.001
Religion	32	0	3	1.60	1.50	1.21	0.84	<.001
Seeking emotional support	32	0	3	1.88	2.00	0.79	0.89	.004
Seeking instrumental support	32	0	3	**1.95**	2.00	0.65	0.85	<.001
Self - distraction	32	0	3	1.61	1.50	0.74	0.95	.109
Denial	32	0	3	0.63	0.25	0.74	0.78	<.001
Venting	32	0	3	1.72	1.50	0.74	0.95	.141
Substance use	32	0	3	0.66	0.00	0.89	0.74	<.001
Behavioural disengagement	32	0	3	0.94	1.00	0.80	0.89	.003
Self-blame	32	0	3	1.66	1.50	0.87	0.93	.052

N – numer of observations ; *Min* - minimum value*; Max* - maximum value*; M - mean; MD - median;*

Table 4. Descriptive statistics and distributions of coping strategies in nurses

Stress coping strategy	*N*	*Min*	*Max*	*M*	*MD*	*SD*	*S-W*	*p*
Active coping	68	0	3	**2.32**	2.50	0.75	0.84	<.001
Planning	68	0	3	**2.35**	2.50	0.67	0.84	<.001
Positive reframing	68	0	3	1.88	2.00	0.75	0.93	<.001
Accteptance	68	0	3	1.91	2.00	0.82	0.92	<.001
Humor	68	0	3	0.95	1.00	0.82	0.90	<.001
Religion	68	0	3	1.96	2.00	0.90	0.87	<.001
Seeking emotional support	68	0	3	2.00	2.00	0.83	0.90	<.001
Seeking instrumental suport	68	0	3	**2.09**	2.00	0.71	0.91	<.001
Self - distraction	68	0	3	1.76	1.50	0.80	0.94	.002
Denial	68	0	3	1.07	1.00	0.81	0.90	<.001
Venting	68	0	3	1.38	1.50	0.79	0.94	.003
Substance use	68	0	3	0.48	0.00	0.74	0.68	<.001
Behavioural disengagement	68	0	3	0.96	1.00	0.88	0.88	<.001
Self-blame	68	0	3	1.49	1.50	0.83	0.94	.002

N – numer of observations ; *Min* - minimum value*; Max* - maximum value*; M - mean; MD - median; SD - standard deviation*; *S-W* –Shapiro-Wilk test; *p*- statistical significance. *** p<0.001

Table 5. Descriptive statistics and distributions of coping strategies in midwifes

Stress coping strategy	*N*	*Min*	*Max*	*M*	*MD*	*SD*	*S-W*	*p*
Active coping	34	0	3	**2.46**	2.50	0.48	0.84	<.001
Planning	34	0	3	**2.41**	2.50	0.61	0.82	<.001
Positive reframing	34	0	3	2.15	2.25	0.69	0.90	.005
Accteptance	34	0	3	1.97	2.00	0.71	0.92	.017
Humor	34	0	3	0.88	0.75	0.70	0.90	.005
Religion	34	0	3	1.90	2.00	0.96	0.89	.003
Seeking emotional support	34	0	3	**2.19**	2.00	0.64	0.89	.003
Seeking instrumental support	34	0	3	2.04	2.00	0.56	0.91	.011
Self - distraction	34	0	3	1.82	2.00	0.81	0.94	.060
Denial	34	0	3	0.90	0.50	0.57	0.87	<.001
Venting	34	0	3	1.49	1.50	0.95	0.92	.021
Substance use	34	0	3	0.51	0.00	0.89	0.60	<.001
Behavioural disengagement	34	0	3	0.75	0.50	0.84	0.82	<.001
Self-blame	34	0	3	1.38	1.50	0.91	0.94	.058

N – numer of observations ; *Min* - minimum value*; Max* - maximum value*; M - mean; MD - median; SD - standard deviation*; *S-W* –Shapiro-Wilk test; *p*- statistical significance. *** p<0.001

Table 6. Kruskal-Wallis and Bonferroni test results for stress coping strategies

Stress coping strategy	Physicians		Nurses		Midwifes			
	Rank	*MD*	*Rank*	*MD*	*Rank*	*MD*	*H*	*P*
Active coping	66.81	2.50	66.60	2.50	69.94	2.50	0.20	.906
Planning	65.84	2.50	67.21	2.50	69.65	2.50	0.18	.913
Positive reframing	67.45	2.00	63.01	2.00	76.53	2.25	2.87	.238
Accteptance	65.63	2.00	67.75	2.00	68.76	2.00	0.12	.943
Humor	61.34	0.50	69.88	1.00	68.54	0.75	1.14	.567
Religion	60.06	1.50	70.44	2.00	68.62	2.00	1.67	.434
Seeking emotional suport	60.63	2.00	67.26	2.00	74.46	2.00	2.24	.326
Seeking instrumental support	62.67	2.00	70.70	2.00	65.65	2.00	1.12	.572
Self - distraction	60.67	1.50	68.35	1.5	72.24	2.00	1.59	.453
Denial	**53.78**	**0.25**	**74.95**	**1.00**	**65.51**	**0.50**	**6.93**	**.031**
Venting	78.09	1.50	62.85	1.50	66.82	1.50	3.52	.172
Substance use	73.22	0.00	66.29	0.00	64.53	0.00	1.33	.515
Behavioural disengagement	69.98	1.00	69.79	1.00	60.59	0.50	1.53	.464
Self-blame	73.86	1.50	67.03	1.50	62.46	1.50	1.49	.476

MD – median; H –Kruskal-Wallis test; p – statistical significance;

The above-presented data suggest some differences between the groups examined,. Therefore, we conducted further analysis using non-parametric Kruskal-Wallis tests for independent samples due to the skewed distribution order of results. The test revealed that physicians, nurses, and midwives significantly differ only in the denial strategy (see Table 6). It confirmed the second hypothesis, although it concerns only one factor. The remaining two hypotheses were not confirmed.

DISCUSSION

The present study found that active coping with stress and planning are the dominant strategies among the surveyed healthcare workers. This observation is consistent with many previous reports, which argue that these strategies serve

as a protective factor against experiencing professional burnout. These studies argue that a high level of perceived stress determines behaviors aimed at active problem-solving as well as reframing. They report the use of planning focusing on the problem, seeking emotional and instrumental support, turning to religion and acceptance, positive reframing, social support, physical activity, and active social life (Kaźmierczak et al., 2019; Kotarba & Borowiak, 2018; Lampert, 2020; Marcysiak et al., 2014; Markiewicz, 2019; Ramuszewicz et al., 2005; Śniegocka and Śniegocki, 2014).

On the other hand, Grochowska, Bodys-Cupak, and Kurus (2017) found that nurses tend to reach for psychoactive substances in some difficult situations. At the same time, Piszcz et al. (2021) observed that members of transplant teams most often use the avoidance style in stressful situations. Also, Stępień and Szmigiel (2017) report that more than half of nurses in pediatric wards admit to using obscene words, stimulants, or overeating. Moreover, the results of the research conducted by Wallace and Lemaire (2013) on 1,100 Canadian doctors revealed the use of denial as the primary strategy for coping with stress, especially in those with longer work experience. Also, Firth-Cozens (1998) reported that physicians often rely on denial and avoidance as stress-coping strategies. The diversity of the choice of strategies used by medical professionals may be influenced by the type of personality and the type or source of stress (see Parkes, 1990; Scheier & Carver, 1985). Furthermore, many physicians often adopt denial as a coping strategy in response to work overload and difficult interactions (Wallace & Lemaire, 2013).

CONCLUSIONS

The above-presented data allow the conclusion that the examined healthcare workers used mostly active coping with stress. The search for emotional support seems to be the domain of women working as nurses or midwives, although the differences were not statistically significant. However, the differences occurred in the case of the denial mechanism, which nurses more often adopted. It is essential to provide appropriate support to these people in the case of longer work experience and the frequency of experiencing difficult and conflict situations at work. The possibility of professional and personal development may be a protective factor – especially in the context of professional burnout. However, the present results must be treated with caution since they are based on reports of participants, and it is a well-known fact that humans tend to show themselves in a better light. Therefore, they tend not to inform about inconvenient facts.

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Address for correspondence:
Bożydar L.J. Kaczmarek
Institute of Psychology and Human Science, WSEI University
Projektowa 4, 20-209 Lublin, Poland
e-mail: bozydarlj@gmail.com