Central European Journal of Nursing and Midwifery

Cent Eur J Nurs Midw 2017;8(3):667–674
doi: 10.15452/CEJNM.2017.08.0017

ORIGINAL PAPER

WORK-RELATED STRESS AND COPING AMONG MIDWIVES IN SLOVAKIA

Ľubica Bánovčinová

Department of Midwifery, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia

Received November 29, 2016; Accepted May 16, 2017.

Abstract

Aim: The purpose of the study was to identify the most common workplace stressors and most frequently used coping strategies among Slovak midwives, as well as the relationships between work place stressors, coping strategies, and demographic characteristics. *Design:* Quantitative cross-sectional study. *Methods:* A cross-sectional study was conducted with the research sample, which consisted of 100 midwives (females, age 37.91 ± 11.03). The Brief COPE questionnaire and Expanded Nursing Stress Scale were used. Descriptive statistic, Kruskal-Wallis Test, Student's t-test, and Pearson's Correlation Analysis were employed. *Results:* Death and dying, conflicts with doctors, and workload were the most cited stressors. Active coping, acceptance, and using instrumental support were the most frequently used coping strategies. Midwives used both problem-focused and emotion-focused strategies when dealing with work-related stressors. *Conclusion:* Since emotion-focused strategies are considered maladaptive in the long term, intervention strategies and education programs helping midwives in the use of positive forms of adaptive problem-focused coping would be beneficial.

Keywords: coping strategies, midwives, working environment, work-related stressors.

Introduction

The quality of health care depends on many factors, including the health and skills of health-care staff, of which a substantial part is formed by nurses and midwives. Previous studies have revealed incidence of common stressors in the work of midwives, such as workload (Li, Lambert, 2008), dealing with death and dying (Lambert et al., 2004), insufficient work resources (Knezevic et al., 2011), shift work (Mollart et al., 2013), conflicts with co-workers and physicians, or dealing with unreasonable demands from patients and their families (Roopalekha, Letha, Swetha, 2012). A person exposed to stress at work exhibits a wide range of emotional, cognitive, behavioral, and physiological reactions to various harmful effects of work, work organisation, and working environment. Psychological reactions to stress may include: growing anxiety, difficulty concentrating, negative emotions, lack of attention, depression, fatigue, burnout syndrome (Knezevic et al., 2011; Mollart et al., 2013), and lower job satisfaction (Sveinsdóttir, Biering, Ramel, 2006; Kamal et al., 2012). Despite this knowledge, there is still insufficient attention assigned to the seriousness and prevalence of work-related psychological distress in midwifery populations (Pezaro et al., 2016). Considering the role of midwives in the quality of healthcare services for mothers and children, it is essential to evaluate their job conditions (Kordi et al., 2014).

The importance of occupational stress management is broadly acknowledged by, among other things, health and safety protection principles, as stress was discovered to be associated not only with a reduction in productivity and shortening of working time, but also with an increase in rates of sickness and accidents at work (Van der Colff, Rothmann, 2009; Moustaka, Constantinidis, 2010).

The way in which workers cope with stress has been the subject of several studies, based mainly on the conceptual analysis of stress by Lazarus (1966). Lazarus divided coping responses into two categories: problem-focused coping, which represents efforts to master the situation or solve the problem; and emotion-focused coping, aimed at reducing negative emotions rather than modifying external sources of stress. Emotion-focused coping also includes avoidance-coping, in which an individual attempts to escape from the situation, or uses drugs and alcohol (Burgess, Irvine, Wallymahmed, 2010).

According to research by Chang et al. (2006), emotion-focused coping is associated with reduced mental health, with the standard effect of emotion-

Corresponding author: Ľubica Bánovčinová, Department of Midwifery, Jessenius Faculty of Medicine in Martin, Commenius University in Bratislava, Mala Hora 5, Martin, Slovakia; e-mail: banovcinova@jfmed.uniba.sk

focused coping being almost as negative as that of stress itself. Conversely, more frequent use of problem-focused coping responses was mildly associated with improved mental health. Therefore, midwives should adopt coping responses that address workplace stressors rather than rely on their own internal responses to stress. Specifically, this means (based on The Brief Cope Questionnaire), resisting one's tendency for avoidance (i.e., self-distraction, substance use, and behavioral disengagement), denial (joking, and verbally expressing negative feelings), and blaming oneself for the situation. Instead, problem-focused coping would be more beneficial. Such responses include taking action to improve the situation, using strategies to solve problems, learning to live with the situation, and using the emotional and instrumental support of others (Carver, 1997). Developing these skills in nurses may require formal professional development (Chang et al., 2007).

Aim

The purpose of the study was to identify the most common workplace stressors and most frequently used coping strategies among Slovak midwives, as well as the relationships between work place stressors, coping strategies, and demographic characteristics. The following research questions were formulated:

1. What are the most commonly identified workplace stressors among midwives?
2. What is the most frequently used coping strategy in our study sample?
3. What are the relationships between our participants´ work place stressors, coping strategies, and demographic characteristics?

Methods

Design

A quantitative cross-sectional study design was used.

Sample

The study sample consisted of 100 midwives working at departments and clinics of gynaecology and obstetrics in Slovakia. All of the research participants were women, with an average age of 37.91 ± 11.03, and length of experience in the field of midwifery 16.75 ± 12.33 years. In terms of level of education attained, the highest proportion of participants (53%), were university graduates, and 47% of participants were (vocational) high school graduates.

Data collection

Research data were collected over an 18-month period from 2014 to 2015. Data collection was carried out in hospital settings, whereby midwives were asked to complete questionnaires. Completion and return of the questionnaire was taken as implied consent. The response rate was 77%.

The demographic questionnaire contained two sections. In the first, we collected personal information such as age, marital status, and education. The second section focused on work-related variables such as years of midwifery experiences, work area, employment status, and weekly shift hours.

The Expanded Nursing Stress Scale (ENSS) was used to measure nurses' job related stressors. The ENSS is an expanded and updated revision of the classic Nursing Stress Scale (NSS) developed by Gray-Toft and Anderson (1981). The ENSS contains 57 items in nine subscales: Death and Dying, Conflict with Physicians, Inadequate Emotional Preparation, Problems Relating to Peers, Problems Relating to Supervisors, Workload, Uncertainty Concerning Treatment, Patients and their Families, and Discrimination. The 57 items were arranged in a five-point Likert response scale. The response ranged from "never stressful" (1), "extremely stressful" (4), and doesn't apply (0) (French et al., 2000). Cronbach's alpha for the ENSS demonstrated improved reliability ($\alpha = 0.96$) over the original NSS ($\alpha = 0.89$) (Grey-Toft, Anderson, 1981). In our study, individual subscale Cronbach alpha ranged from $\alpha = 0.88$ (problems with supervisors) to $\alpha = 0.65$ (discrimination).

The Brief Cope questionnaire (Carver, 1997) was administered to identify 14 coping strategies used in relation to stressors in the work environment. These strategies could be categorised into problem-focused coping (active coping, planning, positive reframing, acceptance, using emotional support, and using instrumental support); emotion-focused coping (humor, religion, venting, and self-blame), and avoidance-focused coping (self-distraction, substance use, behavioral disengagement, and denial). Respondents answer on a four-point frequency scale from "I usually don't do this at all" to "I usually do this a lot" (Burgess, Irvine, Wallymahmed, 2010). Cronbach alpha for this study was 0.859.

Data analysis

Basic descriptive statistics were used to characterize the research sample. The IBM Statistical Package for Social Sciences – SPSS Statistics for Windows was used to analyze the results. To address research question 1, descriptive statistics were used. Questions 2 and 3 were addressed using Student's Rho Test, and the Kruskal-Wallis Test, as some variables failed a normality test.

Results

All of the research participants were women. The average age of respondents was 37.91 ± 11.03, the minimum age was 22, and maximum age was 59 years. The largest single group of respondents (35%) was the age group 22–30. The smallest single group of respondents (16%) was the age group ≥ 51. The average length of experience was 16.75 ± 12.33 years. The largest group of midwives in terms of experience (37%) had been working in the field for less than 10 years. The smallest group (17%) had been working in the field over 31years. The detailed characteristics of the respondents are presented in Table 1.

The majority of respondents (57%) were married or living in long-term relationships, a minority (13%) were separated or divorced. 24% of all respondents had vocational school education; 23% of women were certificated obstetrics/gynaecology nurses, and 53% of midwives had university education. Midwives in our sample worked in various work areas: the majority of respondents (58%) worked at a gynaecological and obstetrics clinic, while the smallest group of respondents (7%) worked in operating rooms.

Table 2 presents the results of the coping strategies used by midwives to overcome stress. The majority of respondents rated active coping (mean = 5.60; SD = 1.77) as the major coping strategy they used to overcome stress. The least used coping methods were identified as humor (mean = 3.21; SD = 1.46), substance use (mean = 2.27; SD = 0.68,) and behavioral disengagement (mean = 2.73; SD = 0.91).

Descriptive analysis indicated that death and dying, and conflicts with physicians were the most stressful events as perceived by midwives (mean = 2.07; standard deviation – SD = 1.15; 2.02 ± 0.82 respectively). Experiencing discrimination on basis of sex, and/or being sexually harassed were the least stressful events as perceived by midwives (mean = 0.64; SD = 0.74; "never stressful" to "does not apply") (Table 3).

Table 1 Background characteristics

Characteristics	n	%
Age (mean = 37.91; SD =11.03)		
22–30	35	35
31–40	22	22
41–50	27	27
≥ 51	16	16
Length of practice (years) (mean = 16.75; SD = 12.33)		
0–10	37	37
11–20	22	22
21–30	24	24
≥ 31	17	17
Marital status		
single	30	30
de facto/married/widowed	57	57
separated/ divorced	13	13
Education		
vocational school	24	24
certificated obstetrics/ gynaecology nurses	23	23
university education	53	53
Work area		
delivery room	26	26
operating room	7	7
outpatient department	9	9
gynaecology and obstetrics clinic	58	58

n – number; SD – standard deviation

Table 2 Coping strategies employed by respondents

	n	mean (SD)	not at all n (%)	a little bit n (%)	a medium amount n (%)	a lot n (%)
self-distraction	99	4.38 (1.65)	18 (18.2)	35 (35.3)	37 (3.4)	9 (9.1)
active coping	99	5.60 (1.77)	7 (7.1)	18 (18.2)	42 (42.4)	32 (32.3)
denial	98	3.36 (1.24)	30 (30.6)	51 (52)	17 (17.3)	0
substance use	100	2.27 (0.68)	85 (85)	14 (14)	1 (1)	0
emotional support	94	4.79 (1.59)	8 (8.5)	35 (37.2)	36 (38.3)	15 (16)
instrumental support	99	4.96 (1.68)	11 (11.1)	30 (30.3)	41 (41.4)	17 (17.2)
behavioral disengagement	98	2.73 (0.91)	51 (52)	43 (43.9)	4 (4.1)	0
venting	98	3.69 (1.20)	18 (18.4)	35 (35.7)	24 (2.5)	1 (1)
positive reframing	100	4.76 (1.72)	11 (11)	34 (34)	41 (41)	14 (14)
planning	99	4.72 (1.65)	11 (11.1)	34 (34.3)	40 (40.4)	14 (14.1)
humor	99	3.21 (1.46)	45 (45.5)	38 (38.4)	13 (13.1)	3 (3)
acceptance	96	4.89 (1.49)	6 (6.3)	31 (32.3)	45 (46.8)	14 (14.6)
spiritual	96	3.53 (1.82)	44 (45.8)	30 (31.3)	12 (12.5)	10 (10.4)
self-blame	99	3.52 (1.26)	27 (27.3)	49 (49.5)	21 (21.2)	2 (2)

n – number; SD – standard deviation

Table 3 Response to items in the ENSS subscales

	n	mean (SD)	never stressful n (%)	occasionally stressful n (%)	frequently stressful n (%)	extremely stressful n (%)	does not apply n (%)
death and dying	99	2.07 (1.15)	29 (29.3)	21 (21.2)	23 (23.2)	26 (26.3)	0
conflict with physicians	99	2.02 (0.82)	11 (11.1)	42 (42.4)	34 (34.4)	11 (11.1)	1 (1)
workload	97	1.90 (0.72)	14 (14.4)	41 (42.3)	40 (41.2)	2 (2.1)	0
problems with supervisors	95	1.86 (0.97)	23 (24.2)	29 (30.5)	31 (32.6)	11 (11.6)	1 (1.1)
uncertainty concerning treatment	97	1.76 (0.79)	18 (18.6)	39 (40.2)	34 (35.1)	5 (5.2)	1 (1)
patients and their families	99	1.73 (0.84)	25 (25.3)	38 (38.4)	29 (29.3)	7 (7.1)	0
inadequate preparation	99	1.50 (0.74)	24 (24.2)	47 (47.5)	21 (21.2)	0	7 (7.1)
problems with peers	98	1.29 (0.84)	34 (34.7)	53 (54.1)	9 (9.2)	0	2 (2)
discrimination	99	0.64 (0.74)	42 (42.4)	15 (15.2)	4 (4)	1 (1)	37 (37.4)

n – number; SD – standard deviation

A Spearman's rank-order correlation was run to determine the relationship between midwives' age, length of practice, and coping methods (Brief COPE); and the Kruskal-Wallis Test was used to examine differences in coping methods according to participants' education and working area (Table 4).

There was a strong, negative correlation between age and education (p = 0.000), self-distraction (p = 0.033), instrumental support (p = 0.004), venting (p = 0,001) and positive reframing (p = 0,014); a negative correlation between length of practice and education (p = 0.000), instrumental support (p = 0.008), venting (p = 0.001), positive reframing (p = 0.028) and self-distraction (p = 0.045); and a positive correlation between age and length of practice (p = 0.000).

Table 4 Relationships between demographics and coping strategies

	age		education		length of practice		working unit	
	r	p	χ^2	p	r	p	χ^2	p
self-distraction	**-0.215***	**0.033**	3.109	0.211	**-0.203***	**0.045**	2.546	0.467
active coping	-0.126	0.212	0.628	0.730	-0.111	0.278	1.522	0.677
denial	0.128	0.210	1.323	0.516	0.091	0.373	2.370	0.499
substance use	0.032	0.752	0.345	0.842	0.045	0.659	3.233	0.357
emotional support	-0.164	0.115	3.576	0.167	-0.127	0.224	0.306	0.959
instrumental support	**-0.289****	**0.004**	3.949	0.139	**-0.266****	**0.008**	0.518	0.915
behavioral disengagement	0.087	0.395	1.429	0.489	0.117	0.255	1.773	0.621
venting	**-0.337****	**0.001**	1.162	0.559	**-0.334****	**0.001**	6.155	0.104
positive reframing	**-0.245***	**0.014**	3.966	0.138	**-0.221***	**0.028**	5.152	0.161
planning	-0.033	0.748	0.234	0.890	0.031	0.764	4.045	0.257
humor	-0.193	0.056	1.658	0.437	-0.198	0.051	3.614	0.306
acceptance	-0.061	0.556	2.499	0.287	-0.099	0.342	1.428	0.699
spiritual	-0.131	0.204	4.598	0.100	-0.099	0.246	1.609	0.657
self-blame	-0,163	0,108	1.568	0.457	-0.139	0.171	2,349	0.503
age					**0.973****	**0.000**	6.337	0.096
education	**-0.523****	**0.000**			**-0.512****	**0.000**	7.522	0.057
length of practice	**0.973****	**0.000**					4.808	0.186
working unit	6.337	0.096	7.522	0.057	4.808	0.186		

***Correlation is significant at the 0.01 level; *Correlation is significant at the 0.05 level; r- Spearman's correlation coefficient; χ^2– chí-squared test; p – significance level*

A Spearman's rank-order correlation was run to determine the relationship between midwives' age, length of practice, and work-related stressors; and the Kruskal-Wallis Test was used to examine differences in workplace stressors according to participants' education and work area (Table 5).

There was a strong, negative correlation between age and conflicts with physicians (p = 0.018) and inadequate emotional preparation (p = 0.017). A negative correlation was also found between length of practice and conflicts with physicians (p = 0.028), and inadequate emotional preparation (p = 0.039).

A Kruskal-Wallis H Test showed that there was a statistically significant difference in workload and inadequate preparation score between the different working units, $\chi^2(3) = 7.954$, p = 0.047; $\chi^2(3) = 9.214$, p = 0.027, respectively.

A Spearman's rank-order correlation was run to determine the relationship between midwives' preferred coping strategies and work-related stressors. Forty positive significant correlations (at p < 0,05 and p < 0,01 level) were found. Table 6 lists all correlations.

Table 5 Relationships between demographics and workplace stressors

	age		education		length of practice		working unit	
	r	**p**	**χ^2**	**p**	**r**	**p**	**χ^2**	**p**
death and dying	0.072	0.481	3.179	0.204	0.089	0.384	4.455	0.216
conflict with physicians	**-0.237***	**0.018**	1.900	0.387	**-0.222***	**0.028**	1.376	0.711
workload	-0.121	0.238	0.859	0.651	-0.086	0.405	**7.954***	**0.047**
problems with supervisors	-0.167	0.106	1.064	0.587	-0.143	0.169	3.824	0.281
uncertainty concerning treatment	-0.180	0.077	0.221	0.896	-0.168	0.101	4.593	0.204
patients and their families	-0.138	0.174	1.149	0.563	-0.124	0.224	0.786	0.853
inadequate preparation	**-0.240***	**0.017**	1.672	0.434	**-0.209***	**0.039**	**9.214***	**0.027**
problems with peers	-0.185	0.068	1.252	0.535	-0.178	0.081	0.535	0.911
discrimination	-0.106	0.295	0.974	0.614	-0.072	0.481	0.107	0.991

***Correlation is significant at the 0.01 level; *Correlation is significant at the 0.05 level; r- Spearman's correlation coefficient; χ^2– chí-squared test; p – significance level*

Table 6 Correlations between workplace stressors[a] and coping methods

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**
self-distraction	0.033	0.201	0.134	0.193	0.182	0.236	**0.360****	0.198	-0.023
active coping	0.196	**0.255***	**0.270****	0.176	**0.255***	**0.225***	**0.358****	0.155	0.077
denial	0.085	0.190	**0.247***	0.184	**0.229***	**0.269****	0.088	**0.235***	-0.013
substance use	-0.150	0.058	0.060	0.149	0.014	0.044	-0.013	0.009	-0.184
emotional support	-0.036	**0.236***	**0.209***	0.160	0.206	**0.240***	0.202	0.190	0.046
instrumental support	0.117	**0.290****	**0.312****	**0.214***	**0.303****	**0.224***	**0.274****	**0.282****	0.133
behavioral disengagement	0.144	0.181	**0.250***	**0.278****	0.199	**0.270****	0.194	**0.284****	0.096
venting	0.000	**0.209***	0.123	0.131	**0.218***	**0.343****	0.097	**0.314****	0.060
positive reframing	0.056	0.186	0.099	0.152	0.148	0.145	0.129	0.058	0.032
planning	**0.240***	**0.289****	**0.239***	**0.368****	**0.338****	**0.297****	0.127	0.161	0.097
humor	-0.084	0.099	0.096	0.137	0.164	0.174	0.043	0.161	0.012
acceptance	0.000	0.187	0.145	0.094	0.125	0.195	0.106	0.126	0.001
spiritual	-0.141	0.199	0.021	0.176	0.176	0.144	0.028	0.086	0.090
self-blame	0.058	**0.206***	**0.319****	0.171	**0.289****	**0.308****	**0.239***	**0.395****	0.092

***Correlation is significant at the 0.01 level; *Correlation is significant at the 0.05 level; 1. death and dying, 2. conflict with physicians, 3. workload, 4. problems with supervisors, 5. uncertainty concerning treatment, 6. patients and their families, 7. inadequate emotional preparation, 8. problems relating to peers, and 9. discrimination*

Discussion

Midwives in our study reported that experience of the death and dying of a patient, especially a child, as the most stressful experience in the work environment. If this experience and the emotions associated with the situation are not addressed adequately, midwives may experience anxiety, depression, and fear of death (Muliira, Bezuidenhout, 2015). They may also experience negative emotions, increased fatigue, and difficulty in concentrating, and these may affect their well-being and performance (Knezevic et al., 2011).

Most midwives in our sample coped with their distress using adaptive methods such as active coping, seeking instrumental support, and acceptance. Thus, midwives in this study would most likely take action to improve their situation (active coping), would seek support and assistance from others (social support), and/or would learn to live with the situation (acceptance).

Participants' education was found to be negatively correlated to age and years of experience of midwifery practice. Midwives who are older and have longer practical experience are more likely to have a lower level of basic midwifery education. This might be expected, as university-level midwifery education in Slovakia was launched only in 2003

with a bachelor degree program, and in 2011, a master's degree was added (Mivšek, Baškova, Wilhelmova, 2016).

Both age of respondents in our sample, and length of practice were found to be negatively correlated with conflicts with physicians, and inadequate preparation. New university-level education models, standards of midwifery hospital care, and legislation allow midwives a considerable degree of autonomy. However, most of these competencies are not used in practice, and the majority of midwives work in outpatient departments and gynaecological and obstetrics clinics where most of these activities come under the remit of doctors (Mivšek, Baškova, Wilhelmova, 2016). The discrepancy between midwives´ education and the level of autonomy they are granted in practice might cause a significant negative correlation between age and conflicts with physicians. Younger midwives, with a higher level of education, while being less experienced, are more likely to be involved in conflicts with physicians than their older colleagues.

Significant differences in workload and inadequate preparation were found among participants from different working units. Midwives working in gynaecological clinics tend to experience workload stress more often than those in operating rooms, delivery rooms, and outpatient departments. Due to the current situation in hospitals – a constant reduction in the number of healthcare staff, and their departure abroad or to other economic activities, the amount of work midwives in gynaecological clinics are expected to perform mounts up. With fewer midwives to care for patients, workload increases. Midwives in surgery experience more stress due to inadequate preparation than those in other units. This might be expected since surgery requires a specific set of skills which are not commonly included in basic midwifery training.

Both age and length of practice were negatively correlated with instrumental support, self-distraction, venting, and positive reframing. These correlations suggest that older and more experienced midwives are more reluctant to seek advice, assistance, and information than their younger colleagues. As suggested by Li and Lambert (2008), this might be related to the fact that older midwives, who have lower levels of basic education, never received adequate basic nursing training in how to mobilize effective coping mechanisms (including social support). On the other hand, their length of practice, and level of experience could mean that they perceive asking for advice or help to be redundant. As healthcare professionals are expected to remain professional, empathetic, and emotionally involved, even in stressful situations, it can be very difficult for midwives to express their own negative feelings (Wallbank, Robertson, 2013; Hunter et al., 2016). According to Gholamzadeh, Sharif and Rad (2011), positive reframing is a coping method that can be enhanced through increased educational preparation and work experience. The authors assumed that use of positive reappraisal coping mode was associated with educational background. This given, it may be possible that lower levels of basic education, associated with higher age in respondents, might be a cause of less frequent use of positive reframing in older and more experienced midwives.

The most cited stressor, death and dying, positively correlated only with planning. This problem-solving coping strategy involves searching for strategies and planning steps for handling and resolving situations. There is little appreciation of the fact that certain aspects of midwives' work can cause intense and uncomfortable feelings. The general assumption being that a maternity unit is a positive environment in which only joyful events occur, it can be very difficult for professionals working in these facilities to express their personal negative feelings (Wallbank, Robertson, 2013).

Conflicts with physicians was positively correlated with active coping, both emotional and instrumental support, venting, planning, and self-blame. As stated by Tabak and Orit (2007), nurses' choice of tactic for resolving conflicts with physician colleagues correlates with the level of stress they experience at work. In their study, problem solving strategies were negatively correlated with stress.

Problems with other midwives (and/or other nurses outside their immediate work setting) were positively correlated with denial, instrumental support, behavioral disengagement, venting, and self-blame. All of these coping methods, except for instrumental support, are focused on emotions. Difficulties in working with peers, and the impossibility of exchanging experiences and feelings with other staff is a very stressful situation (Milutinović et al., 2012) which could make working in a professional team more difficult and less efficient. Positive relationships with co-workers also influence midwives' job satisfaction (Jarosova et al., 2016).

Uncertainty concerning treatment was positively correlated with active coping, instrumental support, planning, self-blame, denial, and venting. Since the majority of midwives in Slovakia work in outpatient departments and gynaecological and obstetrics clinics where most activities and decisions concerning patient treatment come under the remit of doctors

(Mivšek, Baškova, Wilhelmova, 2016), they must deal with stressful situations, such as being uncertain about treatment, regarding treatment selected by physicians to be inappropriate, not knowing exactly what a patient should be told, or being in charge with inadequate experience. A possible reason for using more problem-focused strategies might be the higher basic education of respondents, providing them with the knowledge and skills necessary to effectively deal with situations.

Positive correlations between working with patients and their families and active coping, denial, emotional and instrumental support, behavioral disengagement, venting, planning, and self-blame suggest that midwives use various methods of coping with the stress arising from this. As stated by Milutinović et al. (2012), problems with patients and their families is a significant work-related stressor: working with patients seems to cause excessive workload because nurses must provide psychological support and/or respond to the patients' dissatisfaction or complaints.

Inadequate preparation was found to be positively correlated with self-distraction, active coping, use of instrumental support and, self-blame. Li and Lambert (2008) related the use of predominantly emotionally focused coping among Chinese nurses with insufficient education. However, in the current study, inadequate preparation was associated with lower age and length of practice. This suggests that younger, more educated midwives lack the practical experience, rather than theoretical knowledge, needed to deal with such situations.

The limitations of our study include the relatively small set of participants, preventing extrapolation of the findings onto the broader population of midwives. Moreover, the study does not include some factors that can cause midwives stress (working in shifts, lack of resources etc.).

Conclusion

Midwives working in different working units are faced with stressful situations every day. In our study, the death and dying of patients, excessive workload, and conflicts with physicians were considered the most stressful situations in a sample of Slovakian midwives. These stressors put great demands on midwives' effective mastery. Our results showed that midwives mostly used positive and active coping mechanisms. However, emotion-focused strategies, which are considered maladaptive in the long term, were also quite commonly used. Problem-focused coping is considered more beneficial.

Therefore, it is necessary to design and put into practice intervention strategies, and training programs that would help midwives in the use of positive forms of adaptive coping. This may positively affect not only their performance and job satisfaction, but also the quality of healthcare. The results of this study may also assist supervisors and policy-makers to identify and understand the problems burdening staff, and to develop strategies to improve the working conditions of midwives.

Ethical aspects and conflict of interest

Permission to conduct the project was granted by the Ethical Committee at Jessenius Faculty of Medicine CU in Martin, Slovakia.

The author has no conflicts of interest to disclose.

References

Burgess L, Irvine F, Wallymahmed A. Personality, stress and coping in intensive care nurses: a descriptive exploratory study. *Nursing in Critical Care*. 2010;15(3):129–140.

Carver CS. You want to measure coping but your protocol's too long: consider the brief COPE. *International Journal of Behavioral Medicine*. 1997;4(1):92–100.

Chang EM, Daly J, Hancock KM, Bidewell JW, Johnson A, Lambert VA, Lambert CE. The relationships among workplace stressors, coping methods, demographic characteristics, and health in Australian nurses. *Journal of Professional Nursing*. 2006;22(1):30–38.

Chang EM, Bidewell JW, Huntington AD, Daly J, Johnson A, Wilson H, Lambert VA, Lambert CE. A survey of role stress, coping and health in Australian and New Zealand hospital nurses. *International Journal of Nursing Studies*. 2007;44(8):1354–1362.

French S, Lenton R, Walters V, Eyles J. An empirical evaluation of an expanded Nursing Stress Scale. *Journal of Nursing Measurement*. 2000;8(2):161–178.

Gholamzadeh S, Sharif F, Rad FD. Sources of occupational stress and coping strategies among nurses who work in Admission and Emergency Departments of Hospitals related to Shiraz University of Medical Sciences. *Iranian Journal of Nursing and Midwifery Research*. 2011;16(1):41–46.

Gray-Toft P, Anderson JG. The Nursing Stress Scale: development of an instrument. *Journal of Behavioral Assessment*. 1981;3(1):11–23.

Hunter A, Schott, J, Henley A. Kohner N, *Pregnancy Loss and the Death of a Baby: Guidelines for Professionals*, Revised 4th ed. London: SANDS (Stillbirth and Neonatal Death Society), 2016.

Jarosova D, Gurkova E, Palese A, Godeas G, Ziakova K, Song MS, Lee J, Cordeiro R, Chan SW, Babiarczyk B, Fras M, Nedvedova D. Job satisfaction and leaving intentions of midwives: analysis of a multinational cross-sectional survey. *Journal of Nursing Management*. 2016;24(1):70–79.

Kamal SM, Al-Dhshan M, Abu-Salameh KA, Abuadas FH, Hassan MM. The effect of nurses'perceived job related stressors on job satisfaction in Taif Governmental Hospitals in Kingdom of Saudi Arabia. *Journal of American Science*. 2012;8(3):119–125.

Knezevic B, Milosevic M, Golubic R, Belosevic L, Russo A, Mustajbegovic J. Work-related stress and work ability among Croatian university hospital midwives. *Midwifery*. 2011;27(2):146–153.
Kordi M, Mohamadirizi S, Shakeri MT, Modares Gharavi M, Salehi Fadardi J. The relationship between occupational stress and work ability among midwives in Mashhad, Iran. *Journal of Midwifery and Reproductive Health*. 2014;2(3):188–194.
Lambert VA, Lambert CE, Itano J, Inouye J, Kim S, Kuniviktikul W, Sitthimongkol Y, Pongthavornkamol K, Gasemgitvattana S, Ito M. Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among hospital nurses in Japan, Thailand, South Korea and the USA (Hawaii). *International Journal of Nursing Studies*. 2004;41(6):671–684.
Lazarus R. *Psychological stress and the coping process.* New York: McGraw-Hill; 1966.
Li J, Lambert VA. Workplace stressors, coping, demographics and job satisfaction in Chinese intensive care nurses. *Nursing in Critical Care*. 2008;13(1):12–24.
Milutinović D, Golubović B, Brkić N, Prokeš B. Professional stress and health among critical care nurses in Serbia. *Archives of Industrial Hygiene and Toxicology*. 2012;63(2):171–180.
Mivšek P, Baškova M, Wilhelmova R. Midwifery education in Central-Eastern Europe. *Midwifery*. 2016;33:43–45.
Mollart L, Skinner VM, Newing C, Foureur M. Factors that may influence midwives work-related stress and burnout. *Women and Birth*. 2013;26(1):26–32.
Moustaka E, Constandinidis TC. Sources and effects of work-related stress in nursing. *Health Science Journal*. 2010;4(4):210–216.
Muliira RS, Bezuidenhout MC. Occupational exposure to maternal death: psychological outcomes and coping methods used by midwives working in rural areas. *Midwifery*. 2015;31(1):184–190.
Pezaro S, Clyne W, Turner A, Fulton EA, Gerada C. 'Midwives Overboard!' Inside their hearts are breaking, their makeup may be flaking but their smile still stays on. *Women and Birth*. 2016;29(3):e59–66.
Roopalekha JPN, Letha KS, Swetha P. Occupational stress and coping among nurses in a super specialty hospital. *Journal of Health Management*. 2012;14(4):467–479.
Sveinsdóttir H, Biering P, Ramel A. Occupational stress, job satisfaction, and working environment among Icelandic nurses: a cross-sectional questionnaire survey. *International Journal of Nursing Studies*. 2006;43(7):875–889.
Tabak N, Orit K. Relationship between how nurses resolve their conflicts with doctors, their stress and job satisfaction. *Journal of Nursing Management*. 2007;15(3):321–331.
Van der Colff JJ, Rothmann S. Occupational stress, sense of coherence, coping, burnout and work engagement of registered nurses in South Afrika. *SA Journal of Industrial psychology/SA Tydskrif vir Bedryfsielkunde*. 2009;35(1):1–10.
Wallbank S, Robertson N. Predictors of staff distress in response to professionally experienced miscarriage, stillbirth and neonatal loss: a questionnaire survey. *International Journal of Nursing Studies*. 2013;50(8):1090–1097.

