Assessment of Psychosocial Risk Factors and their Impact on Health-Care Workers' Mental Health: An Empirical Study in Estonian Nursing Homes

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Abstract

According to the World Health Organization, the psychosocial work environment is one of the most important factors in preserving the wellbeing of healthcare workers and ensuring the quality of healthcare services. The psychosocial environment in healthcare is complicated and related to stressful work, high demands and working in shifts. The purpose of the study is to explore the relationships between work-related psychosocial risk factors and the mental health of care workers. The study used the Copenhagen Psychosocial Questionnaire, version II and the statistical analysis was performed using the SPSS 24.

Our results show that the work environment influences the mental health of care workers. Psychosocial hazards, such as low quality of management, lack of staff, role conflicts, low dedication among workers, physically and mentally challenging work and stress at work, are prevalent in the healthcare sector. The management of the organization including the management of safety issues should be proactive and oriented towards preserving the health of the employees and offering patient-centred services.

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1. Introduction

The field of healthcare has changed as a result of rapid technology developments during the last three decades. At present, a lack of the necessary staff is critical in the field of healthcare, and existing positions are being fulfilled by care workers with lower levels of vocational education, which in turn has a significant influence on the quality of the services offered and the sustainability of the institution due to unreasonable additional organizational costs (Titlestad et al., 2018).

It has been confirmed by the study by Rahman, Naing and Abdul-Mumin (2017) that problems concerning lack of staff may be related to the management of the organization and its prevailing work environment. A difficult psychosocial environment from the stressful work, high demands and working in shifts is most commonly highlighted in the field of healthcare (Toode, et al., 2015). The World Health Organization has named the psychosocial work environment (PWE) as one of the most important factors in preserving the wellbeing of healthcare workers and ensuring the quality of healthcare services (Rahman et al., 2017).

In the field of healthcare, the problematic psychosocial work environment is associated with the following factors: lack of staff, role conflict, low management quality, problems related to dedication, and the physical and psychological stress of the staff. The influence of the psychosocial work environment is measured in both employee and organizational terms. From another perspective, the psychosocial work environment due to high standards, efforts and unbalanced payment, and the inability to influence one's work has an effect on employees quitting their jobs (Li et al., 2010) and their incapacity to work, which results in increasing costs for the healthcare system and organizations and society (Rahman et al., 2017).

Based on the statements above, the objective of the current study is to explore the relationships between work-related psychosocial risk factors and four specific mental health problems in care workers (stress, somatic symptoms, symptoms of depression and burnout) in Estonian nursing homes. This study sets three research questions:

a) Which psychosocial hazards have a negative influence on the mental health of healthcare workers?
b) What is the impact of the mental health of healthcare workers on patient safety and the quality of the services offered?
c) How can psychosocial hazards be mitigated through social support and quality leadership?

The study used a cross-sectional survey conducted among the care workers in nine Estonian nursing homes in November 2017. The Copenhagen Psychosocial Questionnaire (COPSOQ II) was used. The study explored psychosocial risk factors and mental health problems (stress, somatic symptoms, symptoms of depression and burnout) among care workers in Estonian nursing homes.

This article is organised as follows: Section 2 provides a literature review addressing the management of occupational safety in the healthcare sector, the safety culture and safety management systems in nursing homes, and safety climate assessment as a safety performance antecedent. Section 3 describes the methodology of the study. In addition, the instrument and test sample used and methods of data analysis are described. Section 4 presents the results of our research. In the last section, the results are discussed and conclusions presented in response to the research questions, and limitations and suggestions for future research are given.

2. Literature overview

2.1. Psychosocial Risk Factors in Healthcare

Studies in the field of healthcare have found that one of the reasons why employees quit their jobs is the psychosocial work environment, leading to identity crisis and difficulties in pursuing a career; role conflicts have also been found to occur. In addition, employees are exposed to such psychosocial risk factors as bad work organization, lack of support at work, conflicts between colleagues, and violence and bullying at work (Lachman, 2015; Longo & Hain, 2014). Therefore, the quality of the provided services may be affected because the employees are not committed and dedicated. In addition, as a result of psychosocial risks, several physical and psychological health problems may occur. Both employees and organizations suffer from the negative influences of the psychosocial work environment (Li et al., 2010; Rahman et al., 2017).

The organization of work and creating the psychosocial work environment are important in nursing. When establishing the psychosocial work environment, it is necessary to consider the needs of the employees and the competence of the managers, which is expressed in management awareness and management quality (Mints-Binder, 2014). The psychosocial work environment consists of job demands, employee autonomy to make decisions, the working environment, social support and the effort-reward balance. An imbalance between these factors has a negative influence on the employees and the organization and increases the risk of health problems among the employees (Rahman et al., 2017), including mental health problems (Freimann & Merisalu, 2015) and skeletomuscular diseases (Freimann, Pääsuke & Merisalu, 2016).

A negative work environment causes burnout in the employees, which is in correlation with the quality of patient safety and healthcare services (Ulrich & Kean, 2018). It is essential to note here that the likelihood of errors, such as when administering drugs, increases when the employee is emotionally and physically exhausted. Previous studies have also shown that burnout may cause exhaustion and a lack of commitment to the job (Maslach, Schaufeli & Leiter, 2001; Vifladt et al., 2016). In addition, problems with employee dedication and satisfaction with work have been highlighted in several studies (Freiman & Merisalu, 2015; Ulrich & Kean, 2018). Low perceptions of patient safety caused by worker burnout were also identified in the study by Halbesleben et al. (2008).

Organizational support is an important component of the psychosocial work environment, which is horizontal across relationships with colleagues as well as vertical across relationships with management. Social support in the work environment is expressed in relations with colleagues and the management, in clearly described work roles, work pressure and innovativeness. A lack of social support influences the work satisfaction of the employees and may cause stress at work and burnout (Dehring, Treuer & Redley, 2018).

Social support from the management is mostly perceived in terms of recognition, which according to earlier studies has a positive influence on employee work satisfaction and dedication and is inversely related to quitting one's job (Mints-Binder, 2014; Ulrich & Kear, 2018). Whereas lacking social support from the management may cause employee burnout, depression, stress at work, and a decrease in cognitive abilities may cause somatic problems, which correlates with patient safety and the quality of healthcare services (Dehring et al., 2018; Ulrich & Kear, 2018).

Collaboration, open communication and respect are indicators of the work environment that reflect organizational culture, and which have been referred to by the World Health Organization in recent decades as important indicators for ensuring patient safety (Westerberg & Tufvelin, 2014). Open communication is a component of supporting the work environment, which has a positive influence on employee dedication and behaviour and promotes collaboration between employees (Sepp & Tint, 2017). In addition, collaboration between workers depends on the work environment and its characteristics, which can be learning or punishing. Healthcare organizations by nature should prevent mistakes or be proactive; admitting errors through open communication should enable all employees to avoid repeating mistakes in the future and facilitate learning from mistakes. The abovementioned phenomena are widespread in healthcare organizations in many countries (Goh, Chanand & Kuziemsky, 2013; Ratnapalan & Ulerik, 2014; Sepp & Tint, 2017), where they have created a blame-free culture and non-punitive environment, and where every mistake is identified, registered (Alameddine, Saleh & Natafgi, 2015) and open communication promotes trust, respect and barrier-free collaboration between employees and the management (Harrington & Smith, 2015). Collaboration excludes violence and bullying at work, which is common in the field of healthcare, and also adds psychosocial risk in the work environment, which is related to the mental health of the employees (Granstra, 2015; Lachman, 2015; Longo & Hain, 2014).

Horizontal violence is an increasing issue in the field of healthcare. Several studies show that more than 50% of healthcare workers suffer from the destructive behaviour of their co-workers (Alspach, 2008; Cleary, Hunt & Horsfall, 2010). Violence is also expressed by leaders (vertical violence); Ulrich and Kean (2018) point out that 57% of the participants in their study reported violence-related incidents by their leaders. Violence and/or bullying is caused by the organisation of the work of the institution and its hierarchical culture, where no anti-violence policy exists or practices developed to reduce the incidence of violence (Alspach, 2008; Cleary et al., 2010; Granstra, 2015). It is very difficult for the victim to admit that she/he is a victim and it is easier to keep incidents secret. In order to find out about such incidents, it is necessary to create a safe environment to ensure justice and the protection of the victim (Cleary et al., 2010; Granstra, 2015).

The consequences of bullying are both physical and psychological, and most commonly include: somatic problems, headaches, stress, irritation, anxiety, sleeping problems, worrying, worsening of social skills, depression, fatigue, difficulties in concentrating, hopelessness, psychosocial complaints, and post-traumatic stress (Cleary et al., 2010). All of the previously mentioned phenomena are important regarding patient safety; ignoring them is irresponsible and the consequences can be dangerous. The aim of a healthcare organization is to provide a patient with a quality service, and therefore to minimize the risks. One solution to bullying problems is seen in a strong work environment and supportive organizational culture, where there is open communication and supportive relationships with colleagues and leaders, where employees can talk freely about every possible topic and with everyone, where there are no structural, ethnic or cultural barriers, and where equal treatment of people is ensured (Alspach, 2008; Cleary et al., 2010; Granstra, 2015; Read & Laschinger, 2013; Tuckey et al., 2009; Ulrich & Kean, 2018).

2.2. Patient Safety and the Safety Climate

In healthcare, psychosocial risk factors are related to the quality of the services provided. Studies show that a heavy workload, bad and insecure working conditions, poor work organisation, lack of employee involvement and low safety culture are associated with stress at work and burnout (Garret, 2008; Li et al., 2010; Toode et al., 2015; Vifladt et al., 2016). In a working environment with prevailing psychosocial risk factors, healthcare workers are more commonly diagnosed with anxiety, burnout, depression and the employees have sleeping problems. In the long term, these problems can irreversibly affect the mental health of the nurses, their quality of life and family relations worsen their perception of risk increases and creates stress (Javaid, 2018). The employees suffering from mental health problems are more vulnerable, services provided by them are not safe from both the point of view of the employee and of the patient (Flin, 2007; Garret, 2008). For example, the main sources of hazards for nurses include the risk of injuring themselves with an injection needle (Jahangiri et al., 2016) and burnout (Ogresta, Rusac & Zorec, 2008; Xie, Wang & Chen, 2011).

Burnout syndrome is related to depersonalization, which by nature reflects high emotional fatigue and somatic symptoms and is revealed in the form of cynicism and low dedication (Garret, 2008). According to Garret (2008), stress at work and burnout have a direct relationship to patient safety, and therefore the quality of healthcare services, since according to Wolfe (2001), patient safety is one of the quality indicators of healthcare services. Studies show that stress management at the organisational level can also be the most important aspect in patient safety (Vifladt et al., 2016).

The likelihood of avoiding errors in the work environment is ensured by different strategies, including assessments (Flin, 2007). One method involves assessing the safety climate, which refers to the climate for psychosocial health and worker safety, and can predict worker safety behaviour, accidents and injuries. The safety climate is made up of employee perceptions of the commitment of the management to safety and performance correlated to safety policies, procedures and practices (Dollard & Bakker, 2010). It is important to understand that the organization of work is an integral part of the work environment; bad planning, which is expressed through work pressure and high emotional demands has an influence on the mental health of employees and causes psychological stress at work (Dollard et al., 2007). According to Vifladt et al. (2016), a positive safety culture is associated with a high level of coherence, where workers perceive that they manage stress positively, their work is challenging and meaningful and they have a sense of purpose.

In healthcare, it is important to understand that the organizational climate influences different outcomes, including occupational safety and patient safety, the influence of which is perceivable organizationally and economically. Studies show that in healthcare, occupational safety is related to patient safety (WHO, 2014) and to the safety climate (Flin, 2007; Pousette et al., 2017). It is common for economic pressure to influence the healthcare sector. Rationalizations are expected to be conducted at the same time because, due to the changing demographics, the demands for care are increasing. Since medicine and technology are developing, it is possible to continuously offer high quality care, but the costs are also constantly increasing. A decrease in occupational and patient injuries would reduce unwarranted costs and make resources available for preserving sufficient and satisfactory high-quality care (Pousette et al., 2017).

The main solutions involve senior management dedication and their inclusion in the development of a work environment that includes policies, strategies, practices and procedures for guaranteeing a strong safety culture (Sfantou et al., 2017). We may argue that a positive safety climate may help resolve physical as well as psychological health problems and injuries if it has gained enough attention in the institution. Yet, the money being spent on psychological health problems is substantial (Dollard & Bakker, 2010).

3. Methodology

3.1. Study Design and Sample

The study was designed as a cross-sectional survey to investigate the relationships between work-related psychosocial risk factors and four mental health problems experienced by care workers and nurses in Estonian nursing homes. Cross-sectional studies allow the inclusion of a large number of variables (Thelle & Laake, 2015). This method gives an opportunity to identify different occupational hazards at a specific point in time in the studied sample population and helps to describe the association between the exposure and the outcome. In addition, the method shows the incidence and prevalence of the aspects being assessed (Nour & Plourde, 2019). The survey was conducted in November 2017 in nine nursing homes in four areas of Estonia. The institutions were chosen on a random basis. The sample consisted of nursing homes, aftercare hospitals, private and public (under a local authority) organisations and nursing homes with a special facility for clients suffering from dementia. Previous studies show that work in nursing homes and the healthcare sector is generally emotionally difficult and stressful (Pousette et al., 2017). The main mental health issues emerging from psychosocial hazards include burnout, workplace stress, and depression and somatic symptoms, which may affect the mental health of employees as well as the quality of their work. Due to emotional exhaustion and depersonalization, the employee may experience the need to compromise on patient safety and the quality of their work (McNamara, 2012). Previous studies report that through effective safety management, particularly through establishing a safety culture, the psychosocial climate can be influenced and consequently, mental health problems can be prevented (Pousette et al., 2017). According to a study conducted in Estonia (Freiman & Merisalu, 2015), the prevalent psychosocial hazards among Estonian nurses are quantitative demands (workload), emotional demands, work pace and role conflicts. Based on these results, our study focuses on critical mental health problems such as occupational stress, burnout, depression and somatic symptoms.

Our purpose is to explore the relationships between work-related psychosocial risk factors and the four main mental health problems (i.e. stress, burnout, somatic symptoms and depression) in care workers in Estonian nursing homes.

3.2. Data and Method

In our survey, a paper-based questionnaire was used with a total of 509 participants. The participation was voluntary, in which each questionnaire included a cover letter about the study and definitions of terms. Information about the voluntary nature of the participation was also explained in the letter. A total of 340 completed questionnaires were returned

(66.79% of the sample), the majority of the respondents were female (332 or 97.6%). Approval for the research was obtained from the management of the institutions and The Research Committee of Tallinn Health Care College.

The Copenhagen Psychosocial Questionnaire version II (COPSOQ- II) was used to assess work-related psychosocial factors and mental health problems (MHPs) (Kristensen et al., 2005). A licensed translator performed the translation and returned the translation of the questionnaire. Cronbach's alphas were calculated to assess the internal consistency of the scales for psychosocial factors and MHPs. In our study, psychosocial factors were assessed using 115 items that covered the following four psychosocial domains: a) demands at work; b) work organisation and job content; c) interpersonal relationships and leadership; d) values at the workplace. To assess the MHPs, we used 16 items grouped into the following four scales: stress, somatic stress symptoms, symptoms of depression, and burnout. Most of the scales for the psychosocial factors and MHPs included three or four items, but two scales – predictability and work versatility – included only two items. All items were scored from 0–100 and four response options 0, 33.3, 66.7 and 100, to make the scoring on the different scales comparable (Pejtersen et al., 2010). The total score on a scale was the mean of the scores of the individual items.

3.3. Analysis

Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS Statistics 24.0), using the T-test and Bonferroni correction. Standard deviation and Cronbach's alphas for self-reported psychosocial factors and mental health problems were calculated. Bonferroni correction was used to account for multiple testing problems.

4. Results

Our results show that in Estonian nursing homes, psychosocial hazards were assessed as an actual problem with emphasis on work insecurity, conflict between work and family life, role conflicts, quantitative demands, low influence, low trust level and low social inclusiveness (Table 1). Workers often feel a conflict between work and their private life; work takes so much time that it has a negative effect on family life; workers are worried about becoming unemployed or being transferred to another job against their will. Sometimes they have to do unnecessary things at work, and contradictory demands may pose a role conflict; there is often no time to do the work properly and with a good quality; the workload might be unevenly distributed and at the same time, it is not possible to influence the amount of work assigned to them.

Low mean scores were recorded for the meaning of work, role clarity, social relationships at work, which indicate that those aspects are not considered as psychosocial problems – workers perceive high meaningfulness of their work, the work has clear objectives, and the workers know what they are responsible for and what is expected of them at work. Table 1 presents the mean scores, standard deviations and Cronbach's alphas for self-reported psychosocial factors and mental health problems.

Table 1. Descriptive statistics for work-related psychosocial factors and mental health problems in Estonian nursing homes

Psychosocial factors and MHPs (scale)	Number of items	Mean*	95% Confidence Interval of the Difference		SD	Cronbach's alpha
			Lower	Upper		
Demands at work						
Quantitative demands	3	50.7	47.9	53.4	25.8	0.858
Work pace	3	30.1	28.1	32.2	19.0	0.849
Cognitive demands	4	29.1	27.6	30.5	13.5	0.676
Emotional demands	4	27.1	25.5	28.7	15.0	0.712
Demands for hiding emotions	3	26.4	24.2	28.6	18.3	0.739
Work organisation and job contents						
Influence	4	50.3	47.9	52.7	20.0	0.777
Possibility for development	4	29.6	27.9	31.3	16.0	0.761
Meaning of work	3	17.1	15.6	18.7	14.4	0.836
Commitment to the workplace	3	38.1	36.1	40.1	18.8	0.575
Interpersonal relationships and leadership						
Predictability	2	33.3	31.2	35.4	19.7	0.725
Rewards	5	28.2	26.5	29.9	15.6	0.853
Role clarity	3	19.0	17.4	20.6	15.1	0.848
Role conflicts	4	52.2	49.7	54.6	22.7	0.835
Quality of leadership	4	35.1	33.1	37.1	18.7	0.848
Social support from colleagues	3	25.5	23.7	27.3	16.8	0.763
Social support from supervisor	3	29.7	27.6	31.8	19.6	0.827
Social relationships at work	3	19.0	17.6	20.5	13.6	0.774
Values at the workplace						
Trust	7	47.3	45.6	48.9	15.0	0.622
Justice and respect	4	37.3	35.4	39.3	18.3	0.853
social inclusiveness	3	39.9	37.5	42.3	22.8	0.67
Adequate work organisation						
Insecurity	4	75.4	73.0	77.7	2.,4	0.839
Satisfaction with work	4	24.9	23.4	26.4	14.1	0.823
Work-Family balance	3	62.3	59.4	65.1	26.7	0.839
Conflicts of the family and work	2	80.2	77.9	82.6	22.1	0.828
Mental health problems						
Stress	4	69.1	67.2	71.0	17.8	0.845
Somatic symptoms	4	79.4	77.9	80.9	14.3	0.641
Symptoms of depression	4	77.1	75.5	78.7	15.3	0.736
Burnout	4	63.5	61.2	65.8	21.5	0.904

*Mean – Single item mean of the scale can be calculated by dividing the scale mean with the number of items in the scale. Abbreviation: SD – standard deviation.
Source: composed by the authors

Table 1 presents the descriptive statistics for self-reported psychosocial factors and mental health problems. The mean scores for four mental health problems (stress, burnout, somatic and symptoms of depression) are relatively high – ranging from 63.5 to 79.4. Those scores indicate that workers generally perceive high work-related stress, high burnout levels (workers have felt worn out, physically and emotionally exhausted), physical health symptoms such as headaches, stomach aches and/or tension in various muscles and symptoms of depression such as continuous negative feelings, lack of self-confidence, and lack of interest in everyday things.

The majority of the scales showed satisfactory Cronbach's alphas, which ranged from 0.904 to 0.712 on the scales for psychosocial work characteristics and mental health problems. For care workers, the following scales had Cronbach's alphas coefficients of less than 0.700: commitment to the workplace (0.575), social inclusiveness (0.670), and somatic symptoms (0.641). Cronbach's α is an estimator of internal consistency and provides an assessment of questionnaire consistency, and values may approach one, which means good reliability or towards zero which means poor reliability.

Table 2. Cross-sectional correlation analysis for psychosocial hazards and mental health problems

Psychosocial factors (scales)***	Burnout	Stress	Depressive symptoms	Somatic symptoms
Demands at work				
Quantitative demands	-0.229**	0.055	0.015	-0.01
Work pace	-0.005	0.071	-0.012	0.016
Cognitive demands	0.108*	0.082	0.093	0.083
Emotional demands	0.201**	0.169**	0.174**	0.226**
Demands for hiding emotions	0.190**	0.051	0.118*	0.124*
Work organisation and job contents				
Influence	-0.141**	-0.281**	-0.118*	0.002
Possibility for development	0.124*	0.139*	-0.023	0.033
Meaning of work	-0.043	-0.096	-0.052	-0.004
Commitment to the workplace	-0.287**	-0.165**	-0.161**	-0.098
Interpersonal relationships and leadership				
Predictability	-0.150**	-0.131*	-0.046	-0.024
Rewards	-0.427**	-0.186**	-0.227**	-0.155**
Role clarity	0.102	-0.093	-0.049	0.021
Role conflicts	-0.183**	-0.077	-0.067	-0.016
Quality of leadership	-0.247**	-0.217**	-0.183**	-0.178**
Social support colleagues	-0.08	-0.105	-0.168**	-0.035
Social support management	-0.183**	-0.174**	-0.114*	-0.098
Social relationships at work	0.130*	-0.055	-0.136*	0.026
Values at the workplace				
Justice and respect	-0.095	-0.099	-0.036	-0.039
Social inclusiveness	-0.178**	-0.072	0.005	-0.168**

*Statistically significant p-values ($p < 0.05$),
**Statistically significant p-values ($p < 0.01$),
*** Numerical values based on Pearson's r correlations adjusted using sequential Bonferroni correction
Source: composed by the authors

Our study results show that only three of the psychosocial factors (rewards, emotional demands and quality of leadership) affect the mental health of care workers (Table 2). The items Rewards and Quality of leadership show a negative correlation with all of the mental health problems. The factor of emotional demands shows a positive correlation with burnout, stress, somatic symptoms and symptoms of depression. Our results also indicate that the good organization of work and meaningful job content contribute significantly to the positive mental health of care workers.

Based on the current study, we can conclude that care workers committed to the workplace have negative correlations with stress and burnout. Our results also show that interpersonal relationships and leadership are important aspects in psychosocial risk management in healthcare: workers expect quality management and social support from their supervisors. Our findings show that stress and burnout have a negative correlation with social support from supervisors as well as quality of leadership. In addition, social inclusiveness has negative correlations with burnout and somatic symptoms, which are the predictable components of depersonalization and lack of commitment and motivation.

Table 3. Comparison of psychosocial factors and mental health problems between Estonian care workers, Estonian nurses, Danish nurses and US nurses

Psychosocial factors	Estonia Care workers		Estonia Nurses		Denmark Nurses		United States Nurses	
	M	95% CI	M	95% CI	M	95% CI	M	95% CI
Quantitative demands	51	48–53	32	31–34	51	49–53	61	60–63
Role conflicts	52	17–21	36	34–38	41	39–44	56	52–57
Influence	50	48–53	33	31–35	46	44–47	46	44–47
Demands for hiding emotions	26	24–29	73	72–75			70	62–77
Rewards	28	27–30	58	55–60			59	57–60
Quality of leadership	35	33–37	60	57–62			60	57–63
Social support from colleagues	25	24–27	60	58–62			58	56–60
Social inclusiveness	40	37–42	61	60–63			62	59–64
Mental health problems								
Stress	69	67–71	40	39–43			38	35–40
Symptoms of depression	77	75–79	31	29–33			29	25–30
Burnout	63	61–66	45	43–47			43	39–45

Source: Freiman and Merisalu, 2015 edited by the authors

The comparison of our data with those from previous research (Table 3) and the experiences in other countries show that the mean score for mental health in Estonian nursing homes is higher than previous results in Tartu University hospital and in other countries (ranking from 69 to 77 on a 100-point scale) (Freiman & Merisalu, 2015). The care workers highlight that there are high quantitative demands at their workplace. Similar results were obtained among Danish nurses; however, US nurses reported even higher quantitative demands. The previous study among Tartu University nurses in Estonia indicates the lowest values. An interesting finding is the considerably lower scores for the demand to hide emotions, rewards, quality of leadership, social support from colleagues and

social inclusiveness among care workers in Estonian nursing homes compared to the US. Yet, Estonian care workers are influenced by role conflict and an inability to have any influence at their work compared to Estonian nurses. The results indicating the influence Estonian nurses have on their work are similar to US and Danish nurses; however, the results are considerably higher for role conflicts among US nurses and considerably lower for role conflicts among Danish nurses. Compared to the experiences of other countries, Estonian care workers are not socially included, which is an important finding. This may refer to the exclusion of representatives of this profession and may also give a rise to bullying at work.

It can be concluded that care workers in Estonia suffer from somatic symptoms and symptoms of depression, stress and burnout, they cannot influence their work, have high quantitative demands, and are not included in the activities of the organization, which in turn refers to a high amount of psychosocial factors in the work environment, which is one of the indicators of poor safety management in the organization.

5. Discussion and Conclusion

Based on the research gap, the purpose of this study was to explore relationships between work-related psychosocial risk factors and the following four mental health problems among care workers: stress (Li et al., 2010), burnout (Garret, 2008), somatic symptoms and symptoms of depression (Cleary et al., 2010) in Estonian nursing homes. To achieve our goal, three research questions were explored. The answer to research question 1 enables us to identify risk factors in the psychosocial work environment that have a negative influence on the mental health of healthcare workers.

Based on our findings, factors including low quality of leadership, high quantitative demands, employee role conflicts, low dedication among workers, physically and mentally challenging work, and stress at work have been identified as prevailing in Estonian nursing homes. Similar results have previously been found by Li et al. (2010). To answer research question 2, we explored how the mental health of nurses can affect patient safety and the quality of the services provided. It was found that high standards and role conflict in nursing homes is problematic for care workers and influences their mental health. It is common for Estonian care workers to have an excessive workload and for them to complete assignments that do not correspond to their qualifications, such as medical activities (Sepp & Tint, 2017). Studies have demonstrated that the frequency of mistakes is increasing; for example, regarding the administering of medication, if the employee is emotionally or physically exhausted, when they are not satisfied with their job and have a low level of dedication (Freiman & Merisalu, 2015; Ulrich & Kean, 2018).

The results of our research demonstrate that in terms of the prevention of mental health problems among care workers it is necessary to understand the importance of managing stress and preventing burnout syndrome. Our results revealed the highest level of those two psychosocial factors of mental health when compared with a previous study conducted in Estonia (Seppo et al., 2010). The risk factor "work organization and job content" shows that the workers perceive the need to influence their work and to be included in the activities of the work organization, including safety planning. Earlier studies have shown that inclusion in the decision-making process and an opportunity to influence their work increases dedication, motivation and decreases risk behaviour (Li et al., 2010). Worker involvement in

various health and safety activities depends on the organizational management and safety climate in the organization (WHO, 2014). Risk behaviour is common practice in healthcare, and overtime hours caused by a chronic lack of staff are one of the risk factors, which influences the mental and physical health of the workers. Previous studies have demonstrated that if the organization fills vacancies overtime shifts, this will lead to chronic fatigue among the workers, which correlates with the likelihood of making medical errors. Studies show that having 24-hour-shifts without resting is equal to an alcohol concentration in the blood of 0.10 per mille (Garret, 2008). Rodrigues et al. (2017) point out that employees working a shift more than 12 hours have three times greater probability of making mistakes than those working 8.5 hours a day. In addition, for those working more than 40 hours a week, the risk of errors increases by 46%. Further, the same authors emphasize that long working hours with a heavy workload cause physical and psychological fatigue, which has a direct negative influence on the quality of services offered to the patients through weak patient safety.

Research question 3 was about measures to prevent psychosocial risk factors. Based on results from the current study, several safety measures are proposed in order to reduce the influence of the psychosocial risk factors of the working environment on the mental health of care workers. According to the results of our research, the organization of work is an indicator of proactivity in regard to mental health and of the effective management of the organization. In addition, earlier results have shown that the organization of work, support at work, relations with colleagues and violence or bullying at work have a major influence on employees. When planning the organization of work, the needs and peculiarities of the worker should be taken into account. Therefore, an important role is played by the competence and training of the leaders (Mints-Binder, 2014). The leaders are responsible for preserving the mental health of the employees through the work environment and relations at work that are respectful and encourage good relations, providing a balance between effort and reward and recognizing the employees for their efforts (Freimann & Merisalu, 2015; Rahman et al., 2017). The employees expect support from the management; good relations at work are an important indicator from the point of view of reducing mental health risks, and colleagues and leaders both play an important role in this. Social inclusion is also a risk factor influencing the mental health of care workers, which may carry aspects related to violence and bullying at work. According to the structure and specifics of the organization, care workers are one of the lowest levels and may perceive exclusion by other members of the organization. The results of our research show that care workers perceive social exclusion; therefore, the management of the organization should ensure that all the members of the organization feel safe and necessary in the institution. It is important to respect every professional position and each member of the organization must have their line of responsibility, upon which the quality of patient-centred service depends. Earlier studies have shown that a lack of support from the organization may cause burnout and stress at work, and influence job satisfaction and motivation among the employees (Dehring et al., 2018).

It can be concluded that the work environment and its creation have an influence on the mental health of the employee through different situations and circumstances. This research has contributed to the understanding that a serious problem prevailing in nursing homes is the perception among the employees that they cannot influence their work, which is demotivating and evidently also affects their level of dedication. Attention should be paid to the organization of work and establishing relations and communication within the organization. It is important to be aware that errors are a part of healthcare organizations

and it is common for a person to make mistakes in order to address these issues, so as to avoid mistakes in the future instead of blaming an employee. A worker should not develop a feeling of guilt, but rather, through support from the organization and learning, the development of the employees should be ensured and the problems of mental health prevented (Doss-McQuitty, 2016; Mira et al., 2015). Management of the organization, including safety management should be proactive and oriented towards preserving the health of the employees and offering patient-centred services.

The current study has some limitations that need to be addressed. The quantitative data were self-reported, which can be affected by information bias and recall bias, especially in relation to reporting such delicate and sensitive data as health symptoms and psychosocial risks factors (Barling, Loughlin & Kelloway, 2002; Pransky et al., 1999). It should be mentioned that the main limitation of this research is the sample that concentrates solely on the assessment of the perceptions of care workers. In future research, psychosocial risk management should also be investigated. In addition, it is essential to explore how the organizational safety management system addresses psychosocial risk management and is integrated into other organisational processes within the healthcare organisation. A safety management system including the objective measurement of psychosocial risks in healthcare should be investigated in detail. In addition, future research should explore the planning of the proactive aspects and good practices in the management of psychosocial risks in the healthcare sector.

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