

Work Stress among Registered Nurses in Health Care Services

LAB University of Applied Sciences
Bachelor of Nursing
2022
Kairi Nurmine

Abstract

Author(s) Nurmine Kairi	Publication type Thesis, UAS	Published 2022
	Number of pages 32	
Title of Thesis Work Stress among Registered Nurses in Health Care Services Descriptive literature review		
Degree Bachelor of Health Care, Nursing (UAS)		
Abstract <p>The aim of this thesis was to investigate the reasons that lead registered nurses to work stress and burnout. This thesis is addressed to all students and medical staff, as well as to different groups of people interested in the topic.</p> <p>The purpose was also to find out how organisations help and support their staff to cope with this challenging work, which requires a strong mentality to support patients and their families, while at the same time protecting their own mental health.</p> <p>In the literature review, data has been collected from various databases and scientific articles that answer the research questions. The data was analysed by using an inductive content analysis.</p> <p>The result of the study has shown that, as registered nursing is mentally exhausting because it deals with sick and dying people, it is an additional source of stress on mental health. Medical organisations should intervene more deeply in work-related stress as this can have a positive impact overall collective and reduce burnout rates in wards.</p>		
Keywords Registered nurses, burnout, work stress, bullying in nurses, workload, management		

Contents

1	Introduction	1
2	Work Stress in Health Care.....	2
2.1	Registered Nurses.....	3
2.2	Burnout.....	3
2.3	Work Stress.....	3
2.4	Bullying in nurses	4
2.5	Workload	6
2.6	Management	6
3	Aims, purpose and research questions.....	8
4	Methodology.....	9
4.1	Reviewing the Literature.....	9
4.2	Data search and collection	9
4.3	Content analysis.....	10
5	Results	13
5.1	Factors causing work stress.....	13
5.2	Management role	15
6	Discussion.....	16
6.1	Discussion of the results	16
6.2	Trustworthiness and reliability.....	17
6.3	Discussion of the thesis process	17
7	Conclusion	19
8	Suggestion for further research.....	20
9	References.....	21

Appendix 1. Inclusion of the studies in the literature review.

1 Introduction

Health care services are crucial part of humanity, but staff shortages can create new risks to access and quality of care. It is therefore important to improve the governance of health care and to identify problematic working conditions that lead to work-related depression and absenteeism. Burnout is closely linked to the recruitment crisis and excessive workload. An effective teamwork climate should be an essential part of a good staff strategy. Productive teamwork also ensures a higher quality service. (Galleta-Williams et al. 2020, 36.)

Over the last twenty years, occupational health research has shown a dramatic increase in burnout. Exhaustion indicates emotional overload and is the most common manifestation. (Maslach et al. 2001, according to Yuan et al. 2020.) Registered nurses are inherently tied to overwhelming workloads and are particularly vulnerable to burnout (Aiken et al. 2011, according to Yuan et al. 2020). High levels of burnout can jeopardise nurses' physical health as well as career prospects, leading to absenteeism and turnover (Daouk – Öyry et al. 2014; Fragose et al. 2016 according to Yuan et al. 2020).

The term "burnout" was first used by Herbert Freudenberg, who defined it as the failure, weariness or exhaustion that results from the excessive demands on energy, resources, and efficiency. Maslach defined "burnout" as a psychological syndrome that manifests itself in emotional exhaustion and a diminished sense of personal fulfilment, which occurs specifically in those who work with other people and in difficult situation. (Kaplan-Serin et al. 2020, 371.)

The aim of the thesis is to find out what medical organisations and leaders could do to support their staff and help registered nurses to battle against burnout and work stress, in order to reduce nurses' turnover in organisations.

2 Work Stress in Health Care

It is known that burnout is higher among nurses than other health professionals because it requires humanity, empathy, cultural awareness, and moral care in a work environment where resources are limited, and responsibilities increase. High demands, low staffing levels, conflicts with colleagues and patients, poor supervision and overtime contribute to burnout. Burnout and job dissatisfaction are interlinked and lead to negative attitudes, status, and social withdrawal. There is a need for a better understanding of the links between stress, burnout, job satisfaction and nurses' overall health, as they all influence productivity, staff absenteeism, turnover, and the quality of patient care. (Khamisa, N. et al. 2015.)

Health worker burnout has been linked to high rates of physical illness, obesity, sleep disorders, psychiatric illness, suicide attempts and cardiovascular disease. Prolonged high workloads and fatigue can lead to burnout syndrome, psychotropic substance use and the risk of alcohol abuse. (Grigorescu et al. 2018; Todaro-Franceschi 2013, 3.)

The registered nursing profession focuses on "quality of life" to improve patients' quality of life. Often nurses do not realise that what is at stake is their own quality of life and how they cope with their work on a day-to-day basis. (Grigorescu et al. 2018.) However, nurses who are already burnt out - are seen as careless because they appear apathetic about their work (Todaro-Franceschi 2013, 3).

Increasingly, the nursing profession is characterised by job dissatisfaction, because in addition to caring for patients, one has to care for patients' families, their emotional needs, and on top of all this, a registered nurse has to train a junior colleague at the same time and deal with work that is not within the competence of a registered nurse (Jondhale & Anap 2013, 57).

Understaffing and tasks that do not match competencies have also been linked to increased levels of stress and even resignation (Serafin et al. 2022).

As burnout has serious consequences both individually and organisationally, it is important to put in place an effectively designed preventive programme and other effective methods (Grigorescu et al. 2018).

2.1 Registered Nurses

Nursing is a health care profession that focuses on caring for individuals, families, and communities to restore or maintain optimal health and quality of life. Nurses may vary in terms of training and scope of practice, make up most health care systems and have a university degree or advanced degree in nursing and work collaboratively with physicians, therapists, the patient, the patient's family, and other team members focused on the treatment plan and improving quality of life. (Wikipedia, 2022.)

By advancing the nurse's career, the nurse becomes a specialist who interacts with every healthcare provider and every specialist. Thus, a nurse must continuously educate him/herself in all professions, understand organisational dynamics and be a leader in both the for-profit and not-profit sectors. (Rigolosi 2013, xxxv.)

2.2 Burnout

Burnout is described as a damaging emotional and somatic reconditioning when a worker's skills and available resources fail to meet the demands of the job (Leka et al. 2012, according to Qi et al. 2013, 27)

Studies have shown that burnout is characterised by negative changes in attitudes over time and in behaviour towards patients, which have now become a disappointment in the nursing ideals that once drove them to work (Dall'Ora et al. 2020).

2.3 Work Stress

Work stress has also been defined as a syndrome of fatigue and inefficiency in response to chronic stress in the work environment. It is thought to affect all occupations today, but studies have shown that people whose job duties involve helping others are particularly susceptible. However, work stress is not the same for everyone, as it is also linked to individual factors such as temperament and personality, which can determine how a person responds to stress of all kinds. (Jaracz et al. 2017.)

People with an anxious temperament are always worried about their own health as well as the health of others, which is perfect for nursing. This also influences how such people respond to work stress. A depressive, irritable, and anxiety-provoking

temperament contributes to burnout easily, while a hypertrophic (positive mood and mindset) temperament promotes tolerance of work stress. As the work of a healthcare worker requires more empathy and sensitivity to suffering, nurses are thought to have a higher anxiety-provoking temperament. (Jaracz et al. 2017.)

As research has shown that effective temperament can be a facilitating factor for certain jobs, and that depressed and anxious temperament is associated with poorer recruitment due to stress (Jaracz et al. 2017).

Depression can be categorized into four areas, such as behavioural, physical, cognitive, and affective: affective reactions lead to anxiety, anger, sadness, indifference, lethargy, and despair. Other antecedents to work stress are limited self-confidence, coping difficulties, traumatic personal experiences and being a woman in an aggressive environment (Hasan & Tumah, 2018).

Individual psychological factors may be more important in the development of work-related psychopathology than organisational and interpersonal factors, and stressors are thought to exist only 'in the eye of the beholder' (Jaracz et al. 2017; Genes at al. 2020, 2).

According to Hasani and Tumah (2018), patient aggression is one of the main stressors in the work environment as it prevents nurses from doing their job and fulfilling their ethical role (Hasan & Tumah, 2018).

2.4 Bullying in nurses

As Dallasega (2019) has discussed, are registered nurses warm-hearted people or are they heartless people, as one minute they are dedicated, compassionate and caring for a patient and the next minute they treat their colleague badly and negatively. Relational aggression has a negative impact on nurses' morale, health, commitment and patient care and related outcomes. (Dallasega, 2019.)

Relational aggression – when someone uses communicative, rather than physical methods, to inflict social harm and this is known as bullying and rudeness towards another person (Dallasega, 2019).

Some registered nurses even quit their jobs, even after years of hard studies, because they cannot tolerate relational aggression (Dallasega, 2019).

Having dynamic and valuable relationships with colleagues is an extremely important source for a great job satisfaction (Dallasega, 2019).

Our prime purpose in this life is to help others.

And if you cannot help them, at least do not hurt them (Dalai Lama, according to Todaro – Franceschi, 2013.)

As the American Nurses Association defines workplace bullying as “repetitive, unwanted harmful actions intended to humiliate, insult, and cause distress to the recipient.” This can mean rumours and gossip, withholding and concealing information, unfair assignments, and low grades. Most often, nurses bully other nurses and older nurses bully their youngest colleagues although bullying is not related to age, gender, or experience level. (Edmonson & Zelonka 2019, 275.)

Bullying in the workplace is so common that various bully archetypes have been identified Table1:

The *supernurse* is often more experienced or specialized than most and communicates a sense of superiority through an elitist attitude, condescending manner, and “corrective comments.”

The *resentful nurse* develops and holds grudges, encourages others to “gang up” on the transgressor, and tends to create drama that can permeate the work environment.

The *PGR nurse* uses put-downs, gossip, and rumours (PGR) to bully other nurses, and is often quick to take offence to a neutral remark.

The *backstabbing nurse* is “two-faced”, cultivating friendships that they then betray, using information as a weapon to enhance their power.

The *green-with-envy nurse* expresses bitterness to those who have what they do not: looks, status, personality, possessions. Their victims often do not realize they are a target.

The *cliquish nurse* uses exclusion as a means of aggression, showing favouritism to some while ignoring others.

Table 1. Common Nurse Bully Archetypes (adapted from Edmonson & Zelonka 2019)

Bullies often lack self-confidence and see certain colleagues as a threat. This is often a learned behaviour from early childhood. Bullying is more likely to occur in a high-stress work environment with a heavy workload and a lack of job autonomy. This is part of nursing and health care in general. (Edmonson & Zelonka 2019, 276.)

2.5 Workload

Nurses' workload is a major problem in global healthcare. The demand for nurses is a result of an ageing population. For example, in America, the population will grow by 18% between 2000 and 2020, but the number of people over 65 will increase by 54%, resulting in a greater need for health services. (Carayon & Gurses, 2008.)

Nursing workload is influenced by the size of the workforce and patient conditions, as well as by the structure of the nursing work system, as nurses play a key role in the delivery of healthcare. Non-professional tasks such as catering, housekeeping, patient transport and commissary, coordination, or provision of ancillary services. (Carayon & Gurses, 2008; van den Oetelaar et al. 2019.)

Excessive job demands lead to burnout and insufficient resources lead to resignation (Dall'Ora et al. 2020).

2.6 Management

The principle of leadership is that leaders set goals for a specific group and a specific environment and develop strategies to achieve those goals. The results are evaluated and changed according to needs. Managers simply and continuously make strategies to move groups of staff to a more efficient and higher quality level of performance. In carrying out these processes, managers plan, organise and motivate other members in the delivery of professional nursing care. (Hersey et al. 2008, according to Rigolosi 2013, xl – 6.)

Motivation is a major factor that determines the level of employee performance and the achievement of objectives. Managers should set goals that are a unidirectional and satisfying growth process. (Hersey et al. 2008, according to Rigolosi 2013, xl – 6.)

3 Aims, purpose and research questions

The aim of the thesis is to find out what medical organisations and leaders could do to support their staff and help registered nurses to battle against burnout and work stress, in order to reduce nurses' turnover in organisations.

The purpose of this thesis is to describe and explain why there are many registered nurses who suffer from working stress and burnout.

Research questions of the thesis are:

1. What are the main factors and causes of work stress?
2. How does management help and support employees in these matters?

4 Methodology

4.1 Reviewing the Literature

Literature review is used in this thesis as research method. It is a written summary of journal articles, books, and other documents which provide the past and current state of information for a proposed study. (Creswell 2008, 89.)

A systematic literature search is an essential part of the systematic review process. It demonstrates the transparency of the research, which makes it clear to the reader how the results of the review are situated within the relevant evidence base. (Cooper et al.2018).

4.2 Data search and collection

The literature review is based on previous studies that have been retrieved from LAB UAS Scientific library database. The material selected was found to be based on the highest criteria of no more than 10 years old and texts in English. The rest of the database was searched by title of needs. Inclusion criteria identify conditions suitable for inclusion in the study. Exclusion criteria are characteristics that are inappropriate for the study has shown Table2.

Inclusion criteria	Exclusion criteria
Study published between 2012-2022	Study published before 2012
Language: English	Language not in English
Free, full text available	Only abstract available, paid article
Studies related to Stress and Burnout among Nursing	Studies not related to Stress and Burnout among Nursing

Table 2. Inclusion and exclusion criteria.

Most of the information has been retrieved from PubMed, but also Medline Ovid, Sage, Ebsco and Google Scholar, which was the only one that was unsuccessful because the corresponding articles did not coordinate.

The keywords from PubMed were work stress AND nurses, literature review, nursing workload AND measurements and data analysis. Seven articles were selected from PubMed.gov. The main options were free full text, English language, and not older than ten years.

Ebscohost and e-book database offered two online books, and two articles by looking for words management AND leadership, bullying among nurses and work stress. The basic choices were no older than ten years, full text, and English language. A total of three different publications were selected.

Sage Open Nursing (SON) database have been chosen for explaining burnout.

Two of the articles came from the year 2008, as the information and the text accurately fit exactly into the thesis that was sought.

13 articles were selected all together for the thesis (see appendix 1 below)

4.3 Content analysis

Data analysis is part of the research process. This analysis explains the complexity of people's behaviour and to mediate people's life experiences. In an era of evidence-based public health based on research and practice, rigorous qualitative analysis, documentation, and reporting are critical to building reliable knowledge. (Raskind et al. 2020.)

The thesis uses inductive content analysis, which is a method that can be applied to both qualitative and quantitative data. Qualitative content analysis is often used in nursing analyses. Content analysis is a method of analysing written, oral or visual communications. (Cole 1988, according to Elo & Kyngäs 2008,108.)

Krippendorff 1980, Downe-Wamboldt 1992, Sandelowski 1995 have stated that content analysis is a method of documentary research, in addition to being a systematic and objective means of describing phenomena (Elo & Kyngäs, 2008, 108).

The inductive approach moves from the specific to the general, so that cases are looked at and then combined into a whole (Elo & Kyngäs, 2008, 109).

In this thesis, different sources have been used in a manual search and the results of the search are shown in Table 3.

Databases	Search words	Delimitations	Results	Selected articles
PubMed	Work stress nurses	Free full text, 10 years, English	9238	5
	Literature review	English	301,581	1
	Nursing workload	English, 10 years, full text	404	1
	Data analysis	Full text, past 5 years, English language	38686	1
Google Scholar	Literature review	English	4 490 000	0
Ebscohost and Ebsco e-book	Management and leadership, bullying among nurses, work stress	Full text, English language, 10 years	1613	4
SAGE Open Nursing (SON).	Burnout in nursing	English, Full text, 5 years	2910	1
TOTAL				13

Table 3. Searched databases results

5 Results

5.1 Factors causing work stress

Nurses' work is part of the public sector, which is why medical staff help citizens daily in the performance of the duties, as well as their job is to assist patients, provide care, and administer medication. Nurses encounter sick or dying people, which is a direct source of mental health burden. The specific nature of the nursing profession is a source of chronic stress that can lead to burnout syndrome. (Jaracz et al. 2017.)

The risk of burnout does not apply to everyone in the same way but is also influenced by job types and individual factors such as temperament and personality (Jaracz et al. 2017).

Work stress is linked to physical and mental health risks. For organisations, it is a financial burden resulting from the loss of productivity due to sick leave. If work-related stress could be prevented or reduced, its harmful consequences could also be reduced. (Havermans et al. 2018.)

Despite all this, the needs of workers to prevent work-related stress is often not met. If stress management is not properly implemented, the desired impact will not be achieved. The development of employee interventions is based on surveys of the workplace, and failure to take needs into account can hinder the full progression. (Havermans et al. 2018.)

Work stress interventions can improve emotional and work-related stress, as well as having a positive impact on reducing burnout rates. Burnout is a syndrome observed in healthcare workers who are exposed to high levels of stress. It has a negative impact on patient care, and on all staff. (Dall'Ora et al. 2020.) Interventions should be taken at both individual and environmental levels to reduce work-related stress. There is a need for more intervention research targeting registered nurses to improve psychological well-being, enjoyment of work and quality of patient care. (Romani & Ashkar 2014.)

Based on the results of this thesis, it can be said that work stress and burnout are also caused by interpersonal relationships in the work environment (Dellasega, 2019).

Nursing requires humanity, empathy, cultural awareness, and moral care in the work environment. High demands at work contribute to work stress and there is a need to understand why there is mass turnover, absenteeism, and general health problems among nurses (Khamisa et al. 2015).

Studies have also shown that job satisfaction and communication problems are closely linked to work stress, as are poor human resource management and inadequate resources. For example, security risks in the workplace also have an impact on nurses' overall health. If the safety and security of the medical staff is in risk, the care of the patients will be significantly reduced. Stress related to staffing problems, inadequate resources and security risks are important factors in determining the job satisfaction of health professionals. (Khamisa et al. 2015.)

Due to their heavy workload, nurses are also at risk of psychotropic substance and alcohol abuse. Burnout is also associated with high rates of physical illness, obesity and sleep disorders, suicide attempts and cardiovascular disease. (Grigorescu et al. 2018.)

Similarly, bullying of nurses has been a systemic problem throughout time, starting before nursing school and continuing throughout the whole career. Nurses leave their jobs because of negative behaviour and so the problem of a shortage of nurses is worsening and tackling this problem starts with recognising the existence of the problem, raising awareness, and acting to mitigate the contributing factors. Anti-bullying policies need to be addressed, work actively to change them, and understand that bullying has no place in the nursing profession or elsewhere in healthcare. (Edmonson & Zelonka 2019.)

Bullying can range from rudeness and exclusion to physical violence. Overt bullying is easier to recognise because it involves verbal criticism, name-calling, abuse, and direct threats. Covert bullying is passive-aggressive, involving rumours, withholding information and unfair tasks. (Edmonson & Zelonka 2019.)

Bullying at work also needs a good environment to thrive. The quality of leadership contributes to a bullying culture. Managers who lead through intimidation also encourage their employees to do the same. Nurses in leadership positions often adopt a style shaped by past leaders. (Edmonson & Zelonka 2019.)

The credibility of a healthcare organisation cannot be achieved in an environment that allows or encourages bullying. Bullying and unreliability end in unqualified results. A highly trustworthy organisation is characterised by a healthy working environment, emotional and physical safety, and a 'fair' culture in which it is safe to work. (Edmonson & Zelonka 2019.)

5.2 Management role

Effective leadership starts with identifying problems, objectives, and opportunities (Rigolosi 2013, 41).

The basic principle of leadership consists of setting objectives in a specific environment. Managers develop strategies to achieve these goals within the organisation. Results are evaluated, changed and new ones are made as needed. Managers work to bring employees to a more effective and higher quality level of performance. The result of the whole process should be an efficient and growth towards the pre-set goal. (Rigolosi 2013, xl.)

For example, a nurse manager aims to improve the quality of nursing care. With technical skills, the manager can deliver the individualised nursing care expected of staff nurses. With human skills, the manager can influence others by setting an example to achieve the goal. Conceptual skills enable the manager to achieve the overall organisational goal of the organisation's customer service, how this affects the whole health care organisation. (Rigolosi 2013, 7.)

According to Yuan et al. says is the research that more effective measures against burnout should be implemented in coordination with employees and would help to develop and maintain a better working environment. Nursing surveys and statistics should be routinely considered. (Yuan et al.2020.)

6 Discussion

6.1 Discussion of the results

The present study focused mainly on the general mental health of health care workers, especially registered nurses in the workplace.

Thirteen different scientific articles have been considered in the study and different medical databases from the LAB UAS library have been used as a search engine. The criteria have been not older than ten years and full text in English to find answers to thesis questions.

The thesis has shown that the most complicated task for registered nurses is to communicate with each other, which is inherent to the nature of the human being. Absence of respect for each other, condescending attitudes towards junior colleagues, in addition to other work-related traits, cause a lot of resentment among nurses in organisations.

The thesis has shown that burnout among nurses is linked to communication problems and high workload in the department, which can result in loss of motivation, which in turn leads to low self-esteem and can be accompanied by lack of exercise, obesity, excessive alcohol consumption and cardiovascular diseases or problems.

Different personality types have also been observed, with individuals with a binge-temperament reacting differently to such problems.

Bullying at work has also been addressed. This raises the question of whether registered nurses are in practice hard-hearted people and how it is possible that at one point they are able to care for and treat patients, and at the same time treat their colleague abusively and rude, leading to resignations as nurses cannot tolerate an aggressive relationship.

Managers and leaders of medical companies could help staff with stronger leadership principles, develop more effective strategies and regularly review operational effectiveness.

Training could help to improve the situation, which would help nurses to implement more effective stress management measures (Hasan & Tumach, 2018).

6.2 Trustworthiness and reliability

The analysis process should be written in such a way as to give the reader a clear overview of how the analysis will be carried out, and the analysis process should be clearly explained. The content of the themes is described through sub-themes and should be conceptually justified. (Elo & Kyngäs, 2008, 112.)

The credibility of the results and interpretations should be demonstrated so that outsiders can follow the research process (Elo & Kyngäs, 2008, 112).

The database comes from the university library, which is the most reliable source.

Content analysis is well suited to nurses' theses as it has the advantage of being able to deal with a large amount of textual data and different sources. On the other hand, the disadvantage is that successful content analysis can be over-interpreted. (Elo & Kyngäs, 2008, 114.)

Mainly used PubMed is offers online books and different literature from Medline, which is related physical sciences, humanities, health, and information sciences as they all tied in health care area

EBSCO eBook offers material from leading publishers and subjects include art, business & economics, education, medical, social science, technology & engineering.

SON is an open access journal which covers nursing and patients care across the various nursing specialties and related disciplines.

A list of references is included after each text to confirm trust, and full references can be found at the end of the thesis.

6.3 Discussion of the thesis process

Writing the thesis and the whole process has been enjoyable. Searching for, reading and analysing data has been rewarding. The whole process has taught me how to find reliable information and at the same time has opened my horizons in finding different databases. Greater knowledge has been developed in reading articles and analysing the day-to-day work of registered nurses and the challenges faced by medical professionals.

It was interesting to find out how different personality types react differently in a tense situation in the workplace and how different archetypes behave differently in doing social harm to another colleague through negative comments and how much harm this causes to the other person without knowing and understanding it themselves.

There are a lot of interesting articles on the subject, but little is said about how to tackle the problem and how organisations could pay more attention to it and find more and more effective solutions to prevent high turnover and prevent sick leave.

7 Conclusion

It is known that burnout and work stress are higher among nurses than among other health care workers. Feelings of dissatisfaction and high demands can lead to job stress and burnout. Long shifts, and staff shortages lead to serious consequences.

Nursing has been assessed as a very stressful job, but it has also been found that different areas generate different levels of stress (Hasan & Tumah, 2018).

Based on the results of this thesis, it can be concluded that the biggest cause of work stress and burnout is interpersonal relationships in the work environment. Attitudes towards each other and the way junior colleagues, just starting out, are treated. Sometimes the resentment towards another colleague is caused by a single individual, sometimes it is created and carried out by a group of people who, through their offensive and intriguing behaviour, try to cause a certain degree of deliberate discomfort to the 'victim'. (Dallasega, 2019.)

Managers often fail to notice the needs of the employees, and in this respect, the work stress prevention programme is either not implemented or not properly implemented (Hersey et al. 2008, according to Rigolosi 2013, xl – 6).

The research suggests that work stress interventions by managers can improve emotional distress and have a positive impact only by being noticed (Hersey et al. 2008, according to Rigolosi 2013, xl – 6).

Since burnout can best be seen and recognised through research within an organisation, intervention research is crucial (Hersey et al. 2008, according to Rigolosi 2013, xl – 6).

The research findings also suggest that nurses' work is largely underfunded and that nurses' work is underappreciated, even though it requires 'saving lives' (Hersey et al. 2008, according to Rigolosi 2013, xl – 6).

Health care organisations aim to achieve a range of goals, such as excellent patient service, quality care, excellence in operations and staff loyalty. This, however, assumes a good balance between patients' needs and nursing staff. The workload of nursing staff should be a method accepted by nurses in organisations. This is currently lacking. (M van den Oetelaar et al. 2016.)

8 Suggestion for further research

As the medical system is experiencing high levels of burnout among registered nurses, more attention should be paid to communication between nurses in transmission studies. There is a lot of talk about work stress, overtime, inadequate tools and resources, failure to adequately train nurses, but little information about the standards of behaviour in the workplace.

As there is a lot of bullying at work and consequent resignation in organisations, perhaps we should start teaching norms of behaviour in medical school, and speak openly, in a clear voice, about the problems of the moment. Students need to think about the norms of behaviour in a medical organisation while they are still at university and do more presentations and reports in this area. This is just as important a part of studies as any other subject.

9 References

- Carayon, P., Gurses, P. 2008. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Chapter 30. Nursing Workload and Patient Safety – A Human Factors Engineering Perspective. Hughes RG. Retrieved on 11 April 2022. Availability at <https://www.ncbi.nlm.nih.gov/books/NBK2657/>.
- Cooper, C., Booth, A., Varley Campbell, J., Britten, N., Garside, R. 2018. Defining the process to literature searching in systematic reviews: a literature review of guidance and supporting studies. PubMed.gov. Retrieved on 23 March 2022. Available at <https://pubmed.ncbi.nlm.nih.gov/30107788/>.
- Creswell, J. W. 2008. Educational Research. Planning, Conducting, and Evaluating Quantitative and Qualitative Research. Third edition. New Jersey. Pearson Education.
- Dall’Ora, C., Ball, J., Reinius, M., Griffiths, P. 2020. Burnout in nursing: a theoretical review. Human Resources for Health. PubMed Central. Retrieved on 24 March 2022. Available at <https://www.ncbi.nlm.nih.gov/pubmed/32503559>
- Dellasega, C. 2019. What to Do When Nurses Hurt Nurses, Second Edition. Sigma. Global Nursing Excellence.
- Edmonson, C., Zelonka, C. 2019. Our Own Worst Enemies. The Nurse Bullying Epidemic. Nursing Administration Quarterly. NCBI Resources. Retrieved on 28 February 2022. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716575/>.
- Elo, S. & Kyngäs, H. 2007. The qualitative content analysis process. Journal of Advanced Nursing. Vol 62, No. 1. Retrieved on 13 April 2022. Available at <https://academic.csuohio.edu/kneuendorf/c63309/ArticlesFromClassMembers/Amny.pdf>
- Folse, V.N. 2013. Compassion Fatigue and Burnout in Nursing: Enhancing Professional Quality of Life by Vidette Todaro-Franceschi. New York. Springer Publishing Company. Retrieved on 11 April 2022. Available at <https://doi.org/10.1177%2F0894318415585632>
- Galleta Williams, H., Esmail, A., Grioroglou, C., Zghebi, S. S., Zhou, A.Y., Hodgkinson, A., Panagioti, M. 2020. The importance of teamwork climate for preventing

burnout in UK general practices. *European Journal of Public Health*. Vol.30, No. Supplement 4. Published by Oxford University Press on behalf of the European Public Health Association. EBSCOhost. iv36. Retrieved on 24 March 2022. Available at <https://doi.org/10.1093/eurpub/ckaa128>

Geuens, N., Verheyen, H., Vlerick, P., Van Bogaert, P., Franck, E. 2020. Exploring the influence of core-self evaluations, situational factors. And coping on nurse burn-out: A cross-sectional survey study. *PubMed*. Retrieved on 24 March 2022. Available at <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc7117734/>.

Grigorescu, S., Cazan, A.M., Grigorescu, O.D., Rogozea, L.M. 2018. The role of the personality traits and work characteristics in the prediction of the burnout syndrome among nurses – a new approach within predictive, preventive, and personalized medicine concept. *EPMA Journal Springer*, 355-365. *PubMed*. Retrieved on 27 March 2022. Available at <https://doi.org/10.1007/s13167-018-0151-9>

Hasan, A.A. & Tumah, H. 2018. The correlations between occupational stress, coping strategies, and the levels of psychological distress among nurses working in mental health hospital in Jordan. *Wiley. Perspectives in Psychiatric care*. p.153. Retrieved on 28 February 2022. Available at <https://doi.org/10.1111/ppc.12292>

Havermans, B.M., Brouwers, E. P. M., Hoek, R.J.A., Anema, J.R., van der Beek, A., Boot, C.R.L. 2018. Work stress prevention needs of employees and supervisors. *PubMed Central*. Retrieved on 27 March 2022. Available at <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc5963034/>.

Jaracz, M., Rosiak, I., Bertrand Bucinska, A., Jaskulski, M., Niezurawska, J., Borkowska, A. 2017. Affective temperament, job stress and professional burnout in nurses and civil servants. *Technion Israel Institute of Technology. Israel*, 2-3. Retrieved on 24 March 2022. Available at <https://doi.org/10.1371/journal.pone.0176698>

Jondhale, A. & Anap, D. 2013. Job Stress among the Nursing Staff Working in Rural Health Care Set Up. *Lecture, School of Bioscience Management*. 57. Ebscohost. Retrieved on 24 March 2022. Available at <http://primo.lut.fi/lab>

Kaplan Serin, E., Özdemir, A., Isik, K. 2020. The effect of nurses' compassion on burnout: A cross-sectional study. *Perspectives in Psychiatric Care*. Wiley. EBSCOhost. 371. Retrieved on 27 March 2022. Available at <https://doi.org/10.1111/ppc.12607>

Khamisa, N., Oldenburg, B., Peltzer, K., Ilic, D. 2015. Work Related Stress, Burnout, Job Satisfaction and General Health of Nurses. *International Journal of Environmental research and Public Health*. PubMed. Retrieved on 24 March 2022. Available at <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc4306884/>.

Qi, Y.K., Xiang, Y.T., An, F.R., Wang, J., Zeng, J.Y., Ungvari, G.S., Newhouse, R., Yu, D.S.F., Lai, K.Y.C., Ding, Y.M., Yu, L., Zhang, X.Y., Chiu, H.F.K. 2013. Nurses' Work-Related Stress in China: A comparison Between Psychiatric and General Hospitals. *Perspectives in Psychiatric Care*. Wiley. EBSCOhost. 27. Retrieved on 27 March 2022. Available at <https://doi.org/10.1111/ppc.12020>

Raskind, I.G., Shelton, R.C., Comeau, D.L., Cooper, H.L.F., Griffith, D.M., Kegler, M.C. 2020. A review of qualitative data analysis practices in health education and health behavior research. *PubMed Central*. Retrieved on 24 March 2022. Available at <https://dx.doi.org/10.1177%2F1090198118795019>.

Rigolosi, E.L.M. 2013. *Management and Leadership in Nursing and Health Care: An Experiential Approach, Third Edition*. E-book. Springer Publishing Company. Ebsco. Retrieved on 24 March 2022. Available at <http://primo.lut.fi/lab>

Romani, M.& Ashkar, K. 2014. Burnout among physicians. *PubMed Central*. Retrieved 27 March 2022. Available at <https://dx.doi.org/10.3402%2FIjm.v9.23556>.

Serafin, L., Strzaska Klis, Z., Kolbe, G., Brozowska, P., Szwed, I., Ostrowska, A., Czarkowska Paczek, B. 2022. The relationship between perceived competence and self-esteem among novice nurses – a cross-sectional study. *Annals of Medicine*. 484. Retrieved on 11 April 2022. Available at <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc8843132/>

Van den Oetelaar, W.F.J.M., van Rhenen, W., Stellato, R.K., Grolman, W. 2019. Balancing workload of nurses: Linear mixed effects modelling to estimate required nursing time on surgical wards. *PubMed Central*. Retrieved on 11 April 2022. Available at <https://dx.doi.org/10.1002%2Fnop2.385>.

Van den Oetelaar, W.F.J.M., van Stel, H.F., van Rhenen, W., Stellato, R.K, Grolman, W. 2016. Balancing nurses' workload in hospital wards: study protocol of developing a method to manage workload. Pubmed Central. Retrieved on 11 April 2022. Available at <https://dx.doi.org/10.1136%2Fbmjopen-2016-012148>.

Wikipedia. 2022. Nursing. Retrieved on 23 March 2022. Available at <https://en.wikipedia.org/wiki/Nursing>

Yuan, L., Yumeng, C., Chunfen, Z., Jinbo, F. 2020. Analyzing the Impact of Practice Environment on Nurse Burnout Using Conventional and Multilevel Logistic regression Models. Sage Journals. Retrieved on 15 February 2022. Available at <https://doi-org.ezproxy.saimia.fi/10.1177%2F2165079919900796>.

Appendix 1. Inclusion of the studies in the literature review.

Authors, publication, year	Purpose of the study	Research design	Main Result
Cooper, C. Booth, A. Varley – Campbell, J. Britten, N. Garside, R. Defining the process to literature searching in systematic reviews: a literature review of guidance and supporting studies. 2018.	The article explains how studies are written transparently and the results are placed in the appropriate evidence base.	Article.	Systematic literature search.
Dall’Ora, C. Ball, J. Reiniu, M. Griffiths, P. Burnout in nursing: a theoretical review. 2020.	Workforce studies often show burnout as nursing 'outcome'	Article.	Workload, such as the number of employees, is the most studied link to burnout.
Dellasega, C. What to Do When Nurses Hurt Nurses. 2019	Understanding and resolving relational aggression and bullying in nursing.	Ebook-	How occurs work-related bullying. Relations between colleagues.
Edmonson, C., Zelonka, C. Our	The book explains metaphor-	Article.	Common Nurse Bully Archetypes that show different

<p>Own Worst Enemies. The Nurse Bullying Epidemic. 2019.</p>	<p>ically how bullying looks like and how it manifests in the working environment.</p>		<p>personalities and associated behaviour.</p>
<p>Grigorescu, S.; Cazan, A-M.; Grigorescu, O-D.; Rogozea, L-M. The role of the personality traits and work characteristics in the prediction of the burnout syndrome among nurses – a new approach within predictive, preventive, and personalized medicine concept. 2018.</p>	<p>The aim of the study is to identify and analyse the value of personal characteristics as predictors of burnout syndrome in nurses.</p>	<p>Article.</p>	<p>The article describes the consequences of burnout, workload, and fatigue among health workers.</p>
<p>Hasan, A.A., Tumah, H. The correlations between occupational stress, coping strategies, and the levels of psychological distress among nurses working in mental health hospital in Jordan. 2018.</p>	<p>Coping strategies among nurses.</p>	<p>Journal.</p>	<p>Symptoms and factors of depression.</p>

<p>Havermans, B O. Brouwers, E P M, Hoek R J A. Anema, J R. Beek, A J. Boot, C R L. Work stress prevention needs of employees and supervisors. 2018.</p>	<p>The facts about reporting and preventing work-related stress.</p>	<p>Article.</p>	<p>Work stress is a financial burden for organizations and society. If work-related stress could be prevented or reduced, its consequences could also be reduced.</p>
<p>Jaracz, M.; Rosiak, I.; Bertrand – Bucinska, A.; Jaskulski, M.; Niezurawska, J.; Borkowska, A. Affective temperament, job stress and professional burnout in nurses and civil servants. 2017.</p>	<p>The aim of this study is to assess nurses' affective temperament, work stress and burnout and the relationships between these variables.</p>	<p>Article.</p>	<p>Occupational stress linked to various individual factors such as temperament. Characteristics of personality and temperament.</p>
<p>Kaplan-Serin, K. E.; Özdemir, A.; Isik, K. The effect of nurses' compassion on burnout: A cross-sectional study. 2020.</p>	<p>Burnout and compassion fatigue can lead to inadequate patient care.</p>	<p>Article.</p>	<p>The study was conducted to determine the impact of nurses' compassion on burnout.</p>
<p>Khamisa, N.; Oldenburg, B.; Peltzer, K.; Illic, D. Work Related Stress, Burnout, Job Satisfaction</p>	<p>This article focuses on work-related stress, burnout, job satisfaction and the</p>	<p>Article.</p>	<p>The article highlights the links between work stress and job satisfaction and general health.</p>

and General Health of Nurses. 2015	overall health of nurses.		
Rigolosi, E-L-M. Management and Leadership in Nursing and Health Care: An Experiential Approach, Third Edition. 2013.	The Management processes.	Ebook.	Organizational behaviour.
Romani, M. Ashkar, K. Burnout among physicians. 2014	Stress management programs could help reduce work-related stress while improving the quality of life of care workers.	Article.	Stress management programs have been found to be crucial in preventing and treating burnout.
Yuan, L.; Yumeng, C.; Chunfen, Z., Jinbo, F. Analyzing the Impact of Practice Environment on Nurse Burnout Using Conventional and Multilevel Logistic regression Models. 2020	Article on the impact of datasets in the nursing practice environment.	Article.	Health research on burnout due to overwork

