



The Effects of Work-Related Stress on Nurses' Performance in Hospital Settings

A Literature Review

Abina Kakshapati

Pramila Shrestha

Puja Pradhan Shrestha

Bachelor's Thesis
Bachelor of Health Care (Nursing)

2021

DEGREE THESIS	
Arcada	
Degree Programme:	Bachelor of Health Care (Nursing)
Identification number:	26080, 26734, 26598
Author:	Abina Kakshapati, Pramila Shrestha, Puja Pradhan Shrestha
Title:	The Effects of Work-Related Stress on Nurses' Performance in Hospital Settings
Supervisor (Arcada):	Heikki Paakkonen
Commissioned by:	
<p>Abstract: Stress in nursing in hospitals is an important issue. Work-related stress in nursing occurs due to different work factors that place job demands on nurses. Stress experience has significant negative effect on nurses' well-being, service delivery, and the organization as a whole. Stress is seen as negative factor affecting individual's physical and mental health. However, stress is a normal part of every individual's life and stress in optimal level is considered necessary to increase individual's performance level. Whereas stress over a prolonged period requires sustained physical and mental effort to meet job demands. Nurses' inability to handle job demands can lead to health problems in nurses and decreases their productivity. The aim of this thesis is to study the sources of stress among nurses, study the adverse effects of stress on nurses' performance, and study the stress coping strategies in dealing with stressful situations. This thesis is based on a literature review of 30 articles. The content analysis of this study is based on inductive qualitative content analysis. The Job Demands-Resources (JD-R) model is used as a theoretical framework for this study. The findings from this study indicate that occupational, organizational, socio-demographic, and psychological factors are related to work stress in nursing. Work overload, role ambiguity, staff shortage, job insecurity, inadequate pay, inequality at work, exposure to death and disease, and lack of management support are associated with major sources of work stress in nursing. Prolonged work stress experience among nurses is linked to reduced job commitment, reduced productivity, poor patient outcomes, burnout, illness, absenteeism, and increase in negative personal behaviors such as aggression, anxiety, apathy, etc. It is important to identify job demands that are likely to cause stress among nurses and address those demands with relevant resources to support nurses' work environment. This could be achieved with job redesign, trainings, proper rewards, recognition, and organizational changes. Actions to reduce work stress are necessary to promote physical and mental well-being of nurses.</p>	
Keywords:	Stress, Work-related stress, Effects, Coping strategies, Nurses, Nursing, Performance, Well-being, Hospitals, Job demands, Job resources
Number of pages:	50
Language:	English
Date of acceptance:	18.06.2021

CONTENTS

1	Introduction.....	5
2	Background.....	7
2.1	Definition of Stress and Work-Related Stress.....	7
2.2	Stress and Nursing.....	9
3	Theoretical Framework.....	11
3.1	Job Demands-Resources (JD-R) Model.....	11
4	Aim and Research Questions.....	14
5	Methodology.....	15
5.1	Data Collection.....	16
5.2	Content Analysis.....	22
5.3	Ethical Consideration.....	23
6	Findings.....	25
6.1	Sources of Work-Related Stress Among Nurses.....	25
6.1.1	<i>Occupational Factors.....</i>	<i>26</i>
6.1.2	<i>Organizational Factors.....</i>	<i>27</i>
6.1.3	<i>Socio-demographic Factors.....</i>	<i>27</i>
6.1.4	<i>Psychographic Factors.....</i>	<i>28</i>
6.2	Effects of Work-Related Stress on Nurses' Performance.....	28
6.2.1	<i>Effects of Work-Related Stress in Nurses' Well-Being.....</i>	<i>29</i>
6.2.2	<i>Organizational Impact of Work-Related Stress.....</i>	<i>30</i>
6.3	Work Stress Coping Strategies.....	32
6.3.1	<i>Organizational Strategies.....</i>	<i>32</i>
6.3.2	<i>Individual Strategies.....</i>	<i>33</i>
6.3.3	<i>Social Support.....</i>	<i>34</i>
6.4	Summary of Findings.....	34
7	Discussion.....	36
7.1	Relation with the Theoretical Framework (JD-R Model).....	39
8	Conclusion.....	42
	Reference.....	44

FIGURES

Figure 1: Diagram illustrating relationship between pressure/performance, adapted from (Royal College of Nursing, 2015).....	8
Figure 2: Simplified Job Demands-Resources Model, adapted from (Broetje, Jenny & Bauer, 2020; Bakker, Arnold B., Demerouti, 2007).	13
Figure 3: Illustration of Data Collection Process.....	17
Figure 4: Illustration of Content Analysis.....	23

TABLES

Table 1: Factor considered for inclusion and exclusion criteria.	17
Table 2: List of chosen articles for the literature review and content analysis.....	18
Table 3: Summary of sources of stress among nurses and its categories.	25
Table 4: Summary of effects of work-related stress on nurses' well-being.	29
Table 5: Coping strategies for stress among nurses.	32

ACRONYMS

JD-R – Job Demands-Resources

CIPD – Chartered Institute of Personnel & Development

OHS – Occupational Health Services

Et al. – Et alia meaning “and others”

FOREWORD

We would heartily like to present our sincere thanks to Dr. Pamela Gray who introduced the subject of Theory in Science and Research Methodology to us. Indeed, this subject enlightened us with all the necessary knowledge that we would be needing while writing our own thesis and has provided enormous support in our academic writing process. We are also grateful to Heikki Paakkonen, Pauleen Mannevaara, Terese Sjölund, and Lotta Eronen who supervised and helped us throughout the writing process. It would have not been possible to complete this thesis on time without their push and continuous support and motivation. Finally, we would also like to thank our families and supporters who believed in us and motivated us throughout the study. We cannot miss thanking Arcada University of Applied Sciences for providing this platform. We owe them for everything.

1 INTRODUCTION

Stress affects all age groups, races, and occupations and is a common occurrence that can occur in people's everyday lives, and in some cases, it is difficult to escape stress. Stress can also be the reason to cause the physical and mental imbalance in an individual's day to day life (Jarinto, 2011). As stress can occur in any profession, nursing profession does not stand alone being not affected by it. Stress in nursing has been a chronic issue which may result in many health problems among nurses and can reduce their quality of performance (A, Osamudiamen & A, 2013). The nursing profession is a highly demanding and responsible profession that any kind of compromises in care may lead to serious and hazardous effects on the individual seeking for care.

Work-related stress in nursing is the stress experienced by the nurses inside their working environment which is the result of lack of support from their colleagues and supervisors, and when their abilities and knowledges does not match the working expectations (Gelsema et al., 2006). According to Gelsema et al. (2006), high job demands, work overload and lack of control over work also leads to work-related stress which has been further discussed in detail in findings and discussion chapter.

Furthermore, to support this theory, this paper has used the Job Demands-Resources (JD-R) model which has been presented in the theoretical framework chapter. The methodology chapter includes methodology where the different methods used in the study has been discussed and described. The findings chapter consists of detailed outcomes gathered after collecting data from the literature review and then analyzing the collected data thoroughly. The findings chapter also consists of the most important findings the authors have found while reviewing the literature and have been jotted down as a Summary of Findings. The discussion and conclusion chapter consist of detailed review of the nursing literature on work-related stress along with answering study's research questions.

The main aim of this study is to examine the leading and primary sources of work-related stress among nurses in hospital setting along with its possible effects on nurses'

performance. This paper also seeks to examine the stress coping strategies frequently used in nursing profession to cope up and manage the stress. Moreover, the reason behind being inspired and selecting this topic for further study came from the author(s) own personal experiences. Work stress among nurses in nursing profession are felt and experienced by almost everyone. However, the level of stress varies from person to person. The same level of stress experienced by an individual might not affect the other. Hence, the authors felt the need of further detailed study in this topic and rule out more possible and underlying stressors and their consequences in nursing performance along with the coping strategies.

2 BACKGROUND

This chapter provides background for the research presented in this thesis. The key terms used in this thesis: stress, work-related stress, and stress in nursing profession are defined and discussed.

2.1 Definition of Stress and Work-Related Stress

Stress is an unavoidable factor in human life because it is a natural phenomenon which regularly develops in anyone's life. It can happen to anybody, any gender, and any professional career. Stress is a kind of pressure that causes mental disturbance and loss of self-balance in an individual, and thus results in a change in person's behavior (Jarinto, 2011). Royal College of Nursing (2015) state that *'stress is not an illness but can lead to a range of physical and mental ill health disorders'*.

The concept of stress and its effects were first introduced and researched by Selye in 1974. Hans Selye, as a pioneer in stress research has classified stress in two categories, each with two variations: distress (harmful stress) and eustress (beneficial stress) (Beh, 2012; Drafke, Kossen, 2002). According to Chartered Institute of Personnel & Development (2020), stress up to a certain level is considered beneficial as it provides energy and motivation to improve people's performance. It is good to experience challenges up to a certain level in life to feel motivated to level up performance. However, if pressure/stress becomes excessive and continues for longer period of time, it loses its beneficial effect and becomes harmful to health. Depending on how individual perceive, the degree of effect of stress in individual will vary. Every individual is unique by nature and hence their experience of pressure, and when that pressure leads into stress will also differ (CIPD, 2020). Several other studies have indicated that stress influences individual's performance. As mentioned above, stress up to a certain degree is necessary to motivate individual to perform well, while stress beyond an optimal level can lead to a range of physical and mental health disorders.

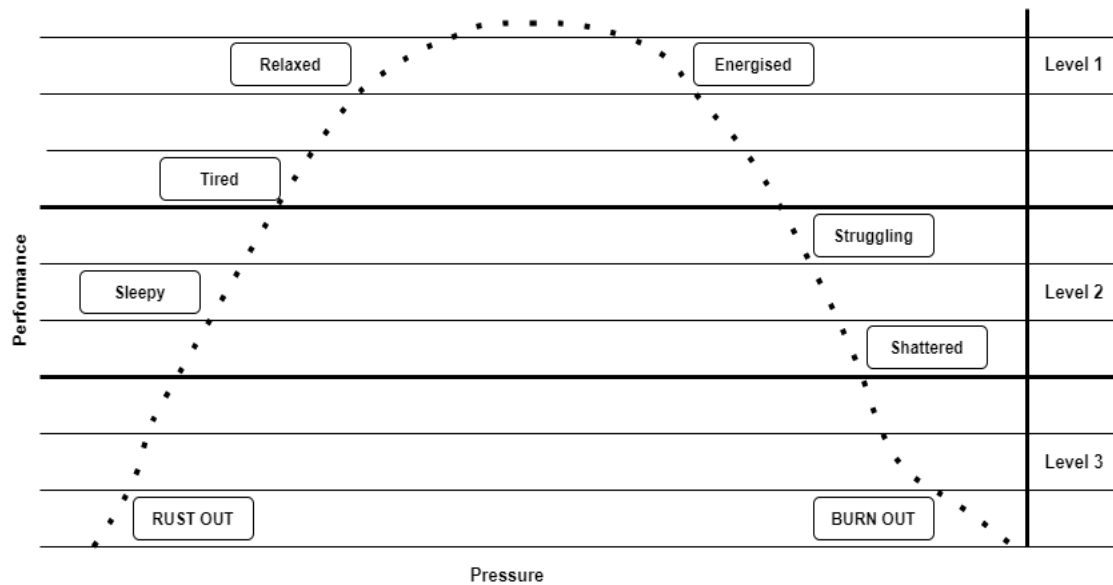


Figure 1: Diagram illustrating relationship between pressure/performance, adapted from (Royal College of Nursing, 2015).

As mentioned in Figure 1, an optimal level of pressure is required for peak performance. The optimum level of pressure in the above-mentioned graph is denoted by a healthy tension between feeling of “relaxed” and “energised”. An individual will feel “sleepy” and “tired”, and eventually will “rust out” if optimal level of pressure is not experienced. However, pressure/stress beyond optimal level will lead an individual to a feeling of “struggling”, and in due course will “burnout” (Royal College of Nursing, 2015).

Work-related stress is a type of stress associated with workplace. World Health Organization (2020) has defined work-related stress as:

“Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope”.

Moreover, according to Sarafis et al. (2016), and Richardson, Rothstein (2008), work stress is a situation where work-related factors interact with an employee, causing a change in employee’s both physiological and psychological condition such that the person is compelled to deviate from normal functioning. Any work by itself includes duties, responsibilities, and other work-related factors that may cause stress in employee. According to the European Agency for Safety and Health at Work (Milczarek, Schnei-

der & González, 2009), stress is the second highest reported work-related health problem, affecting 22% of workers from the 27 European countries. Work-related stress causes adverse impact for both employees and organizations (Mosadeghrad, Ali, 2014).

2.2 Stress and Nursing

Hingley (1984) as cited by Cox, Griffiths & Cox (1996) has defined nursing as a profession subject to a high degree of stress, stating that:

“Every day the nurse confronts stark suffering, grief and death as few other people do. Many nursing tasks are mundane and unrewarding. Many are, by normal standards, distasteful and disgusting. Others are often degrading; some are simply frightening.” (p.3)

Nursing by its nature is a strenuous job with higher workload and complicated demands. It is a profession that requires high level of knowledge and skills, teamwork in different situations, and delivery of care round the clock. The combination of too much responsibility, and too little authority have been identified as the most challenging stressors among nursing staffs (Sarafis et al., 2016; Mark, G., Smith, 2012; Sveinsdóttir, Biering & Ramel, 2006). The act of caregiving as a nurse is an interpersonal procedure which includes interpersonal sensitivity and intimate relationships, including positive communication and implementation of professional knowledge and skills (Sarafis et al., 2016; Fingeld-Connett, 2008). A, Osamudiamen & A (2013) state that prevalence of stress among nurses is an endemic problem. Stress can significantly cause health related issues in nurses effecting their quality of life, and simultaneously reduce their efficiency or care-giving behavior (Sarafis et al., 2016; Fingeld-Connett, 2008). Stress can result in loss of compassion for patients and can increase the possibility of nursing errors and thus affects nurses’ quality of care (Sarafis et al., 2016; Teng, Hsiao & Chou, 2010). According to numerous studies, stress has a positive or negative influence on the delivery of nursing care and on patient results (Sarafis et al., 2016; Harris, 2001; Spence Laschinger, Leiter, 2006). Stress in optimal level has positive implications, such as improving one’s performance or increasing one’s level of alertness and cognition, while its negative implications in nurses’ performance are the main scope of this thesis.

Nursing requires excess of energy in different levels. In the perspective of physicality, the job can be very demanding which requires high levels of muscular-skeletal stress leading to many aches and pain. In addition, apart from physicality, a nurse must be mentally sharp and astute, capable of making medical calculations as well as dealing with patient and relatives at the same time (Royal College of Nursing, 2015). Depending on the size and nature of healthcare institutions, nurses are confronted with different work tasks, working hours, work-shifts, working conditions, and the suffering and death of patients (Eleni, Theodoros, 2010). According to different studies, there are various stress factors which can cause stress among nurses. Stress can have profound impact on nurses. It is essential to understand the effects of stress among nurses because:

1. The psychological and mental suffering caused by stress can have adverse effect in nurses' care-giving behavior (Royal College of Nursing, 2015).
2. It can bring distressful situation to the nurse concerned (Royal College of Nursing, 2015).
3. It can cause effect on nurses' health (Royal College of Nursing, 2015).
4. It can have effect on attendance at work and nurse turnover (Royal College of Nursing, 2015).

To deal with stress at work, stress coping strategies among nurses is very important. For that, CIPD (2020) state that stress management should be approached proactively by healthcare institutions (employers). Focus should be on prevention and early intervention of stress rather than just responding when a problem situation becomes more significant. Similarly, Regina, Doody & Lyons (2013) has emphasized on the importance of well-being of nurses to ensure their ability to work and maintain and improve standards of care. It is important that healthcare institutions should actively promote and assess physical and mental well-being of nurses.

3 THEORETICAL FRAMEWORK

In this chapter, the theory that supports this thesis is explained, showing that the research of this thesis is based in established ideas. The theoretical framework supporting this thesis is Job Demands-Resources (JD-R) Model. This theory is chosen for its relevance to the topic in connection to stress. The JD-R model presents the relationship between two factors of working conditions: job demands and job resources, and how these factors determine the occurrence of work-related stress.

3.1 Job Demands-Resources (JD-R) Model

Researcher Demerouti and her colleagues in 2001 first introduced Job Demands and Resources model, also called the JD-R model. The main objective of this model is to improve well-being and job performance of the employees preventing burnout. It is one of the frameworks for understanding well-being and ill-being of employee (Halbesleben, Buckley, 2004). The JD-R model categorizes working condition into two parts: job demands and job resources.

Job demands belong all the physical, social, or organizational aspects of the job that ask for sustained physical and/or psychological (cognitive and emotional) effort or skills and are associated with physiological and/or psychological costs. These include work pressure, emotional demands, time pressure, unfavorable working environment (Bakker, Arnold B., Demerouti, 2007).

Job resources belong all the physical, social, or organizational factors of the job that help to achieve work goals, reduce job demands and the associated physiological and psychological costs, and stimulate personal growth, learning, and development. For example, good leadership, favorable working environment, career opportunities, role-clarity, good teamwork, interpersonal relationships, coaching and mentoring (Bakker, Arnold B., Demerouti, 2007).

According to many empirical studies done on occupational group, it is proven that (Bakker, Arnold B., Demerouti, 2017):

1. every compound of executed work can be put in either in job resources or in job demands.
2. when resources are available it boosts commitment and when there is high job demands it may lead negative consequences like stress, exhaustion, etc.
3. to a certain extent availability of the resources decreases the chance of negative consequences associated with work strain.
4. in the scenario where resources are available, high demands can also be driving or stimulating.
5. same as the resources provided by the company or organization, the internal resources of the worker (like personality traits, their self-esteem or positive attitude) as well assist them to cope with the job demands (Azizollah et al., 2013).

Job demands are not necessarily negative but becomes stress factors when sustained efforts are required to meet the job demands. They can be perceived critically if there is an imbalance between demands and resources. When job demands are high and job resources are low, it results to stress and burnout among employees. Conversely, job resources can balance the impacts of high job demands, and this can lead to positive results where employees become more engaged and motivated towards their work (Bakker, Arnold B., Demerouti, 2007).

The main purpose of the JD-R model is to avoid an imbalance between job demands and job resources. The imbalance between these two work factors could lead to a serious health and personal problems. Theoretically, two different but related psychological processes are assumed by JD-R model to explain “job strain” (e.g., stress, burnout) and “motivation” (e.g., engagement, commitment) (Bakker, Arnold B., Demerouti, 2007). As shown in the Figure 2, job demands (physical, mental, emotional, etc.) increase the strain with negative results on the employees’ health and in some cases, workers could develop depression, anxiety, or burnout syndrome. Higher job demands in comparison to inadequate resources lead to “health impairment process” causing negative outcomes such as poor performance, reduced organizational commitment, absenteeism, etc. On

the other hand, sufficient job resources (autonomy, feedback, support, etc.) may reduce negative impact of job demands and increase “motivation” among employees that leads to better final results (Bakker, Arnold B., Demerouti, 2007). Job resources are associated with work engagement which leads to positive outcomes such as organizational commitment, increased work performance, job satisfaction, etc. Job demands and job resources rely on each other: an increased level of demands could reduce motivation and engagement, and in the same way, increased level of resources could decrease the strain and difficulties posed by the demands. The right equilibrium between job demands and job resources could be achieved if the negative perception of job demands are balanced with strong job resources (Fernet, Austin & Vallerand, 2012; Bakker, Arnold B., Demerouti, 2007; Schaufeli, 2017).

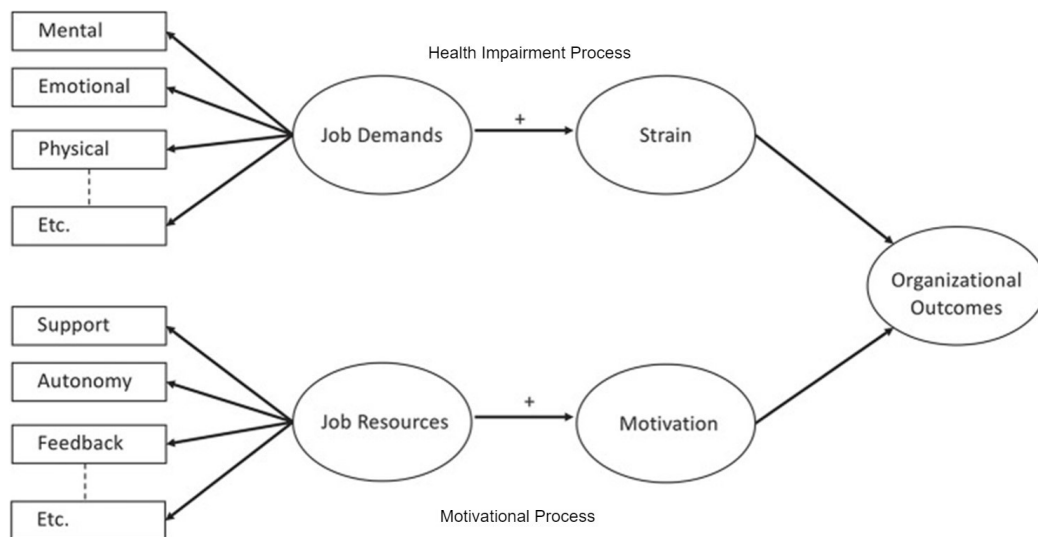


Figure 2: Simplified Job Demands-Resources Model, adapted from (Broetje, Jenny & Bauer, 2020; Bakker, Arnold B., Demerouti, 2007).

Conclusively, JD-R model is chosen in our research to bring clarity to our topic. We decided to choose this theory since it integrates a focus on not only for the negative aspects of work like strain, stress, or burnout but also the positive aspects. It is relevant for all jobs features as it has a huge range of scope, it is flexible and can be customized to the need of any organization or individual and it is also for all the stakeholder a general communication medium (Schaufeli, 2017). This theory will guide us to look deeper into the causes and effects of stress in nurses’ performance and its management also.

4 AIM AND RESEARCH QUESTIONS

The aim of this thesis is to study the major sources and effects of work-related stress on nurses' performance and what could be the possible stress coping strategies.

1. What are the sources of work-related stress among nurses?
2. What are the effects of work-related stress on the nurses' performance?
3. What are the work stress coping strategies?

5 METHODOLOGY

According to the Merriam-Webster Dictionary, methodology has been defined as “1) a body of methods, rules, and postulates employed by a discipline: a particular procedure or set of procedures, 2) the analysis of the principles or procedures of inquiry in a particular field”. The methodology of a research paper provides the necessary information through which a study’s believability is assessed. Hence, it requires a clear and detailed description of how an experiment was conducted, and the motive for why specific experimental procedures were chosen (Kallet, 2004).

In thesis writing, the methodology provides guidance in gathering the necessary data to help answer the aims and research questions. In this chapter, we present the method, data collection process, content analysis of the collected data, list of articles chosen for our research paper, and ethical considerations.

For this thesis, a review of the literature was used. The primary purpose of a literature review is that it provides the foundation of knowledge on the chosen topic. It helps in identifying the main methodologies and the data collection process that has been used in the previous studies. It also provides enormous support in relating to the author’s own research findings. Moreover, it aids in identifying inconsistencies such as gaps in research, conflicts in previous studies, etc. allowing us to place our own research within the context of existing literature for why further study is needed (Hart, 2018).

A qualitative methodology done for the content analysis supported us in gathering the data. Through the systematic search from different academic databases, 30 articles were selected.

5.1 Data Collection

The authors have done a qualitative literature review for the study. A literature review is a critical review or recap of a topic which is done systematically for the purpose of identifying, evaluating, and synthesizing what has already been researched. Literature review is important as it allows the researcher to find out what is already known about the topic and how the other researchers have approached it (Fink, 2019).

For the data retrieval of our research paper, we used five search engines and different keywords and phrases which helped us to retrieve the exact and necessary data that justifies our topic and research questions. The search engines we used during our research were ScienceDirect, SAGE, Pub-med, Google Scholar, and Academic Search Elite (EBSCO). The search keywords that were applied to these databases to collect the relevant articles were “work-related stress AND nurses’ performance” and “work-related stress AND nurses’ performance AND hospital settings”. A detailed description of how the articles were collected and narrowed down to achieve the most relevant articles to the study has been illustrated in Figure 3. It shows the process of database search and the total number of hits that were obtained during the search. Besides, the authors have also followed the inclusion and excision criteria to obtain the necessary information for the study. Furthermore, the factors considered for inclusion and exclusion criteria are summarized in Table 1. Narrowing down the year to 2010-2021 and selecting the articles that were written only in the English language and are free aided the authors further in choosing the articles. The articles which did not answer the topic and research question were excluded. Considering the above-mentioned criteria, the sum of 30 articles was chosen.

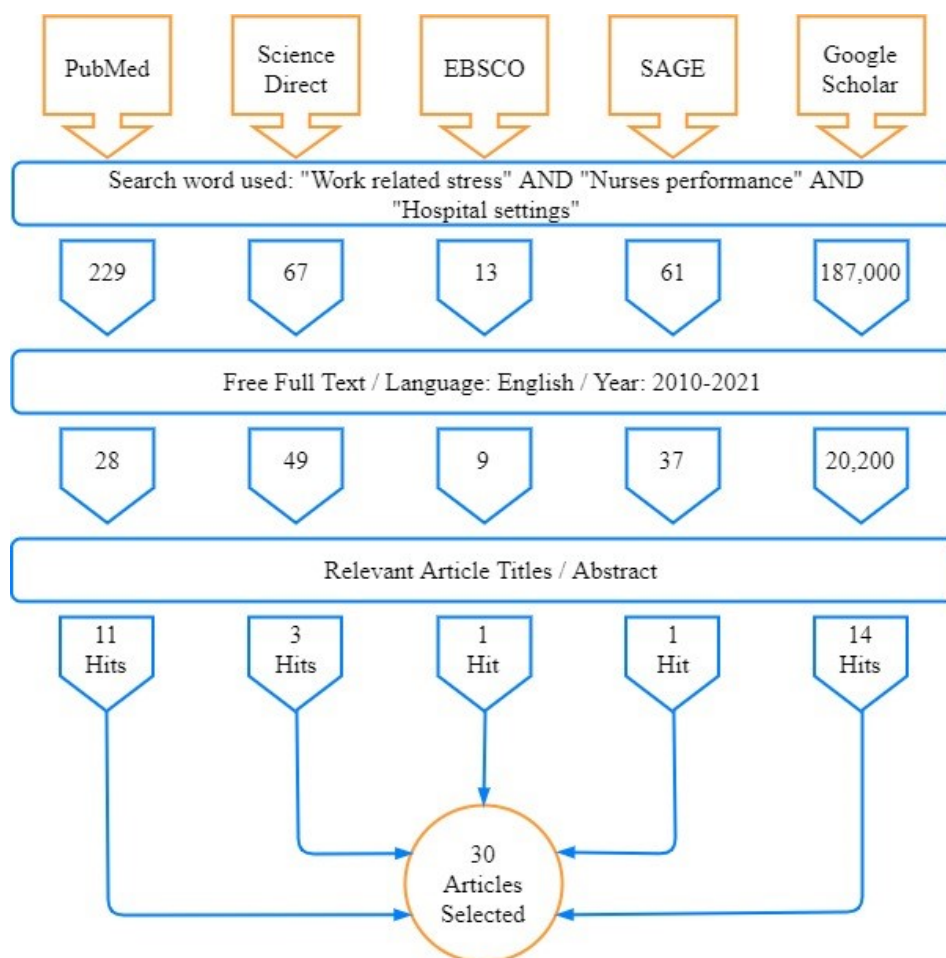


Figure 3: Illustration of Data Collection Process.

Table 1: Factor considered for inclusion and exclusion criteria.

Inclusion Criteria	Exclusion Criteria
Articles that were relevant to the stress in nurses were included.	Articles that were not relevant to the stress in nurses were excluded.
Articles in full text were included.	Articles not available in full text were excluded.
Free full text articles were included.	Paid articles were excluded.
Articles from 2010-2021.	Articles older than 2000.
Articles in English language.	Articles other than English language.

Articles from academic databases such as EBSCO, PubMed, SAGE, Science Direct, Google Scholar.	Articles from non-academic databases.
---	---------------------------------------

Table 2: List of chosen articles for the literature review and content analysis.

SN	Authors	Title	Publication	Vol.	Iss.	Pages	Year
1	Abuanja, M.J; Awad, H;	Impact of stress on nurse's performance in El Mek Nimer University Hospital	Advance Research Journal of Multi-Disciplinary Discoveries	3	1		2016
2	Mosadeghrad, Ali Mohammad;	Occupational stress and turnover intention: implications for nursing management	International journal of health policy and management	1	2	169	2013
3	Sarafis, Pavlos; Rousaki, Eirini; Tsounis, Andreas; Malliarou, Maria; Lahana, Liana; Bamidis, Panagiotis; Niakas, Dimitris; Papas-tavrou, Evridiki;	The impact of occupational stress on nurses' caring behaviors and their health related quality of life	BMC nursing	15	1	1-9	2016
4	Najimi, Arash; Goudarzi, Ali Moazemi; Shari-firad, Gholamre-za;	Causes of job stress in nurses: A cross-sectional study	Iranian journal of nursing and midwifery re-search	17	4	301	2012
5	Ruotsalainen, Jani H; Verbeek, Jos H; Mariné, Albert; Serra, Consol;	Preventing occupational stress in healthcare workers	Cochrane Database of Systematic Reviews		11		2014
6	Mosadeghrad, Ali Mohammad;	Occupational stress and its consequences	Leadership in Health Services				2014
7	Tiwari, Swarni-ma; Bhagat, Deepak;	Determinants of Occupational Stress in Health Care Professionals: A Critical Review	Global Publishing House			45-58	2017
8	Sharma, Parul; Davey, Anuradha; Davey, Sanjeev;	Occupational stress among staff nurses: Controlling the risk to health	Indian journal of occupational and environmental medicine	18	2	52	2014

	Shukla, Arvind; Shrivastava, Kajal; Bansal, Rahul;						
9	Gulavani, Apeksha; Shinde, Mahadeo;	Occupational stress and job satisfaction among nurses	International Journal of Science and Research (IJSR)	3	4	733-740	2014
10	Rickard, Greg; Lenthall, Sue; Dollard, Maureen; Opie, Tessa; Knight, Sabina; Dunn, Sandra; Wakerman, John; MacLeod, Martha; Seiler, Jo; Brewster-Webb, Denise;	Organisational intervention to reduce occupational stress and turnover in hospital nurses in the Northern Territory, Australia	Collegian	19	4	211-221	2012
11	Moustaka, Eleni; Constantinidis, Theodoros C;	Sources and effects of work-related stress in nursing	Health science journal	4	4	210	2010
12	Donkor, Jacob	Effects of stress on the performance of nurses: Evidence from Ghana	International Journal of Accounting, Banking and Management	1	6	64-74	2013
13	Khamisa, Natasha; Oldenburg, Brian; Peltzer, Karl; Ilic, Dragan;	Work related stress, burnout, job satisfaction and general health of nurses	International journal of environmental research and public health	12	1	652-666	2015
14	Al-Khasawneh, A.L; Moh'd Futa, Sahar;	The Relationship between Job Stress and Nurses Performance in the Jordanian Hospitals: A Case Study in King Abdullah the Founder Hospital	Asian Journal of Business Management	5	2	267-275	2013
15	Mokhtar, Kawther; El Shikieri, Ahlam; Rayan, Ahmad;	The relationship between occupational stressors and performance amongst nurses working in pediatric and intensive care units	Am J Nurs Res	4	2	34-40	2016
16	Adib-Hajbaghery, Mohsen; Khammechian, Mar-	Nurses' perception of occupational stress and its influ-	Iranian journal of nursing and midwifery re-	17	5	352	2012

	zieh; Alavi, Ne- gin Masoodi;	encing factors: A qualitative study	search				
17	Mark, George; Smith, Andrew P;	Occupational stress, job charac- teristics, coping, and the mental health of nurses	British journal of health psy- chology	17	3	505- 521	2012
18	Nowrouzi, Behdin; Light- foot, Nancy; Larivière, Mi- chael; Carter, Lorraine; Rukholm, Ellen; Schinke, Robert; Belanger- Gardner, Diane;	Occupational stress management and burnout interven- tions in nursing and their implications for healthy work environments: A literature review	Workplace health & safety	63	7	308- 315	2015
19	Keykaleh, M.S; Safarpour, H; Yousefian, S; Faghisolouk, F; Mohammadi, E; Ghomian, Z;	The Relationship between Nurse's Job Stress and Pa- tient Safety	Open Access Macedonian Journal Medical Science	6	11	2228- 2232	2018
20	Monserate, Reyzen.O;	Occupational Stress and Quality of Worklife among Staff Nurses in a Level 1 Private Hospital in Padada, Davao del Sur	International Journal of Sci- entific & Engi- neering Re- search	9	2		2018
21	Applebaum D, Fowler S, Fiedler N, Osinubi O, Robson M.	The Impact of En- vironmental Fac- tors on Nursing Stress, Job Satis- faction, and Turno- ver Intention	J Nurs Adm	40	7-8	323- 328	2010
22	Li Li; Hua Ai; Lei Gao; Hao Zhou; Xinyan Liu; Zhong Zhang; Tao Sun; Lihua Fan; Li, Li; Ai, Hua; Gao, Lei; Zhou, Hao; Liu, Xinyan; Zhang, Zhong; Sun, Tao; Fan, Lihua	Moderating effects of coping on work stress and job per- formance for nurs- es in tertiary hospi- tals: a cross- sectional survey in China.	BMC Health Services Re- search	17		1-8	2017
23	Wei,Holly; Sew- ell, A Kerry; Woody, Gina; Rose, A Mary	The state of the science of nurse work environments in the United States: A systemat-	International Journal of Nurs- ing Sciences	5	3	287- 300	2018

		ic review					
24	Anbazhagan, A; Soundar Rajan, LJ;	A Conceptual Framework of Occupational Stress and Coping Strategies	International Journal of Business Economics & Management Research	3	5		2013
25	Yim, H.Y; Seo, H.J; Cho, Yoonhyung; Kim, JinHee	Mediating Role of Psychological Capital in Relationship between Occupational Stress and Turnover Intention among Nurses at Veterans Administration Hospitals in Korea	Asian Nursing Research	11	1	6-12	2017
26	Mat Saruan, N.A; Yusoff, Hanizah. Mohd; Mohd Fauzi, Mohd Fadhli; Wan Puteh, S.E; Robot, R.M	Unplanned Absenteeism: The Role of Workplace and Non-Workplace Stressors	International Journal of Environmental Research and Public Health	17	17	6132	2020
27	Martinez-Zaragoza, F; Benavides-Gil, G; Rovira, T; Martin-Del-Rio, B; Edo, S; Garcia-Sierra, R; Solanes-Puchol, A; Fernandez-Castro, J	When and how do hospital nurses cope with daily stressors? A multi-level study	Plos One	15	11	e0240725	2020
28	El Khamali, R; Mouaci, A; Valera, S; Cano-Chervel, M, et al.	Effects of a Multimodal Program Including Simulation on Job Strain Among Nurses Working in Intensive Care Units	JAMA	320	19	1988-1997	2018
29	Hämmig, Oliver	Work- and stress-related musculoskeletal and sleep disorders among health professionals: a cross-sectional study in a hospital setting in Switzerland	BMC Musculoskeletal Disorders	21		319	2020
30	Lu, Dong-Mei; Sun, Ning; Hong, Su; Fan, Yu-ying; Kong, Fan-ying; Li, Qiu-jie	Occupational Stress and Coping Strategies Among Emergency Department Nurses of China	Archives of Psychiatric Nursing	29	4	208-212	2015

5.2 Content Analysis

Content analysis is a research methodology for systematically analyzing collected data to generate findings and put them into context (White, Marsh, 2006). Content analysis can be characterized as “a systematic, rigorous approach to analyzing documents obtained or generated in the course of research” (White, Marsh, 2006). The aim of content analysis in a research is to provide better understanding of data collected by refining words of the text into few categories that are related content wise (Elo, Kyngäs, 2008).

For content analysis, the authors of this thesis have chosen inductive qualitative content analysis method. In this method, relevant data are first identified, and after that data are coded and themes are generated based on the underlying of relevant data. According to Elo, Kyngäs (2008), inductive content analysis has three main phases: preparation, organizing, and reporting. In preparation phase, relevant data were identified and read repeatedly to make sense of the data (Elo, Kyngäs, 2008). In the context of this thesis, authors collected data relevant to stress among nurses from academic databases such as ScienceDirect, PubMed, EBSCO, Google Scholar, and SAGE. In organizing phase, data were read word by word to derive codes by identifying data that appear to reflect key thoughts or concepts of research questions. Generated codes were then sorted into categories and sub-categories based on relation and link between different codes (Hsieh, Shannon, 2005). In reporting phase, results of the analysis were organized and grouped into meaningful clusters (categories and sub-categories) in relation to causes of stress among nurses, effects of work-related stress in nurses' performance, and coping strategies (Hsieh, Shannon, 2005).

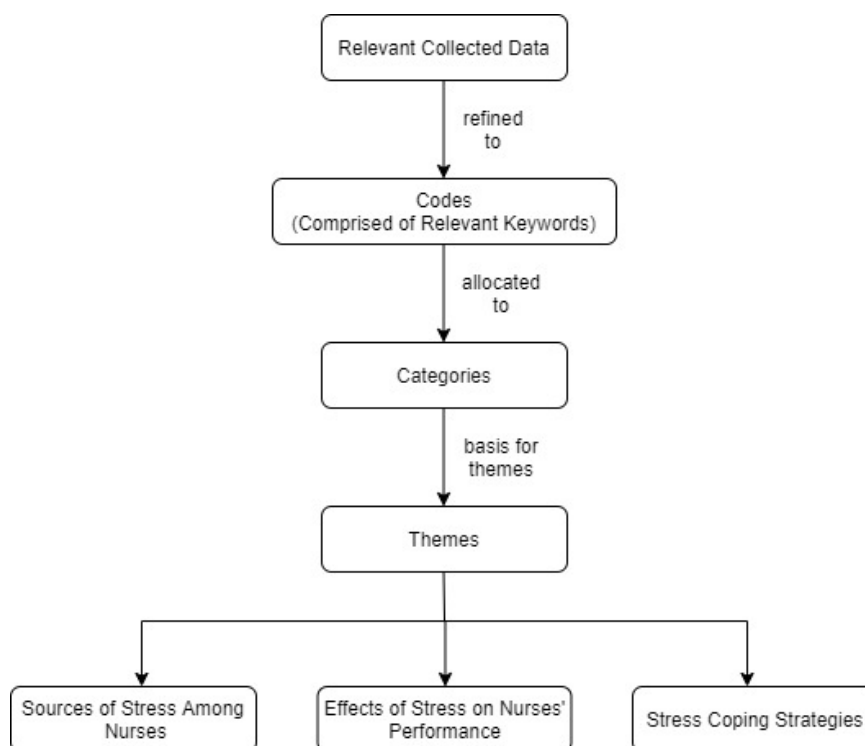


Figure 4: Illustration of Content Analysis.

Authors identified four main categories in response to factors contributing to work-related stress in nurses. Three main categories were identified in response to effects of work stress in nurses' performance and stress coping strategies, respectively. Findings from content analysis are presented in detail in findings chapter (Table 3, Table 4 & Table 5).

5.3 Ethical Consideration

Ethical consideration is a series of guidelines that researchers need to follow while writing their research paper. As our research paper is based on literature review where qualitative research design has been used. Considering and following all the ethical guidelines which is crucial to follow while writing a research paper, an equitable behavior to the obtained information has been done by the authors. Moreover, the authors have considered and followed the writing guide 2018, Version 3.0 (3.10.2018) provided by The Arcada University of Applied Sciences. It can be found on their official website.

The authors who have accessed this website are registered degree students of Arcada University of Applied Sciences therefore, they have used their official credentials to access the available academic database which helped the authors to retrieve the necessary articles for this research paper.

While conducting the study, the Finnish advisory board on research integrity were also observed, followed, and the ethical considerations that must be taken were properly addressed. The retrieved and included articles in the study were fully analyzed to ensure that research ethics were thoroughly followed, and the findings found from the literature were also assessed for reliability in accordance with the Finnish advisory board on research integrity's standards for the responsible conduct of research (TENK, 2012).

The plagiarism is the first and one of the important key factors to be considered. Next, this paper also aims to protect the confidentiality and the copyrights of the intellectual property holder by not extracting the obtained information in illegal way. Likewise, the research paper we have written has been supervised and approved by the supervisors of Arcada University of Applied Sciences beforehand. In this research paper, the authors ensure that no one's privacy, morality and solemnity is faulted knowingly and unknowingly. The rights of author were admired and acknowledged.

The information included in this paper were already published. Throughout the writing and research process, proper citation of articles was done and the sources from where the information were retrieved was observed thoroughly. This is the key process in literature review as this process urge the researchers to be responsible for treating the published works candidly and giving the appropriate credits to the intellectual property. Paraphrasing was also used for some explicit information in this paper.

In addition, the authors also guarantee that no falsification of data has been attempted by considering and following the high standard referencing style.

6 FINDINGS

This chapter is based on the 30 articles selected for this research. The information is collected in relation with the main research question and formulated in form of categories and sub-categories by reading every single article separately. The authors have presented relevant articles here, and some other articles are used in some other chapters such as background, theoretical framework section of the research. The selected articles from 1-30 (in ascending order) are referenced in this chapter using those numbers.

6.1 Sources of Work-Related Stress Among Nurses

The major sources of stress among nurses were divided into four main categories. Summary of categories and sub-categories are listed in Table 3 below. The main categories include occupational factors, organizational factors, socio-demographic factors, and psychographic factors.

Table 3: Summary of sources of stress among nurses and its categories.

Main Factor	Sub-Factor	Articles Number
Occupational Factor	Workload	1, 2, 4, 6, 7, 8, 11, 12, 14, 15, 16, 17, 19, 20, 24, 25, 27
	Conflict or misunderstanding with colleagues	9, 11, 12, 13, 14, 15, 16, 20, 24
	Role ambiguity (ranges of roles)	2, 4, 6, 7, 11, 15, 20, 24, 25
	Insufficient regular breaks or time for rest	2, 6, 9, 16, 17, 24
	Time pressure	2, 6, 7, 8, 15, 16
	Role duality (contradiction)	2, 4, 6, 7, 20, 24
	Conflict with physicians	9, 12, 17, 19, 20
	Exposure to infectious diseases	7, 11, 14, 16
	Insufficient training or experience or education	2, 11, 15, 16
	Responsibilities	4, 11
	Handling dangerous chemical substances (chemotherapy)	11, 18

Organizational Factor	Staff coverage	1, 2, 6, 8, 11, 12, 16, 20
	Lack of management support	2, 6, 7, 9, 10, 11, 15, 24
	Inadequate pay	2, 6, 8, 13, 15
	Lack of equipment	7, 15, 16
	Career development issues and education	6, 7, 11
	Lack of job security	2, 6
	Use of sophisticated technologies	11,12
Socio-demographic Factor	Unfairness and discrimination	2, 6, 9, 16, 17, 24
	Age and experience	2
	Sex	6
	Uncertainty concerning treatment of patient	9, 12, 15, 20
Psychographic Factor	Dealing with the seriously ill or dying patients	7, 9, 11, 12, 15, 16, 17, 27
	Dealing with patient or family	9, 12, 19
	Poor attitudes of physicians	8,14

6.1.1 Occupational Factors

Occupational factor is the most important factor influencing nurses' work satisfaction and organizational commitment. They are also found as the crucial turnover factor among nurses. When there is disproportion between the worker's ability to cope and demands of the workplace, occupational stress occurs (2). Several studies have highlighted work overloads and time pressure as significant contributors to work stress among health care professionals (1). Healthcare profession is stressful profession by its nature as nurses do the long working hours, difficult working conditions, dealing with difficult patients and numerous occupational health and safety hazards (2).

Besides that, burdensome tasks, excessive workload, insufficient time, staff shortage, excessive working hours, irregular shift work, conflict with other colleagues and high job demands are also found as nurses' occupational stress factors. (2) Here some references also mentioned that conflict with physicians is found more psychologically demanding and damaging for the nurses than with their colleagues. (8) Verbal abuse from the physicians was noted to be stressful for nurses, poor relationship with peers and su-

pervisors and discrimination from them were also found as stressors. (8) Occupational stress give rise to physical and mental problems for nurses. Low decision latitude, role contradiction, conflicting demands, insecurity of job and poor management system give rise to psychological distress for staffs (6).

6.1.2 Organizational Factors

The findings also mention that the organizational policies had the strongest relation with the nurses' work-related stress. Organizational polices have the power to change the nature of work and eventually employers' lay off or relocation. In effort to decrease the nurses occupational stress, change in management systems and structure, changes in senior management behavior, changes in organizational variables such as benefit scales, employee involvement and participation in policy development and work environment and demonstrating the value to the employee are found to be very effective (2).

In many studies, inadequate staff coverage and excess working hours as a major stress factor for the nurses which could be solved by the organization. Problem with the nursing director/manager was felt by more than half (58.3%) of the nurses as a source of stress (1). Insufficient salary, lack of control over work, too much responsibility and too little authority, poor social support, job insecurity, poor opportunities for advancement and poor management styles are also found as a source of stress for the nurses working in hospitals (2). Heavy workload, hazardous situation, staff shortage, lack of training and inadequate resources is linked with employees' physical injuries (6).

6.1.3 Socio-demographic Factors

According to the finding, level of job stress in different age groups were different. Nurses of age group 25-29 showed more at risk of stress (4). The age group of 35 or more are found to have minimum stress level which may be related to more skill, experience, and greater consistency due to increasing of age (4, 6). There was no significant relation found between job stress and marital status or education level. In addition, it was also found that age, marital status, tenure, and education also influence nurses' turnover.

Direct strong correlation between the occupational stress of employees, work tenure, place of work and their age are found (2, 4).

6.1.4 Psychographic Factors

Nursing is one of the stressful jobs and affected nurses in a serious way. In the study of stressful jobs, Food and Drug Administration (FDA) has declared that among 130 studied jobs, nurses visiting doctor about their mental condition come at 27th place. Nurses also experience stress as patients and some of them cannot handle the present stress. The average of absences because of excessive stress is about four times more than other nonprofessional damages and professional disorders according to estimations in 1997 in USA (4). Nurses being responsible for the patient outcomes, complexity of disease treatment, and uncertainty concerning treatment of patients, propagation of diseases from patients, and dealing with death and dying people have also been found as sources of occupational stress (4, 9).

6.2 Effects of Work-Related Stress on Nurses' Performance

Stress causes change in individual's psychological and physiological condition. It forces individual to deviate from normal functioning (3). Level of stress up to a certain level can be beneficial, however, if the intensity of the stressor exceeds thresholds of tolerance level, then the stress can lead to bad consequences (19). Work-related stress can significantly affect nurses' quality of work life and well-being (3). It can lead to deterioration of nurses' physical and mental health condition (3, 19). Simultaneously, work stress can also lead to different work-related events such as: increased absenteeism and turnover intention, decreased job satisfaction, reduced productivity and organizational commitment, and reduced quality of patient care (2, 19, 24). Work stressed nurses are likely to have greater job dissatisfaction, reduced job performance, increased negative reaction towards patients under their care, increased absenteeism, higher number of work errors/accidents, lower morale and greater interpersonal conflict with colleagues and superiors. Work stress can adversely affect nurses' care giving behaviors in a way that it may result in loss of compassion for patients, decreased concentration and deci-

sion-making, and increased incidences of nursing practice errors (3). Based on the selected articles, results show that work-related stress in nursing remains as a significant concern affecting both the nurses' well-being and the organization, they work in. This section presents what effects work-related stress has on nurses' well-being and the organization.

6.2.1 Effects of Work-Related Stress in Nurses' Well-Being

Work-related stressors may have adverse effect on nurses' physical and mental health well-being (2, 24). Work stress is associated with chronic fatigue/tiredness, disordered eating, headaches, hypertension, musculoskeletal pains, emotional exhaustion, sleeping problems, depression, anxiety, mood disturbance, lack of concentration, lack of decision making, etc. Nurses encountering work stress are prone to negative physical, emotional, and behavioral responses (2, 6, 7, 11, 13, 14, 18, 19, 20, 22, 27, 29). Based on information gathered from selected articles, nurses' response to work stress and the effect of work stress in nurses' well-being are divided into three main categories: physical response, emotional response, and behavioral response. Table 4 summarizes the three main categories and sub-categories of effects of work-related stress in nurses' well-being.

Table 4: Summary of effects of work-related stress on nurses' well-being.

Physical Response	Emotional Response	Behavioral Response
- Headache	- Anxiety	- Bad lifestyle (smoking, eat poorly, drinking alcohol, and drug intake)
- Tiredness/Fatigue	- Apathy	- Absenteeism
- Muscle, back and joint pain	- Aggression	- Decreased work performance
- Tightness of chest or chest pain	- Depression	- Loss of confidence
- Trembling	- Impatience	- Burnout
- Breathlessness	- Feeling of inadequacy	- Accident/Error prone
- Nausea	- Lack of concentration	- Disrupted sleep patterns
- Hypertension	- Indecisions	
	- Alienation	
	- Job dissatisfaction	

Results indicate that strong inverse relationship exists between work-related stress and nurses' well-being. Excessive work stress experience in hospitals causes nurses to have poor quality of life. As shown in Table 4, work-related stress causes nurses to have neg-

ative physical, emotional, and behavioral responses. Workplace stress in nursing is caused by various work stress factors that places high job demands (e.g., high workload, shift work, understaffing, emotional demands, etc.) on nurses and lack of sufficient job resources (e.g., adequate professional resources, support from colleagues/management, opportunities for training and development, etc.) to tackle those job demands. An association between nurses' work stress experience and depression, anxiety, fatigue, muscle pain, hypertension, lack of concentration, reduced job performance, job dissatisfaction, loss of confidence, adoption of bad lifestyle (e.g., smoking, drug intake, drinking alcohol, poor eating habits), etc. has been identified in selected articles. Nurses' inability to cope with work stress negatively affects their health and quality of service.

6.2.2 Organizational Impact of Work-Related Stress

Work-related stress can impact an organization in several ways (1, 2, 6, 7, 8, 11, 13, 14, 18, 19, 20, 21, 22, 27). As mentioned above, work stress causes negative changes in nurses' physical, emotional, and behavioral responses, which simultaneously affects their well-being and quality of work. Occupational stress can lead to various negative work-related events, resulting in increased absenteeism and turnover intention, decreased job satisfaction/motivation, reduced productivity and organizational commitment, poor work relationship with colleagues/supervisors, and reduced quality of patient care. Eventually, all these negative work-related events due to work stress among nurses affect hospitals' operation. This sub-chapter presents how nurses perceive and perform their duties when they experience work stress, and how it affects the organization, they work in.

Nurses' Attitude and Behavior

Results suggest that work-related stress causes nurses to have reduced motivation and job commitment towards their work. It causes negative changes in nurses' attitude and behavior towards their work and workplace. Nurses could feel that their workplace is not contributing enough to provide suitable work environment to meet job demands placed on them. Nurses' job satisfaction is adversely affected by work stress, resulting

in lack of engagement in work and poor morale. Due to job dissatisfactions, they have increased intentions to leave the job.

Sickness Absence

There is strong negative relationship between work stress and nurses' well-being. Work stress causes nurses to have negative physical, emotional, and behavioral responses. These negative responses could lead to physical and mental illness among nurses. So, due to work stress, there could be significant rise in overall sickness absence of nurses (absenteeism), and simultaneously could cause nursing shortage in hospitals.

Work Relationship

According to different studies, workplace stress could cause conflict and tension between work colleagues and teams in hospitals. For better teamwork, it is necessary to have mutual respect between nurses and other healthcare workers. Work-related stress could lead to different negative emotional responses (e.g., aggression, impatience, indecisions, alienation, etc.) among nurses. As a result, these negative emotional responses could deteriorate mutual respect and increase conflict between work colleagues and teams. Moreover, due to these negative emotional responses, there could also be poor relationship with patients or clients.

Work Performance

Work-related stress causes physical and emotional exhaustion among nurses leading to reduced efficiency or productivity among nurses. The inability of nurses to cope with workplace stress could increase incidences of nursing practice errors, poor decision making, and lack in control of work and planning, which could therefore threaten safety of patients.

Impact on Patient Outcomes

Results show that there is a relationship between nurses' well-being and delivery of patient care. Work stress reduces nurses' efficiency as well as their health and quality of nursing services. Work-related stressors are the risk factors for nurses' poor job performance including reduced quality of nursing care and patient outcomes. Work stress

among nurses could result in loss of compassion for patients, decreased concentration and decision-making, and increased possibility of nursing practice errors. Poor patient care could lead to legal consequences and could also cause irreparable harms to patients which in turn could have frightful consequences for the patients and their family, resulting to dissatisfaction of patients or clients with the hospitals.

6.3 Work Stress Coping Strategies

Stress coping is a way of dealing with stress when an individual experience it, as one cannot remain attached continuously to the state of tension (24). Coping strategies may be categorized as organizational strategies, individual strategies, and social support (7, 22, 24, 27, 30). Table 5 summarizes the main categories and sub-categories collected from the selected articles.

Table 5: Coping strategies for stress among nurses.

Organizational Strategies	Individual Strategies	Social Support
- These strategies include health maintenance, stress reduction workshops among nurses, leadership trainings.	- These strategies include problem focused and emotion focused strategies. - Positive coping strategies and negative coping strategies has also been used under individual strategies.	- It includes support from friends, families, and colleagues.

6.3.1 Organizational Strategies

Nursing profession is known to be a very stressful profession worldwide (22). To protect the nurses from various stress and to reduce the unwanted and negative consequences that might appear later, it is important to have a manageable organizational strategy that is meant to support nurses. The chosen articles showed that the organizational strategies like stress reduction workshops, health maintenance and effective leadership trainings helped to alleviate the level of stress among nurses (24). Giving the nurses the opportunities to participate in decision making and ruling out the actions affecting their job strongly supported in alleviating the stress among nurses. (7, 24). Also,

these articles ruled out that the nurses want them to be ‘heard’ when they are framing important policies of the organization in solving organizational problem. When they are unheard or given no concern, they tend to feel under participation which leads to low job satisfaction (24). Good communication, clearly defined workers’ roles, and responsibilities, eliminating stressors and redesigning jobs and making organizational changes, reducing uncertainty about career development, and providing opportunities for social interactions are the important organizational strategies that aided in coping stress among nurses (7, 10). Furthermore, awarding the employee with rewards and recognition has a positive impact on work performance as well as on their personal life (6).

6.3.2 Individual Strategies

Under individual coping strategies, authors found that the coping strategies can be either problem-focused or emotion-focused (22, 24, 27). Furthermore, coping strategies are also categorized as positive coping and negative coping strategies (22, 23, 25, 28, 30).

In problem-focused coping strategies, one can reduce the stress level by directly changing their own work habits or the environment they are working in. In this strategies, constructive actions can be taken. This strategy helps individual to have control, hold positive self-review, self-reliant approach to manage life stressor. Overall, this strategy focuses on extracting the stressor causing stress in more practical way and focuses on solving it (24).

The articles also showed that the positive coping strategies are used more often than the negative coping strategies to manage stress and stressful situations related to nursing (22, 27). This strategy not only reduced the stress but also contributed positively to improve better job performance and job satisfaction among nurses (22, 23, 27, 30). This type of coping strategy is used by the nurses which requires direct care and high demands medication tasks (27). Positive coping strategies also balanced the relationship between job performance and patient care (22) whereas negative coping strategies balanced the relation between workload and time and job performance of nurses (22).

Another individual strategy is emotion-focused coping strategy. This strategy does not aid in changing the stressful situation immediately rather it helps an individual adjust to

stress more easily. In this type of strategy an individual tends to seek more social support, biofeedback, increased tolerance of ambiguity, relaxation techniques and reduced perfectionism (24). Comforting oneself, waiting to change the stressful status and attempting to forget the entire matter, avoidance is some of the negative aspects of emotion focused coping strategies (22, 24, 30). However, emotion focused coping strategies were highly used by the nurses working in palliative care, intensive care, and emergency care such as positive thinking, religious beliefs, and spirituality (27). It is also said that embracing the positive coping strategies led to low stress level whereas nurses who adopted negative coping strategies experienced high stress level (30).

6.3.3 Social Support

Social support is the support an individual gets from friends, families and colleagues which can be a crucial help to overcome stress. Hence, an individual needs encouraging and supportive people in their lives which not only aids in reducing stress but also prevents an individual from being lonely during the time of crisis (22, 24, 27).

6.4 Summary of Findings

Based on the findings from selected articles, results show that work-related stress in nursing is negatively associated with the nurses' well-being, job satisfaction, job performance, behavioral response, and quality of nursing care. Occupational, organizational, socio-demographic, and psychological factors are related to sources of work stress in nursing in hospitals. The major sources of work stress are identified as work overload, shift works, staff shortage, relationship with supervisors, inequality at work, exposure to disease and death, and lack of management support. Stress is linked to negative effects on both the nurses and the organization, they work in. Results show that stress is associated with the increase in negative physical, emotional, and behavioral responses among nurses. High levels of work stress possess increased risk of chronic fatigue/tiredness, disordered eating, headaches, hypertension, musculoskeletal pains, emotional exhaustion, sleeping problems, depression, anxiety, mood disturbance, lack of concentration, lack of decision making, etc. Because of negative physical, emotional, and behavioral

responses of nurses to stress, work-related stress can impact an organization in several ways. Stress is linked to various negative work-related events such as increased absenteeism and turnover intention, decreased job satisfaction/motivation, reduced productivity and organizational commitment, poor work relationship with colleagues/supervisors, and reduced quality of patient care. All these negative work-related events due to work stress among nurses affect overall hospitals' operation. As a coping strategy to work stress, studies have suggested different stress coping strategies like organizational strategies, individual strategies, and social support. These stress coping strategies tend to reduce work stress in nurses.

7 DISCUSSION

The main objective of this thesis is to study the causes of stress in nursing, effects of work stress on nurses' performance, and stress coping strategies. The results suggest that stress experience has significant negative effect on nurses' well-being and service delivery. Frequent work-related stress is associated with the physical and mental health illness among nurses, and significantly affects their ability to provide care effectively.

According to the findings, certain amount of stress is necessary for optimal productivity. However, too much stress beyond threshold in working situation is of concern in terms of employee safety and well-being. Nurses face different stress factors within their clinical practice including occupational factors, organizational factors, socio-demographic factors, and psychographic factors. Stress in nursing mainly arises from factors associated with job demands (e.g., work overload, lack of task control, role ambiguity, etc.) also known as occupational factors, organizational factors (e.g., poor interpersonal relations, poor management practices, etc.), socio-demographic factors (e.g., age, gender, unfairness, etc.), and psychographic factors (e.g., dealing with seriously ill or dying patient, perceived poor attitude from patients or their family, etc.). Different research studies of nurses have found the factors like long work hours, work overload, inadequate staffing levels, shift work, role ambiguity and conflict, time pressure, lack of support from supervisors/head nurses/management, exposure to infectious diseases, exposure to toxic chemicals, exposure to work-related violence or threats, lack of equipment, dealing with difficult or seriously ill patients, etc. to be linked with stress in nursing in hospital settings.

Studies indicate that work-related stress in nursing can lead to various negative consequences for nurses' well-being, work life, and the hospital they work in. Stress directly influences nurses' care giving behavior, how they handle their duties and responsibilities. The detrimental effects of work stress include reduction in performance and productivity, job dissatisfaction, poor patient outcomes, negative reaction towards patients under their care, absenteeism, turnover intention, work accidents and errors, alcohol and drug use, health problem (e.g., headache, blood pressure, nausea, etc.), interper-

sonal conflict with colleagues/superiors, emotional exhaustion, etc. Work stress can cause nurses to detach from their roles and responsibilities, resulting in poor patient outcomes or quality of care. As a result of stress, nurses have increased tendency to quit the job which causes shortage of nurses in hospitals. Due to shortage of nurses, other nurses working in hospital experience increase in workload. Different studies suggest that absenteeism and turnover intention among nurses are one of the major effects of work stress in nursing. Stress can also be linked with different responses like physical response, emotional response, and behavioral response. Nurses' well-being is negatively affected by the presence of stress factors in work environment. As stress develops in work life, it can lead to adverse physical (e.g., headache, tiredness, hypertension), emotional (e.g., depression, anxiety, aggression), and behavioral (e.g., sleep problems, absenteeism, bad lifestyle, burnout) responses. Work stress is associated with nurses' poor quality of life. When nurses experience stress, they feel physically, mentally, and emotionally drained. To deal with higher level of work stress, nurses are likely to adopt bad lifestyle such as intake of drugs, alcohol, and smoking. Research has also indicated that prolonged exposure to work-related stress can lead to burnout. When the perceived level of stress becomes too high beyond tolerance level, nurses eventually tend to quit the job as a last resort. Studies have confirmed that nurses' performance is related to stress in occupational level. Strong inverse relationship can be found between work stress and employee's well-being and quality of work life.

Actions to reduce work stress are necessary to improve working conditions. Work-related stress causes adverse effects for both employees and organizations. Different research studies indicate that stress coping strategies can be helpful for the management of problems and stressful situations. However, it is unlikely to eliminate perceived stress completely. Studies have suggested three types of coping strategies: organizational strategies, individual strategies, and social support. These are categorized as the coping strategies that the nurses used to reduce and manage stress during their working life. Findings indicate that under organizational strategies good leadership trainings to nurses, stress reduction workshops and health maintenance is considered to be the effective coping strategies that helped to reduce work-related stress (Ajaganandam, Rajan, 2013). Providing the nurses with the opportunities to participate in decision making supported

them to boost their confidence which resulted in low job stress. Findings also revealed that having good communications with the staffs, division of roles and responsibilities, cleared defined workers and reducing the uncertainty about the career development are the important coping strategies that organization can plan to reduce the work-related stress. Modification in the management structure and system, senior management behavior, organizational variables such as benefit scales, employee involvement and participation in policy development, and work environment and showing value to staff could then create an effort to decrease nurses' occupational stress.

Another strategy is individual coping strategies. These strategies included problem-focused and emotion-focused strategies. Reducing and coping with stress by directly changing the working habits or the working environment is problem-focused strategy. This strategy also focuses on removing the stressor that causes stress and move ahead to solve it (Ajaganandam, Rajan, 2013). Findings also revealed that problem-focused strategies were used more frequently than emotion-focused coping strategies (Martínez-Zaragoza et al., 2020). Emotion-focused coping strategies include avoidance, escape, ignorance, self-blame, accepting the situation rather than solving it, comforting oneself, etc. However, some studies show that the stress can be managed by following positive coping strategies. On the contrary, findings revealed that there are negative coping strategies that moderated the connection between workload and time and job performance. Moreover, findings also revealed that positive coping strategies are used more when it comes to coping and managing stress. Positive coping strategies played an important role to balance the relationship between patient care and job performance. Also, this strategy helped nurses to improve their job performance and obtain job satisfaction. The study done among Chinese nurses in emergency department of China reported the relationship between stress and coping strategies as work pressure will be low and there will be high job performance when they obtained positive coping strategies and work pressure level will be high and low job performance occur when the nurses get swiped up with the negative coping strategies. Hence, positive, and negative coping strategy has a vice-versa relationship. Under the social support coping strategies, support from family members, friends, colleagues helped the nurses to cope up with the stress.

The scope of study for this thesis is not limited to any hospital department or any country or any continent. The authors have selected articles for study based on their relevance to thesis topic. Most of the selected articles focus on the sources of work-related stress in hospitals, their effects on nurses' performance, and the potential work stress coping strategies to reduce stress. The authors considered including studies related to Finnish healthcare working life to add more value to the topic. However, authors found difficulty in finding sufficient articles relevant to work-related stress in healthcare in Finland. In the research done in physician and nurses from a Finnish metropolitan area suggest that participants associate the concept of work-related stress with general fatigue, exhaustion, strain, burnout, and other mental symptoms. Work-related stress was mentioned less often, and factors of workplace stress were more unfamiliar to nurses (Amoroso, 2011). Any written or agreed standardized procedures for assessing or handling work-related stresses were not known to the participants (nurses and physicians). Actions to tackle work-related stress was considered as part of the responsibilities of Finnish Occupational Health Services (OHS). The Finnish OHS was seen as a responsible body to undertake preventive actions to alleviate work risk factors posed by work-related stress (Amoroso, 2011). So, further studies and research are needed to assess the prevalence of work-related stress, its effects among nurses, and work stress coping strategies in hospitals in Finland.

7.1 Relation with the Theoretical Framework (JD-R Model)

The main assumption of Job Demands and Resources (JD-R) model is that stress in work environment occurs when there is imbalance between job demands placed on an individual and the availability of job resources to deal with those job demands. The JD-R model proposes two main psychological pathways, linking high level of job demands to stress/strain, and linking job resources to motivation (e.g., increased work engagement) (Bakker, Arnold B., Demerouti, 2007).

In the context of nursing, nurses have been found to experience significant amount of work stress at work that is related to high workloads, role ambiguity, role conflict, lack of formal rewards, lack of management support, exposure to infectious disease, dealing

with seriously ill or dying patients, emotional demands, shift work, understaffing, etc (Broetje, Jenny & Bauer, 2020). These work factors are the job demands that ask for physical or mental effort to perform the job. Job demands are not necessarily negative but becomes stress factors when sustained physical or mental efforts are needed to meet the job demands. They are perceived negatively when there is an imbalance between job demands and resources (Bakker, Arnold B., Demerouti, 2007). Higher job demands lead to stress affecting physical and mental well-being of an individual which in turn affects the workplace in various ways (e.g., absenteeism, negative changes in employee's attitude and behavior, reduced job performance, poor job relationship, poor patient outcomes). Work stress tends to stimulate adverse physical, emotional, and behavioral responses in an individual which are linked with negative effects on individual's well-being and service delivery.

Job resources are aspects of work that are helpful in achieving work goals. They can balance the impacts of high job demands and can lead to positive results where an individual become engaged and motivated towards work. Job resources can be instrumental to reduce work stress by decreasing the impact of job demands (Bakker, Arnold B., Demerouti, 2007). The factors like autonomy, support from colleagues/supervisors/organization, fair management (e.g., authentic leadership), adequate professional resources (e.g., access to resources), interpersonal relations (e.g., mutual respect), transformational leadership (e.g., opportunities for training and development), stress coping strategies can be considered as job resources in nursing (Broetje, Jenny & Bauer, 2020). These resources can help tackle associated work stress and improve employee well-being and organizational outcomes.

The results from findings show connection with and support of the JD-R model. In nursing, the level of job demands and the requirements to provide quality nursing care is high. Availability of lack of sufficient job resources in hospitals in form of adequate staffs, support from management, access to clinical resources, etc. cause imbalance between job demands and job resources. To cope with workplace job demands, hospital management or leadership should provide sufficient job resources and support to nurses. The JD-R model can be instrumental to establish balance between job demands and re-

sources in hospital settings. It can be helpful to minimize negative effects of work stress in nurses and hospitals, resulting in improved employee well-being and organizational outcomes. Hospital management should identify job demands that are likely to cause work stress among nurses and address those demands with relevant resources (e.g., adequate staff, role clarity, support from management/supervisor, adequate clinical resources, training opportunities, stress management strategies, etc.) to support nurses' work environment and increase nurses' motivation and job commitment.

8 CONCLUSION

At the onset of the thesis, the main aim was to find effects of occupational stress in nurses' performances. The authors decided to do an inductive qualitative review of literature, three questions were used to guide this study. They were to identify sources of work-related stress, effects of work-related stress on nurses' performance and coping strategies of work-related stress among nurses.

The results suggest that nurses face different stress factors within their clinical practice including occupational factors (e.g., work overload, lack of task control, role ambiguity, etc.), organizational factors (e.g., poor interpersonal relations, poor management practices, etc.), socio-demographic factors (e.g., age, gender, unfairness, etc.), and psychographic factors (e.g., dealing with seriously ill or dying patient, perceived poor attitude from patients or their family, etc.). As an effect studies indicated that the occupational stress in nurses can lead to reduction in nurses' performance and productivity, poor patient outcomes, absenteeism, turnover, work accidents, errors, alcohol, and drugs use and health problem among nurses. Stress can cause many negative consequences for both nurses and the hospital. Actions to reduce work stress are necessary to improve working conditions. Studies have suggested three types of coping strategies: organizational strategies, individual strategies, and social support. The strategies to reduce or manage stress can be directed at the individual and at the organization level. Moreover, social support like support from friends, families, and colleagues can be helpful in coping with work stress. Since, work-related stress can contribute to physical and mental health illness among nurses, resulting in significant impact in organization they work in, resources on prevention, early intervention and risk reduction should be considered to ensure well-being of nurses, and their ability to work, maintain and improve standards of nursing care.

The strengths, limitations, and recommendations are also found in the research. The research provides in depth knowledge about the sources, effects, and coping strategies of occupational stress of nurses. This study was done in a group of three people. The pre-understanding about the topic and the experiences the authors had gained while working

in their home country provided enormous support to tackle the challenges that appeared during the study. Authors found enough articles for sources and effects of work-related stress, but limited articles were found related to work stress coping strategies and management of work-related stress. The authors have conducted qualitative literature review for the first time and the time allocated for the research was finite. In accordance with results, the authors noticed occupational and organizational factors are dominant factors of stress among nurses. Whereas, coping strategies or management for work-related stress are limited. Henceforth, the authors suggest further research in coping and management of occupational stress.

REFERENCE

A, O.O., Osamudiamen, O.S. & A, O.A. (2013) Occupational stress management among nurses in selected hospital in Benin city, Edo state, Nigeria. *European Journal of Experimental Biology*. [Online] 3 (1), 473-481. Available from: <https://www.imedpub.com/articles/occupational-stress-management-among-nurses-in-selected-hospital-in-benin-city-edo-state-nigeria.php?aid=12016> [Accessed 12th February 2021].

Ajaganandam, A. & Rajan, S. (2013) A Conceptual Framework of Occupational Stress and Coping Strategies. *ZENITH International Journal of Business Economics & Management Research*. [Online] 3 (5). Available from: https://www.researchgate.net/publication/271200735_A_CONCEPTUAL_FRAMEWORK_OF_OCCUPATIONAL_STRESS_AND_COPING_STRATEGIES [Accessed 13th March 2021].

Amoros, M.K. (2011) Finnish Occupational Physicians' and Nurses' Experience of Work-Related Stress Management: A Qualitative Study. *Industrial Health*. [Online] 49 (6), 774-778. Available from: doi:10.2486/indhealth.MS1295 [Accessed 3rd June 2021].

Applebaum, D., Fowler, S., Fiedler, N., Osinubi, O. & Robson, M. (2010) The impact of environmental factors on nursing stress, job satisfaction, and turnover intention. *The Journal of nursing administration*. [Online] 40 (7-8), 323-328. Available from: doi:10.1097/NNA.0b013e3181e9393b [Accessed 18th March 2021].

Awad, H. & Abuanja, M. (2016) Impact of stress on nurse's performance in El Mek Nimer University Hospital. *Advance Research Journal of Multi-Disciplinary Discoveries*. [Online] 3 (1), 10-15. Available from: https://www.researchgate.net/publication/305770550_Impact_of_stress_on_nurse's_performance_in_El_Mek_Nimer_University_Hospital [Accessed 15th March 2021].

Azizollah, A., Zaman, A., Khaled, O. & Razieh, J. (2013) The relationship between Job stress and performance among the hospitals nurses. *World of Science Journal*. [Online] 2. Available from: doi:10.13140/2.1.1992.7045 [Accessed 12th March 2021].

Bakker, A.B. & Demerouti, E. (2017) Job demands–resources theory: Taking stock and looking forward. *Journal of occupational health psychology*. [Online] 22 (3), 273-285. Available from: doi:10.1037/ocp0000056 [Accessed 14th February 2021].

Bakker, A.B. & Demerouti, E. (2007) The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*. [Online] 22 (3), 309-328. Available from: doi:10.1108/02683940710733115 [Accessed 14th February 2021].

Beh, L. (2012) Job Stress and Coping Mechanisms among Nursing Staff in Public Health Services. *International Journal of Academic Research in Business and Social*

Sciences. [Online] 2 (7). Available from: https://www.researchgate.net/publication/267555289_Job_Stress_and_Coping_Mechanisms_among_Nursing_Staff_in_Public_Health_Services [Accessed 15th March 2021].

Broetje, S., Jenny, G.J. & Bauer, G.F. (2020) The Key Job Demands and Resources of Nursing Staff: An Integrative Review of Reviews. *Frontiers in psychology*. [Online] 11, 84. Available from: doi:10.3389/fpsyg.2020.00084 [Accessed 19th March 2021].

CIPD. (2020) *Stress in the Workplace | Factsheets*. [Online] Available from: <https://www.cipd.co.uk/knowledge/culture/well-being/stress-factsheet> [Accessed 18th February 2021].

Cox, T., Griffiths, A. & Cox, S. (1996) Work-related stress in nursing: Controlling the risk to health. *International Labour Organization*. [Online] Available from: https://www.ilo.org/global/topics/safety-and-health-at-work/resources-library/publications/WCMS_250097/lang--en/index.htm [Accessed 15th February 2021].

Donkor, J. (2013) Effects of Stress on the Performance of Nurses: Evidence from Ghana. *International Journal of Accounting, Banking and Management*. [Online] 1 (6), 64-74. Available from: <http://www.ijabm.com/> [Accessed 11th March 2021].

Drafke, M. & Kossen, S. (2002) *The Human Side of Organizations*. Prentice-Hall, Upper Saddle River, New Jersey.

El Khamali, R., Mouaci, A., Valera, S., Cano-Chervel, M., Pinglis, C., Sanz, C., Allal, A., Attard, V., Malardier, J., Delfino, M., D'Anna, F., Rostini, P., Aguilard, S., Berthias, K., Cresta, B., Iride, F., Reynaud, V., Suard, J., Syja, W., Vankiersbilck, C., Chevalier, N., Inthavong, K., Forel, J., Baumstarck, K., Papazian, L. & SISTRESSREA, S.G. (2018) Effects of a Multimodal Program Including Simulation on Job Strain Among Nurses Working in Intensive Care Units: A Randomized Clinical Trial. *JAMA*. [Online] 320 (19), 1988-1997. Available from: doi:10.1001/jama.2018.14284 [Accessed 15th March 2021].

Eleni, M. & Theodoros, C. (2010) Sources and effects of Work-related stress in nursing. *Health science journal*. [Online] 4 (4), 210-216. Available from: <https://www.hsj.gr/medicine/sources-and-effects-of-workrelated-stress-in-nursing.pdf> [Accessed 1st March 2021].

Elo, S. & Kyngäs, H. (2008) The qualitative content analysis process. *Journal of advanced nursing*. [Online] 62 (1), 107-115. Available from: doi:10.1111/j.1365-2648.2007.04569.x [Accessed 11th March 2021].

Fernet, C., Austin, S. & Vallerand, R. (2012) The effects of work motivation on employee exhaustion and commitment: An extension of the JD-R model. *Work and Stress*. [Online] 26 (3), 213-229. Available from: doi:10.1080/02678373.2012.713202 [Accessed 20th February 2021].

Finfgeld-Connett, D. (2008) Meta-synthesis of caring in nursing. *Journal of Clinical Nursing*. [Online] 17 (2), 196-204. Available from: doi:10.1111/j.1365-2702.2006.01824.x [Accessed 15th February 2021].

Fink, A. (2019) *Conducting Research Literature Reviews: From the Internet to Paper*. [Online] USA, SAGE Publications. Available from: https://books.google.fi/books?hl=fi&lr=&id=0z1_DwAAQBAJ&oi=fnd&pg=PP1&dq=Conducting+Research+Literature+Reviews:+From+the+Internet+to+Paper&ots=15InhXXPeC&sig=6UZrqM5W1hCxgtqDX7hGbcK8qhM&redir_esc=y#v=onepage&q=Conducting%20Research%20Literature%20Reviews%3A%20From%20the%20Internet%20to%20Paper&f=false [Accessed 20th February 2021].

Gelsema, T., Doef, M., Maes, S., Janssen, M., Akerboom, S. & Verhoeven, C. (2006) A longitudinal study of job stress in the nursing profession: causes and consequences. *Journal of nursing management*. [Online] 14 (4), 289-99. Available from: doi:10.1111/j.1365-2934.2006.00635.x [Accessed 25th March 2021].

Gulavani, A. & Shinde, M. (2014) Occupational Stress and Job Satisfaction among Nurses. *International Journal of Science and Research (IJSR)*. [Online] 3 (4), 733-740. Available from: https://www.researchgate.net/publication/265784831_Occupational_Stress_and_Job_Satisfaction_among_Nurses [Accessed 10th March 2021].

Halbesleben, J.R.B. & Buckley, M.R. (2004) Burnout in Organizational Life. *Journal of Management*. [Online] 30 (6), 859-879. Available from: doi:10.1016/j.jm.2004.06.004 [Accessed 15th February 2021].

Hart, C. (2018) *Doing a literature review: Releasing the research imagination*. [Online] London, SAGE Publications Ltd. Available from: https://books.google.fi/books?hl=fi&lr=&id=ff1BDwAAQBAJ&oi=fnd&pg=PP1&dq=Hart,+C.+2018,+%22Doing+a+literature+review:+Releasing+the+research+imagination&ots=iCHMjNckVi&sig=19YEB-RA71zv5ilzBPCabUkrZfA&redir_esc=y#v=onepage&q=Hart%2C%20C.%202018%2C%20%22Doing%20a%20literature%20review%3A%20Releasing%20the%20research%20imagination&f=false [Accessed 20th February 2021].

Hämmig, O. (2020) Work- and stress-related musculoskeletal and sleep disorders among health professionals: a cross-sectional study in a hospital setting in Switzerland. *BMC musculoskeletal disorders*. [Online] 21 (1), 319. Available from: doi:10.1186/s12891-020-03327-w [Accessed 7th March 2021].

Harris, N. (2001) Management of work-related stress in nursing. *Nursing Standard*. [Online] 16 (10), 47-55. Available from: doi:10.7748/ns2001.11.16.10.47.c3122 [Accessed 10th February 2021].

Hingley, P. (1984) The humane face of nursing. *Nursing Mirror*. 159 (21), 19-22.

Hsieh, H. & Shannon, S.E. (2005) Three Approaches to Qualitative Content Analysis. *Qual Health Res.* [Online] 15 (9), 1277-1288. Available from: doi:10.1177/1049732305276687 [Accessed 12th March 2021].

Jarinto, K. (2011) Understanding Stress in Multinational Companies in Thailand. *International Business Research.* [Online] 4 (4). Available from: doi:10.5539/ibr.v4n4p153 [Accessed 10th February 2021].

Kallet, R.H. (2004) How to Write the Methods Section of a Research Paper. *Respiratory care.* [Online] 49 (10), 1229-1232. Available from: <https://pubmed.ncbi.nlm.nih.gov/15447808/> [Accessed 15th February 2021].

Keykaleh, M.S., Safarpour, H., Yousefian, S., Faghisolouk, F., Mohammadi, E. & Ghomian, Z. (2018) The Relationship between Nurse's Job Stress and Patient Safety. *Open access Macedonian journal of medical sciences.* [Online] 6 (11), 2228-2232. Available from: doi:10.3889/oamjms.2018.351 [Accessed 16th March 2021].

Khamechian, M. & Alavi, N. (2012) Nurses' perception of occupational stress and its influencing factors: A qualitative study. *Iranian journal of nursing and midwifery research.* [Online] 17 (5), 352-359. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3703075/> [Accessed 16th March 2021].

Khamisa, D.N., Oldenburg, B., Peltzer, K. & Ilic, D. (2015) Work Related Stress, Burn-out, Job Satisfaction and General Health of Nurses. *International Journal of Environmental Research and Public Health.* [Online] 12 (1), 652-666. Available from: doi:10.3390/ijerph120100652 [Accessed 14th March 2021].

Khasawneh, A., Lutfi, A. & Futa, S. (2013) The Relationship between Job Stress and Nurses Performance in the Jordanian Hospitals: A Case Study in King Abdullah the Founder Hospital. *Asian Journal of Business Management.* [Online] 5 (2), 267-275. Available from: https://www.researchgate.net/publication/337731435_The_Relationship_between_Job_Stress_and_Nurses_Performance_in_the_Jordanian_Hospitals_A_Case_Study_in_King_Abdullah_the_Founder_Hospital [Accessed 12th March 2021].

Li, L., Ai, H., Gao, L., Zhou, H., Liu, X., Zhang, Z., Sun, T. & Fan, L. (2017) Moderating effects of coping on work stress and job performance for nurses in tertiary hospitals: a cross-sectional survey in China. *BMC health services research.* [Online] 17, 401. Available from: doi:10.1186/s12913-017-2348-3 [Accessed 18th March 2021].

Lu, D., Sun, N., Hong, S., Fan, Y., Kong, F. & Li, Q. (2015) Occupational Stress and Coping Strategies Among Emergency Department Nurses of China. *Archives of Psychiatric Nursing.* [Online] 29 (4), 208-212. Available from: doi:10.1016/j.apnu.2014.11.006 [Accessed 18th March 2021].

Mark, G. & Smith, A.P. (2012) Occupational stress, job characteristics, coping, and the mental health of nurses. *British Journal of Health Psychology.* [Online] 17 (3), 505-521. Available from: doi:10.1111/j.2044-8287.2011.02051.x [Accessed 19th March 2021].

Martínez-Zaragoza, F., Benavides-Gil, G., Rovira, T., Martín-Del-Río, B., Edo, S., García-Sierra, R., Solanes-Puchol, Á & Fernández-Castro, J. (2020) When and how do hospital nurses cope with daily stressors? A multilevel study. *PloS one*. [Online] 15 (11), e0240725. Available from: doi:10.1371/journal.pone.0240725 [Accessed 17th March 2021].

Mat Saruan, N.A., Mohd Yusoff, H., Mohd Fauzi, M.F., Wan Puteh, S.E. & Muhamad Robot, R. (2020) Unplanned Absenteeism: The Role of Workplace and Non-Workplace Stressors. *International journal of environmental research and public health*. [Online] 17 (17), 6132. Available from: doi:10.3390/ijerph17176132 [Accessed 16th March 2021].

Milczarek, Schneider & González (2009) *OSH in figures: stress at work — facts and figures*. [Online] Luxembourg, EU-OSHA. Available from: https://www.researchgate.net/publication/224022848_OSH_in_Figures_Stress_at_Work_-_Facts_and_Figures [Accessed 10th February 2021].

Monserate, R.O. (2018) Occupational Stress and Quality of Worklife among Staff Nurses in a Level 1 Private Hospital in Padada, Davao del Sur. *International Journal of Scientific & Engineering Research*. [Online] 9 (2). Available from: <https://www.ijser.org/onlineResearchPaperViewer.aspx?Occupational-Stress-and-Quality-of-Worklife-among-Staff-Nurses-in-a-Level-1-Private-Hospital-in-Padada-Davao-del-Sur.pdf> [Accessed 14th March 2021].

Mosadeghrad, A. (2014) Occupational stress and its consequences. *Leadership in Health Services*. [Online] 27 (3), 224-239. Available from: doi:10.1108/LHS-07-2013-0032 [Accessed 27th February 2021].

Mosadeghrad, A.M. (2013) Occupational stress and turnover intention: implications for nursing management. *International journal of health policy and management*. [Online] 1 (2), 169-176. Available from: doi:10.15171/ijhpm.2013.30 [Accessed 25th February 2021].

Moustaka, L. & Constantinidis, T. (2010) Sources and effects of Work-related stress in nursing. *Health Science Journal*. [Online] 4 (4), 210-216. Available from: <https://www.hsj.gr/medicine/sources-and-effects-of-workrelated-stress-in-nursing.pdf> [Accessed 24th February 2021].

Najimi, A., Goudarzi, A.M. & Sharifirad, G. (2012) Causes of job stress in nurses: A cross-sectional study. *Iranian journal of nursing and midwifery research*. [Online] 17 (4), 301-305. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3702151/> [Accessed 24th February 2021].

Nowrouzi, B., Lightfoot, N., Larivière, M., Carter, L., Rukholm, E., Schinke, R. & Belanger-Gardner, D. (2015) Occupational Stress Management and Burnout Interventions in Nursing and Their Implications for Healthy Work Environments: A Literature Re-

view. *Workplace Health Saf.* [Online] 63 (7), 308-315. Available from: doi:10.1177/2165079915576931 [Accessed 17th March 2021].

Rayan, A., Shikieri, A., Salah, E. & Mokhtar, K. (2016) The Relationship between Occupational Stressors and Performance amongst Nurses Working in Pediatric and Intensive Care Units. *American Journal of Nursing Research.* [Online] 4 (2), 34-40. Available from: doi:10.12691/ajnr-4-2-2 [Accessed 12th March 2021].

Regina, O., Doody, O. & Lyons, R. (2013) The effect of stress on health and its implications for nursing. *British Journal of Nursing.* [Online] 22 (16), 969-973. Available from: doi:10.12968/bjon.2013.22.16.969 [Accessed 2nd March 2021].

Richardson, K.M. & Rothstein, H.R. (2008) Effects of occupational stress management intervention programs: A meta-analysis. *Journal of occupational health psychology.* [Online] 13 (1), 69-93. Available from: doi:10.1037/1076-8998.13.1.69 [Accessed 11th February 2021].

Rickard, G., Lenthall, S., Dollard, M., Opie, T., Knight, S., Dunn, S., Wakerman, J., MacLeod, M., Seiler, J. & Brewster-Webb, D. (2012) Organisational intervention to reduce occupational stress and turnover in hospital nurses in the Northern Territory, Australia. *Collegian.* [Online] 19 (4), 211-221. Available from: doi:10.1016/j.colegn.2012.07.001 [Accessed 8th March 2021].

Royal College of Nursing. (2015) *Stress and you: a guide for nursing staff.* [Online] Available from: <https://www.rcn.org.uk/professional-development/publications/pub-004967#detailTab> [Accessed 18th February 2021].

Ruotsalainen, J.H., Verbeek, J.H., Mariné, A. & Serra, C. (2015) Preventing occupational stress in healthcare workers. *The Cochrane database of systematic reviews.* [Online] 2015 (4), CD002892. Available from: doi:10.1002/14651858.CD002892.pub2 [Accessed 4th March 2021].

Sarafis, P., Rousaki, E., Tsounis, A., Malliarou, M., Lahana, L., Bamidis, P., Niakas, D. & Papastavrou, E. (2016) The impact of occupational stress on nurses' caring behaviors and their health-related quality of life. *BMC nursing.* [Online] 15 (56). Available from: doi:10.1186/s12912-016-0178-y [Accessed 6th March 2021].

Schaufeli, W.B. (2017) Applying the Job Demands-Resources model: A 'how to' guide to measuring and tackling work engagement and burnout. *Organizational dynamics.* [Online] 46 (2), 120-132. Available from: <https://doi.org/10.1016/j.orgdyn.2017.04.008> [Accessed 10th February 2021].

Sharma, P., Davey, A., Davey, S., Shukla, A., Shrivastava, K. & Bansal, R. (2014) Occupational stress among staff nurses: Controlling the risk to health. *Indian journal of occupational and environmental medicine.* [Online] 18 (2), 52-56. Available from: doi:10.4103/0019-5278.146890 [Accessed 2nd March 2021].

Spence Laschinger, H.K. & Leiter, M.P. (2006) The impact of nursing work environments on patient safety outcomes: the mediating role of burnout/engagement. *The Journal of Nursing Administration*. [Online] 36 (5), 259-267. Available from: doi:10.1097/00005110-200605000-00019 [Accessed 10th February 2021].

Sveinsdóttir, H., Biering, P. & Ramel, A. (2006) Occupational stress, job satisfaction, and working environment among Icelandic nurses: a cross-sectional questionnaire survey. *International Journal of Nursing Studies*. [Online] 43 (7), 875-889. Available from: doi: 10.1016/j.ijnurstu.2005.11.002 [Accessed 11th February 2021].

Teng, C., Hsiao, F. & Chou, T. (2010) Nurse-perceived time pressure and patient-perceived care quality. *Journal of Nursing Management*. [Online] 18 (3), 275-284. Available from: doi:10.1111/j.1365-2834.2010.01073.x [Accessed 11th February 2021].

TENK. (2012) *Responsible conduct of research and procedures for handling allegations of misconduct in Finland*. [Online] Available from: https://tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf [Accessed on 25.05.2021]

Tiwari, S. & Bhagat, D. (2017) Determinants of Occupational Stress in Health Care Professionals: A Critical Review. *Global Publishing House*. [Online] 45-58. Available from: https://www.academia.edu/37652817/Determinants_of_Occupational_Stress_in_Health_Care_Professionals_A_Critical_Review [Accessed 9th March 2021].

Wei, H., Sewell, K.A., Woody, G. & Rose, M.A. (2018) The state of the science of nurse work environments in the United States: A systematic review. *International journal of nursing sciences*. [Online] 5 (3), 287-300. Available from: doi:10.1016/j.ijnss.2018.04.010 [Accessed 12th March 2021].

White, M. & Marsh, E. (2006) Content Analysis: A Flexible Methodology. *Library Trends*. [Online] 55 (1). Available from: doi:10.1353/lib.2006.0053 [Accessed 22nd February 2021].

World Health Organization. (2020) *Occupational health: Stress at the workplace*. [Online] Available from: <https://www.who.int/news-room/q-a-detail/occupational-health-stress-at-the-workplace#:~:text=What%20is%20work%2Drelated%20stress,challenge%20their%20ability%20to%20cope>. [Accessed 17th February 2021].

Yim, H., Seo, H., Cho, Y. & Kim, J. (2017) Mediating Role of Psychological Capital in Relationship between Occupational Stress and Turnover Intention among Nurses at Veterans Administration Hospitals in Korea. *Asian Nursing Research*. [Online] 11 (1), 6-12. Available from: doi:10.1016/j.anr.2017.01.002 [Accessed 5th March 2021].

