



# STRESS FACTORS IN NURSING PRACTICE

## A Literature Review

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## Abstract of thesis

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Despite there being a lot of research on how nursing is one of the most demanding jobs in the world, there seems to be not enough research on the type of stressors which the nurses are experiencing, and which are affecting their work in nursing practice. Understanding the stressors in nursing helps in the establishing of coping mechanisms which ensure a safe working environment for the nurses and which are leading to the provision of quality care in healthcare services. The purpose of this study was to identify the stress factors in nursing and how their influence the nurses' work. The aim of this study is to assist nurses to become conscious of the stress factors in nursing practice and how they affect their work.

The study seeks to help nurses in implementing strategies to improve stress management in their profession. The research questions are: what are the causes and impact of stress among nurses and what are the methods used for coping with stress? Lazarus and Folkman's (1984) Transactional Model of Stress and Coping was used in the theoretical framework of the thesis. The inclusion and exclusion criteria was used in the collection of information and the main databases used in collecting data include Elsevier Science Direct, PubMed, Academic Search Elite (EBSCO), Cinahl (EBSCO) and Google scholar. The inductive content analysis was used in the analysing of the data.

Results from the study showed that heavy workloads, shortages of staff, bad working environments, and emotional distress such as experiencing death and dying of patients are among the common stressors in nursing practice. Coping strategies used by nurses to ensure effective management of stress have an individual as well as an organizational basis. Development of these strategies ensures positive outcomes such as the health and wellbeing of nurses and better healthcare experiences.

**Key words** stress factors, nurses, coping strategies, nursing practise

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#### List of abbreviations

EU-OSHA- European Agency for Safety and Health at Work

ICN- International council of Nurses

WHO – World Health Organization

## 1 INTRODUCTION

Over the last couple of years, the prevalence of stress in workplaces has been an issue of great concern. Transcendental medicine (2012) cites that new survey published by the European Agency for Safety and Health at Work reveals that 51% of Europe's workers find stress 'commonplace' in their workplace (Transcendental medicine,2012). Research has indicated that job related stress appears to be more prevalent in healthcare professions such as nurses. This might be attributed to the fact that although nursing is a noble job, it is often very demanding and requiring multi-tasking. According to WHO, in many countries, nurses make up half of all health care professionals and have a vital role in how health actions are organized and applied, both at the front-line and managerial levels (WHO,2020). As a result of this, research such as Sharma et.al (2014) argue that nursing has been identified as an occupation that has high levels of stress due to the several roles nurses have in healthcare.

EU-OSHA (2012) notes that work-related stress has increased in workplaces because of performance requirements and competition-related changes in working life. Nurses face these kinds of stressors among others such as high workload, shift changes, long working hours, pressure from team members and other healthcare professionals which makes their profession more difficult and highly stressful. When the nurses become overwhelmed and are not able to cope with these stressful situations it thereby affects the quality of work they provide to the general population. Arabi et al. 2014 indicates that nurses play an integral role in changing health policy on multiple levels. For instance, nurses can conduct quality improvement projects in their working environments and use their findings to help implement new policies at the facilities where they work when they assume the role of advocate since they have an influence on countless people. Thus, nurses should be in their right state of mind since their involvement in health policies impacts positive change in health care that will benefit multiple generations of patients across institutions, states, the nation, and even globally (Chilton,2015).

Since nurses have a duty in ensuring the well-being of the society and providing healthcare services it becomes of relevance to research and identify the common stressors in nursing and how they affect the nurses on a personal and institutional

basis. The purpose of this study was to identify the stress factors in nursing and how they influence the nurses' work. The aim of this study is to assist nurses to become conscious of the stress factors in nursing practice and how they affect their work. The aim seeks to help nurses in implementing strategies to improve stress management in their profession. The research questions are; what are the causes and impact of stress among nurses and what are the methods used for coping with stress. Having enough knowledge on this helps the management and nurses to be able to implement coping mechanism so that their professionalism is not affected by the job stressors they experience.

To date there has been a lot of ongoing research in relation to stress being an issue of major concern in nursing practice. This study adds to the existing literature by looking beyond the mere idea that nurses often face many stress factors whether they are positive or negative. While the identification of stress factors is of importance, it is their impact which is of great concern since it affects the quality of care provided to patients and clients. This is of importance when trying to understand the implication of individual behaviour when providing healthcare services and how they affect the population. As such the topic is of significance because although there has been previous research on the subject matter there still needs to be more information and knowledge to cater for the nurses who are having to deal with it and help in the improving the general healthcare of the country.

## 2 THEORETICAL FRAMEWORK

Lazarus and Folkman (1984) theory for transactional based models on stress gives the basis for this thesis. Suzuki (2013) mentions that Lazarus and Folkman (1984) proposed that stress occurs when people perceive that the demands from external situations are beyond their coping capacity. At the core of Lazarus and Folkman theory of stress there are two concepts i.e. that of 'appraisal' being the way an individual interprets a situation which influences its significance to them and 'coping which individuals' efforts in thought and action to manage specific demands. Lazarus (1966) considered stress to be a transactional phenomenon between the person and the environment. This makes the transactional model suitable in the nursing framework since nurses are individuals experiencing appraisal which acts as a mediate and which in turn influences how they react, feel and behave at their workplace.

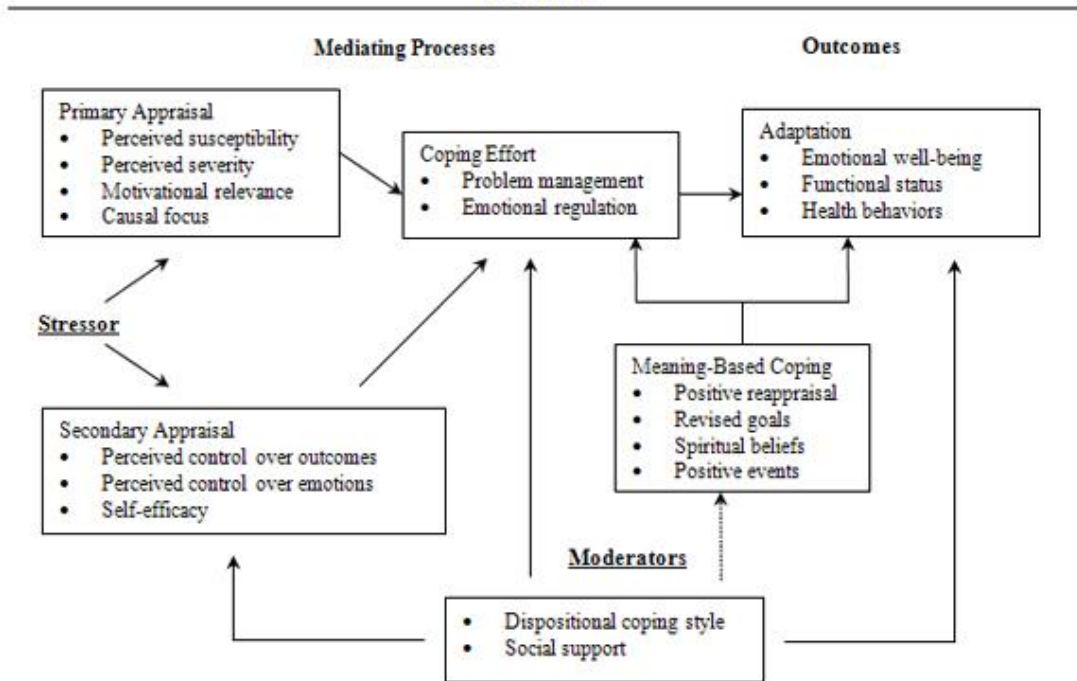
Rice (2012) notes that the types of appraisal which were identified in the transactional model include primary appraisal, secondary and reappraisal. Primary appraisal is present when the individual assesses and determines a personal meaning to the situation and what might be at stake about his or her well-being. Lazarus and Folkman suggest that primary appraisal can be distinguished into irrelevant, benign positive and stressful. Although important primary cognitive appraisal cannot determine the final meaning assigned to the situation of stress. This view is supported by Esteves & Gomes (2013) who argue that the secondary appraisal process indicates what can be done toward dealing with the situation itself through individuals performing an analysis of the resources or specific skills they believe they possess in order to deal with the situation.

As indicated by transactional based model theorists, coping is a constantly changing cognitive and behavioural effort to manage specific external and or internal demands that are appraised as taxing or exceeding the resources of the person (Lazarus and Folkman ,1984). In other words, Rice (2012) argues that coping maybe defined as an effort to manage psychological stress. There are two types of coping that is one which is problem focused and emotional based. McLeod (2015) describes emotional based coping as trying to reduce the negative emotional responses associated with stress such as embarrassment, fear, anxiety, depression, excitement and frustration. Whereas problem-based

coping targets the causes of stress in practical ways which tackles the problem or stressful situation that is causing stress, consequently directly reducing the stress.

The picture below gives a summary of Lazarus and Folkman (1975) transactional based model of stress and coping with its main ideas.

**FIGURE 10.1. DIAGRAM OF TRANSACTIONAL MODEL OF STRESS AND COPING.**



(Picture taken from IB Notes (2014) which is an adaptation of Transactional model of stress: Lazarus and Folkman (1975).

One can note that although the theory has been accepted by many there appears to be a gap on its applicability in studies of real-life scenarios such as those of occupational stress which is experienced in most professions nursing included. This view is supported by Dewe and collaborators (2010) who mention that upon discovering that the model is widely accepted in the study of stress in general, yet very little is known regarding its use to explain confrontation of occupational stress.



### 3 STRESS AND NURSING

#### 3.1 Stress factors in nursing

Stress in all its forms reaches about 90% of global population, according to the World Health Organization (WHO). In the work context stress is related to situations when work demands exceed the ability of the worker to handle them, or when the conditions and resources available are insufficient to meet those demands. Many scholars have argued that nursing is one of the most stressful as a result the writer saw it to research about identifying the stress factors experienced by nurses and how they are of impact in nursing practice.

There is no one correct definition of stress since the definition varies depending on the context it is being used. However, The American Institute of stress notes that the term "stress", as it is currently used was coined by Hans Selye in 1936, who defined it as "the non-specific response of the body to any demand for change"(American institute of stress,2020). Another misconception people have is that stress is a disease as such The World Health Organisation (WHO) defines work related stress as "the reaction people may have when presented with demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope."(WHO 2020). Stress factors or stressors can be defined as the circumstances be it internal such as expectations and attitudes or external such as environment which influence and contribute to the development of stress (Medicine net 2010).

Stress is something that is inevitable and occurs to people on a day to day basis. Nursing like any other profession, due to its high demands and responsibilities makes it one of the most stressful professions. Greenwood (2010) notes that patient care, decision-making, taking responsibility and change are four factors that have been identified as significant sources of stress in a nurse's life, according to the Agency for Healthcare Research and Quality. On top of this there might be medical emergencies which will increase and add tension of patient care thereby increasing the workload for the nurses. The constant need for the nurses to provide good patient while keeping patient safety and their own contributes to the need for nurses to be extra carefully while working. The American holistic Nurses Association notes that the major factors that contribute to stress in nursing

practise include inadequate staffing or workload, the nurse's relationships with other clinical staff, leadership style and support, and coping with the emotional needs of patients. Furthermore, Dagget et al. (2016) argues that job-related stress from dealing with death & dying; uncertainty regarding patient treatment and workload appear to be stressors in the nursing profession

Nursing by virtue of its nature is a profession which is subjected to high levels of stress. This is so due to several factors such as the fact that in providing essential services and health care support, the average nurse's daily workload to meet up with the clinical requirements of patients is enormous (Ogundipe, Obinna & Olawale, 2015). On top of that nurses often have long shifts of about 12hours when working in hospitals due to shortages of nursing staff which is not only physically tiring but mentally exhausting. Canady & Allen (2015,2) mention that nursing shortages and long hours of work result in mental and physical complaints from nurses; complaints of mental stress, mild depression, and anxiety disorders lead to healthcare professional impairments and decreased work performance (Han et al. 2014). Thus Ardekani et al. (2008) concluded that the nursing profession in general is increasingly characterized by job stress.

The working environment for nurses in other stress factor in nursing practice. This view is supported by Moustaka & Constantinidis (2010,211) who argue that the working conditions such as the wrong ventilation, lighting and the inadequate temperature levels are among the potential work-related stressors. These working conditions can be stressful to the healthcare staff and influence things such as job satisfaction and the type of care provided by the staff members. According to Applebaum et al. (2014,324) the perceived environmental factors such as odour, noise, light, colour promote stress in the workplace affecting the quality of job done. For instance, the perception of odour is dominated by pleasant or unpleasant dimensions which can affect the mood and how a nurse conducts their job. In the case of noise Joseph & Ulrich (2007) suggest that nurses are adversely affected by high noise levels which is then associated with increased stress and annoyance, fatigue, emotional exhaustion, and burnout (Applebaum et al. 2014,324). Likewise, light and colour if not supplied enough contributes to the type of work produced by nurses when are working in places such as the operating theatre. This thereby shows an inverse relationship between these environmental factors and perceived job stresses. Moreover, the

working environment such as that in emergency units can appear as more stressful than a regular ward. According to Dagget et al. (2016) shows that nurses working in units such as surgical ward experienced more stress than those working in wards such as psychiatry. Thus, indicating that the working environments in nursing practices contribute to the development of stress by nurses.

There are many factors of working life which are associated to the stress experienced by nurses. Most people argue that nursing is one of the most noble jobs since some of the roles of nurses include that of caring and saving lives. Good as that is this can have a toll on the nurse as an individual and be the reason why they develop stress. This view is supported by Starc (2018) who argues that due to their professional empathy towards those in need of help, nurses are exposed to stress factors daily which can be overwhelming and mentally exhausting. A prolonged exposure to all these emotions triggers impulsive reactions and lead to a phenomenon known as burnout which is a state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress. The burnout of nurses is also the result of particularly demanding, conflictive, harder-to-manage patients, as well as of the terminally ill, with whom the staff has frequent contacts and through whom they confront suffering and dying (Molan 2016).

Nursing as a human science is always changing and evolving which might be difficult to keep up. For instance, the use of technology implies that there will be frequent changes in equipment and working processes which might be difficult for the nurses who have been working for a long time to keep up and thereby stressing them. The use of sophisticated technology and competition from other hospitals are all part of the organizational setup of the healthcare sector which appears to be a stress factor in the nursing practice. This is supported by Moustaka & Constantinidis (2010,212) who argue that a large part of potential sources of stress for nurses appear to be organizational in nature including stress-generating nursing work situations, which can be of physical, psychological or social nature. In a study by Leitão et al. (2019) they researched on how the organization of work and the workers feelings impacts on the quality of work in relation to things such as productivity. This in relation to nursing

appears to be applicable since the organizing of work affects nursing care outcomes.

One can argue that stress in nursing can be situation based. This view is supported by Greenwood 2010 who mentions that Lanette L. Anderson argues that the first time a nurse makes a medication error and the first time a patient dies in her care are two situations highlighted as stressful for nursing professionals (Greenwood, 2010). Chatzigianni et al. (2018) also support this notion who after conducting their study found out that the most stressful situations experienced by nurses were dealing with death and dying. Moreover, when some nurses are dealing with personal situations this might affect how they conduct their job thereby affecting how they tolerate stress in certain situations. Other factors such age and experience of nurses also contribute to job stress in nursing. For instance, nurses between 30 and 34 years expressed higher stress in all cases except patients' and their families' demands stressor (Chatzigianni et al. 2018).

Canady & Allen (2015,1) argue that nurses work 12-hour shifts to provide continuous 24-hour inpatient care creating sleep deprivation and higher stress demands increasing the risk of nurses developing other chronic issues such as hypertension, diabetes and mental illnesses such as diabetes. Moreover, workloads and shift work among nurses might affect their health because when nurses have these long shifts, they tend to neglect their wellbeing and healthy habits. This view is supported by Jordan et.al. (2016) who argues that they found out that there was an obvious disconnect between nurses' health status and their health behaviours when they conducted a study to identify the correlation between work stress and health status for nurses. This is so because when some nurses are stressed it has an impact on them resulting in them binge drinking, failing to exercise, eating unhealthily as well as neglecting their general health status resulting in them being overweight (Jordan et al. 2016). The long-term impact of being overweight leads to the development of other related diseases such as heart disease and high blood pressure. Not only does things such as shift work affect the health of nurses but also it affects their sleep patterns. A study by Kaliyaperumal et al. (2017) revealed that nurses who often work long shifts are sleep deprived which makes it difficult for them to work properly resulting in an increase in the risk of patient errors.

### 3.2 Impact of stress in nursing practise

Nursing practise involves the providing of care and help to different kinds of people. The ICN defines nursing as an integral part of the health care system which encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. The Helsinki university hospital website(HUS 2020) mentions that core task in nursing include caring for the patient, assessing the patient's need for care as well as planning, implementing and evaluating nursing care. Therefore, nursing practise includes the promotion of health, the prevention of illness, and the care of ill, disabled and dying people. Major nursing roles include advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education. For this to be effective Henry et.al (2011) argue that nurses need to be equipped with the right communication skills and exemplify resilience during assessments. Moro so, inclusion of evidence-based practices in nursing provides nurses with the scientific research to make well-founded decisions and helps them understand the risks or effectiveness of treatments so that nurses provide safe and effective nursing practise (Eastern Illinois University 2018). This is view is supported by the Helsinki university hospital website which indicates that nursing is guided by patient-centred, evidence-based practice, patient safety, and multi-professional and collegial atmosphere (HUS, 2020).

Nurses are pivotal in providing health care; however, work-related stressors affect that care. In order to provide good care to patient's nurses often build interpersonal relationships with the patients so that they provide care which is more individualistic, and which fits the needs of the client. However, when nurses are often experiencing occupational stress it usually affects how they conduct their job and the type of care they provide to their patients and clients. For instance when the stress is as a result of problems with workmates such as doctors this may lead nurses to spending more energy coping with the difficulties that rose from these aspects, holding them at the same time away from focusing on patient needs (Sarafis et al. 2016).This thereby making it difficult for nurses to attain good patient satisfaction through failure to cater for the needs of the patient and provide good care. Furthermore, when nurses are not in their right state of mind, they are likely to make a lot of mistakes such as medical errors or

being certain when they make a certain clinical decision. Thus, affecting the overall care of the patient or client.

Occupational stress like any other type of stress affects an individual differently. For example, Lee and Wang (2002) found that a high level of occupational stress is related to workload and responsibility, while for someone else workload is the best independent predictor of health and well-being status (Moustaka & Constantinidis 2010,212). According to WHO pressure at the workplace is unavoidable due to the demands of the contemporary work environment since and when its acceptable by the individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristic. Therefore, many people argue that stress might produce positive results when it's still manageable pressure which prompts and pushes a one to do better (Tehrani & Ayling 2009).

The impact of stress on nurses should always be accessed since it can affect the healthcare services to a greater extent. Najimi et al. (2012,301) note that job stress is one of the main factors that can decrease productivity of organizations and develop physical and psychological complications efficiency. Nurses are considered as the backbone of the healthcare system as such when they are not functioning well enough it not only affects them physically, socially or psychologically but also affects the general healthcare system of a country. In addition, the International Organization of Labour, estimated the detriment caused by job stress, about 1% - 3.5% of national gross production. In a 2011 survey sponsored by the American Nurses Association (ANA), nurses identified the acute and chronic effects of stress and overwork as one of their two top safety and health concerns (ANA 2011), which is consistent with findings of a similar survey sponsored by the ANA nearly a decade earlier (ANA 2001). Thus , studies have proven stress should not be underestimated since it can be toxic for the body and can lead to diseases (Cohen S. et al. 2007), and how it is regarded as a work hazard since mid-1950s (Jennings B. M. 2011).

### 3.3 Stress management

Although there are other occupational hazards in nursing, stress ranks near the top. It is for this reason that there needs to be coping mechanism for nurses to deal with the stress to reduce or prevent its negative impacts. This is so because

Najimi et al. 2012) mentions that the Food and Drug Administration (FDA) after studying about health disorders in stressful jobs has declared that among 130 studied jobs, nurses in visiting doctor about their mental condition are at 27th place. This shows how stress factors are of major concern in nursing practice and why they should be coping mechanism at workplaces to cater for them. As a result, for there to be stress management programs what needs to be done first is the identification and evaluation of the stressors in nursing practise (Salilih & Abajobir 2014,331). Once this is done the management programs will be implemented since it will be easier to work with what you already know. According to Embriaco et al. 2007 better-organized management structure and organized individual working practice are effective way of managing or coping with work stress. This implies that when there is better organization and distribution of workload nurses are in a better position to manage their working conditions which entail reduces the chances of developing work-related stress.

Roberts & Grubb (2014) mention that stress management programs are designed to build employees' capacity to cognitively and behaviourally manage stress. This is so because many people have argued that occupational stress is influenced by the working culture for a place be it a hospital or nursing home. This is so because when workers such as the nurses are experiencing bad working conditions such as long shifts due to shortage of nurses and conflicts with other staff members, they are likely to face challenges which causes them to be stressed in the workplace. Hahtela et al. (2015,470) mention that improving workplace culture is thus vital in meeting the challenges related to recruitment and retention. A better work culture means more satisfied nurses in the nursing practice which entail reduces the work-related stress. The work culture can be improved through interventions such as rescheduling shifts and recruitment of adequate nurses and decreasing workloads (Salilih & Abajobir 2014,332). Once the hospital or nursing administrators take responsibility through the implementations the stressful situations are reduced therefore improving the health and wellbeing of the staff so that they perform their jobs effectively. An improvement of the work culture even attracts and promotes the recruitment of other nurses since just like any other country there already appears to be a shortage of nurses.

Xu et al. (2019,184) in their study of coping strategies argue that maintaining normal life, thinking about solutions, using previous experience, maintaining control of the situation and information seeking are the most common methods of coping used by nurses when faced with stressful situations. Learning these strategies helps in enhancing resilience in the face of continuing workplace stress. Moreover, Happell et al. (2013,196) mention that, “In a recent study with Singaporean nurses (Lim et al. 2011), three main ways of coping were identified: (1) taking time out (breaks at work, rest and relax, shopping), (2) seeking emotional support (family, husband, colleagues), and (3) belief systems (role of luck, fatalistic thinking, spiritual interventions)”. Belief systems such as praying go a long way in acting as coping methods. The above methods not only help the nurses in maintaining their normal life but also allow for the development of emergency coping strategies when need comes.

Another effective method of coping with stress in the nursing practice includes the use of counselling services and self-help groups. Bratianu (2015) mentions that employers who institute measures which reduce stress among nurses benefit by having increased staff retention and improved patient outcomes. Therefore, there is usually counselling services offered to the workers at workplaces so that when experiencing a stressful situation or feeling overwhelmed they always have someone to talk to who guides them and offers them support. Professional help of counsellors and therapists is always important because they help you understand what the cause of stress is and how to cope and develop effective coping techniques, as well as make any changes you need to manage your stress in the long term. In Finland nursing associations such as Tehy (The Union of Health and Social Care Services) also offer support to nurses and help nurses to deal in their everyday work and to take an active role in healthcare issues be it theirs or for other people. Thus, managing of stress requires a combination of person focused and organizational focused strategies (Roberts & Grubb, 2014) to produce better outcomes of stress coping and management in a broader context.

Although there has been a lot of research on how nursing is stressful there appears to be a shortage of research in relation to the coping methods used for the nurses to be able to deal with the stressors. This is so because according to Jordan et al. (2016) stress and coping abilities influence the health and work



performance of nurses. Coping mechanism for stress implemented outside the workplace can go a long way in reducing negative effects of stress at work. This view is supported by Happell et al. (2013) who conducted a study in which they identified how nurses cope with stress outside their working place. According to Happell et al. (2013,197) there are four main coping themes which nurses use in order to cope with stress and anti-social behaviours. These include socialising with colleges, engaging in other activities and substance abuse. Engaging in other activities such as exercising, family activities and outdoor activities and socialising with friends, colleagues and family goes a long way in making sure that the general health of the nurse is good and that their mental health is in check which helps when they return to work the following day. However, not all coping methods are good coping methods for instance things such as substance abuse might promote addiction as well as affect the general health of the nurse whereas anti-social behaviours might lead to depression since the nurse will not have anyone to talk to when experiencing stress.

It is of importance to acknowledge the fact that there are other factors which play a huge role in the effectiveness of coping mechanism for stress. The Medicine online (Medicineonline2015), mentions that as people age, their ability to achieve relaxation response or recovery from stressful situations becomes more difficult. Thus, indicating the need for checking for applicability of coping strategies before implementing them.

#### **4 PURPOSE OF STUDY AND RESEARCH QUESTIONS**

The purpose of this study was to identify the stress factors in nursing and how they influence the nurses' work.

The aim of this study is to assist nurses to become conscious of the stress factors in nursing practice and how they affect their work. The aim seeks to help nurses in implementing strategies to improve stress management in their profession.

Based on literature the research questions are:

1. What are the causes and impact of stress among nurses?
2. What are the methods used for coping with stress?

## 5 RESEARCH METHODOLOGY

### 5.1 Literature review

A literature review was used in this study. According to an article by the Bloomsburg University of Pennsylvania (2020) a literature review is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a specific area of research. This makes it a reliable choice of research methodology because as a researcher you will be building your research on and relating it to existing knowledge thereby making it important in the development of knowledge towards a topic. This view is supported by Snyder (2019) who notes that a literature review is an excellent way of synthesizing research findings to show evidence on a meta-level and to uncover areas in which more research is needed, which is a critical component of creating theoretical frameworks and building conceptual models. This makes it possible for the information found to be used in a larger scale for instance in the nursing profession.

According to the University of West Florida university library (2020) there are five main stages of conducting and writing a literature review. The first stage is choosing a topic which seeks to define your research and narrow down your ideas. It is of importance to note that a good topic is one that is not too broad and one that is applicable to your area of study. After choosing the topic the next stage is of deciding your scope of the review depending on the aims and goals of the study. Once this is done you start searching for the information you will use based on selected databases. It is always important to read the articles so that you can understand them and develop and organize them into subtopics which help you to link them to the choice of topic and write your research (University of Guelph library, 2020). The fifth stage of literature review is reviewing the literature so that you get the results and can discuss and draw up conclusions from your research. It is of importance to note that conducting a literature review is usually recursive, meaning that somewhere along the way, you will find yourself repeating steps out-of-order (University of West Florida 2020)

One can argue that using a literature review is of an advantage because as an author you can synthesize findings qualitatively or quantitatively. The Quantitative

approach deals with things such as statistics which in research can be used when using meta-analysis. A meta-analysis is a statistical method of combining results from different studies to weigh and compare and to identify patterns, disagreements, or relationships that appear in the context of multiple studies on the same topic (Davis et al. 2014). Therefore, when using this approach in the study, data collected should be of a similar approach so that findings are applicable in the research when dealing with things such as the target population.

The qualitative approach was used as well since the research was characterised by its aims, which related to understanding some aspect of social life as to how it impacts the nurse and their tolerance for stress. Using the qualitative paradigm is a suitable approach as it gets to explore and understand exactly what is being looked for concerning the stress factors in nursing practises. One advantage of using qualitative paradigm is because its more flexible meaning that gathering new information can emerge and evolve as the study progressed (Pathak et al. 2013). The results obtained in this approach had to be subjective meaning that they could reveal some form of bias and experiences that can impact the results as well.

## 5.2 Data collection

Data collection for this study was done through Lapland University of Applied Sciences library services through FINNA information search services. The main databases used include Elsevier Science Direct, PubMed, Academic Search Elite (EBSCO), Cinahl (EBSCO) and Google scholar.

For the data collected to be more content specific formulation of key words is of significance. The key words chosen to look for information included stress, stress factors, nursing practice and stress coping. In some cases, combination words were used to be able to obtain more specific articles such as stress and coping in nursing practice, stress factors in nursing practice and nursing and stress. From these key words a vast number of articles were found. For instance, EBSCO had over 388 articles, Google scholar with around 3000 articles, ScienceDirect with about 7600 articles, PubMed with 7519 articles. These articles were a lot for one to be able to use at once.

This led to creating more related keywords to my study such as looking for things such as coping strategies, impacts of stress in nursing as well as limiting the articles based on the year of publication. This helped in reducing the number of articles coming up on the search.

Data collection is one of the most important part in research because as a researcher or writer no results can be attained without first collecting the necessary data. Therefore, the writer used the exclusion and inclusion criteria as part of the data collection method. A summary of how the inclusion and exclusion criteria was used can be viewed in (Table 1). The Inclusion and exclusion criteria help to define who and what can be included or excluded from the study to be able to meet the research questions. According to Garg (2016) Inclusion criteria is everything that a study must have in order to be included in review and exclusion criteria are the factors that would make a study ineligible to be included in the review.

Table 1: A summary of Inclusion and Exclusion criteria

	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
<b>Publication date</b>	From 2007 to 2020 were used in the study	Articles published before 2007 were excluded in the study
<b>Language</b>	Publication should be English and written in an academic way	Other languages
<b>Cost of reading and using articles</b>	Free articles that can be easily accessed without requiring payments	Payable articles which require things such as extra payment or permission.
<b>Availability of articles</b>	Linked full text which can be accessed or downloaded	Articles with Incomplete text were excluded in the study

<b>Availability of references</b>	Articles with a reliable List of references were included	Articles without a List of references excluded
<b>Availability of abstract</b>	Articles with an Abstract available as well as clear and rich summaries	No abstract and without a clear and reliable as well as rich summary
<b>Search terms</b>	Stress factors, Nurses, Nursing practice	Other non-key words
<b>Relevance</b>	Articles chosen should be of relevance to the subject of study that is stress factors in nursing	Articles without relevance which do not including the nursing perspective are excluded such as stress of doctors in occupation.

#### 5.4 Data analysis

The method chosen for analysing data in this study was the inductive content approach. This was the most suitable choice of data analysis because even though there has been research about the chosen topic there seems to be not enough information related to the topic in nursing practise. This view is supported by Elo & Kyngäs (2008) who argue the inductive content analysis is more suitable when there is not enough former knowledge about the phenomenon or if this knowledge is fragmented. The chosen analysing approach is of importance because the credibility of research deals with the focus of the research and takes in to recognition how well the data address the intended focus (Polit & Beck, 2012).

Elo et al. (2014) note that the content analysis processes involve three main phases which are preparation, organization, and reporting of results. During the preparation stage the author began by collecting data that was relevant to the topic of interest (Principles of sociology inquiry 2012). As a result, data relevant

to stress factors in nursing and coping mechanism was collected from the academic databases (Science direct and EBSCO etc) and the writer began reading the chosen articles to understand the content and meaning. The fact that researchers are guided by the aim and research questions gives some order in the preparation stage to move to the organization stage. Elo & Kyngäs (2008) mention that the organization phase in inductive analysis includes open coding, creating categories, and abstraction. The goal of this stage is to be able to divide the data into smaller groups which are easier to understand, explain and analyse. Thus, Moule & Goodman, 2013, argue that interpretations of data will be coded, put into categories and themes, and links will be explored across the data during the inductive content analysis approach.

During open coding the writer was able to jot down and formulate headings while reading the selected articles to be to gather content which answered the research question what are the causes and impact of stress among nurse? The writer then analysed the 10 articles which described and identified the stress factors in nursing practice, how it was affecting the nurses work whether positive or negative. The inductive approach involves beginning with a set of empirical observations, seeking patterns in those observations, and then theorizing about those patterns (Principles of sociology inquiry 2012) Through looking for patterns in the 10 articles the writer was able to group the information obtained into categories and subcategories based on being similar and dissimilar to reduce the number of categories created. The headings for generic categories was based on similar words found in the articles explaining the factors causing stress such as organizational factors and the sub categories where the causes such as shortages of nursing staff, environmental stressors and the impacts on the nurses whether positive or negative . (Fig 1) created by the author gives a summary and illustration of how this was done. However it is of importance to note that it is not only a matter of putting data which is similar and dissimilar but it's more of classifying data which belongs to a particular group so as to give a comparison and analysis of findings( Elos & Kyngäs 2008).

Fig 1: Data analysis summary

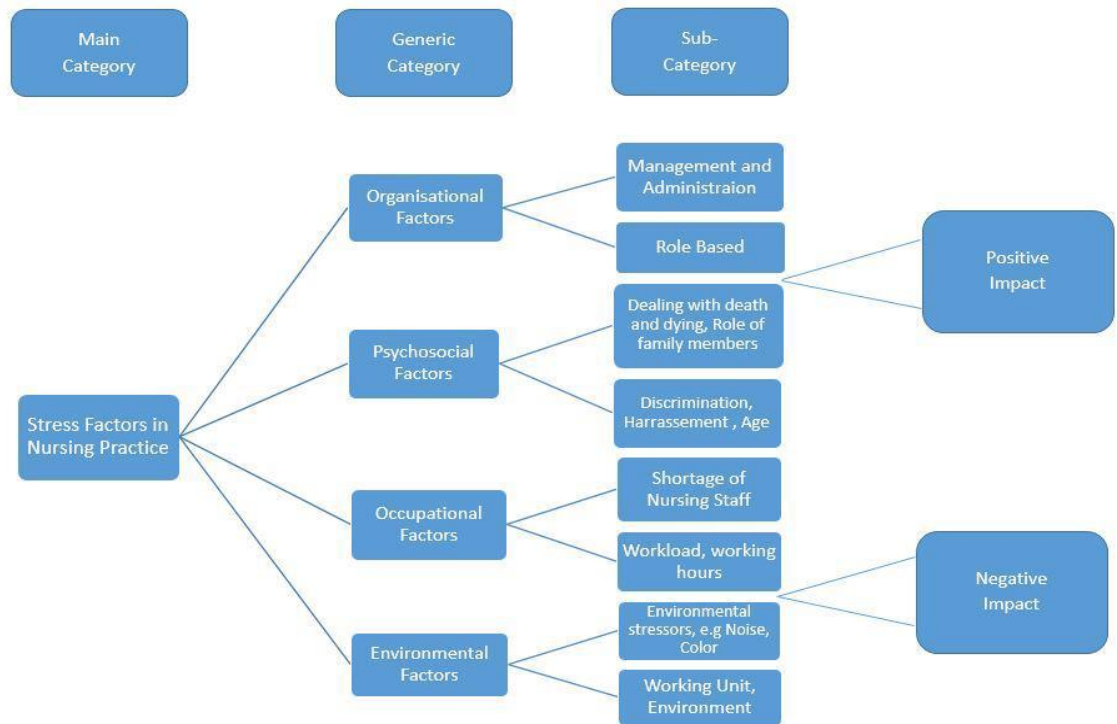


Figure 1 Categories of causes and impact of stress among nurses

Furthermore, during the process of inductive content analysis, the researcher decides through interpretation which things to put in the same categories. For instance, in trying to answer the research question about the method used for coping with stress, the generic categories were formed using content-characteristic words from both the articles and the main points from Lazarus and Folkman transactional based model of stress used and the subcategories from the similar concepts in the 10 articles used in relation to the topic. This can be viewed in the (table2) below which was created by the author to show the summary of the data analysing process for the coping methods used by nurses. It can be noted that the categories were formed after the reader had read the articles several times to get enough content from them.

Table 2. Coping methods analysis

MAIN CATEGORY: Methods used for Coping	
Generic category	Generic category



ORGANIZATIONAL STRATEGIES: Problem management	INDIVIDUAL STRATEGIES: Emotional regulation
Subcategories	Subcategories
-organizational counselling	- dealing with emotional and psychological state
-specific occupational health education	-lifestyle related
-suitable working conditions	- time management and planning
-work policies	-social and spiritual support

All in all, the goal of the organizing and categorizing is to capture what was intended and so that the results are described through the content of the categories describing the phenomenon to present the final stage of inductive content analysing which is reporting (Elo et al. 2014). During the reporting stage a detailed account is shown in arranged manner which helps one to better understand the whole process of analysing data and the results from it. Thus, Schreier (2012) mentions that readers should be able to clearly follow the analysis and resulting conclusions. A much detailed. An empirical explanation of this will be shown in the results section where the writer was able to conclude on what the main stress factor categories were and how they impact nurses and the coping method used by nurses through the generated categories.

## 6 RESULTS

Chapter 6 of this thesis focuses on the results for the literature review based on ten articles. (The 10 articles summary can be seen in Appendix 1). The results are classified according to the research questions and objectives of the study. The author has categorized the results in a manner which shows the findings in the research and so that possible comparison are made and co-related based on the research findings.

### 6.1 Identification of causes and impact of stress in nursing

In order to be able to come up with the subcategories of the research the author used the process of inductive data analysis and its stages. This means that the research questions and topic choice helped guide the author to analyse the chosen articles. This made it possible for the author to identify similarities in the chosen articles and from those formulate the categorizes indicating the factors under a subtopic which summaries the factors alike. The headings were created by the author based on familiar words from the articles which summarised the concept of each category. As a result, the causes and impact of stress among nurses can be identified and categorized into several factors which include;

- Organizational factors
- Psychosocial factors
- Occupational factors
- Environmental factors

#### 6.1.1 Organizational factors

Results show that organizational factors play a part in the developing of stress in nursing. The fact that nursing is an ever changing and evolving profession which provides room for competition makes this organizational factor contribute to the experiencing of stress by nurses (Canady & Allen 2015, Moustaka, & Constantinidis 2010, Roberts & Grubb 2014). Management and administrative responsibilities are another major source of causing stress among nurses since poor management and leadership leads to things such as role confusion (Moustaka & Constantinidis 2010). Role-based factors such as lack of power, role

ambiguity, and role conflict (Moustaka & Constantinidis 2010, Najimi et al. 2012, Dagget et al. 2016).

#### 6.1.2 Psychosocial factors

Psychosocial variables were associated with stress levels among nurses. Many articles show that the most stressful situations were dealing with death and dying (Chatzigianni et al. 2018, Canady & Allen 2015, Starc, 2018, Sarafis et al. 2016, Dagget et al. 2016). Dealing with uncooperative family members and clients/patients is another cause of stress (Chatzigianni et al. 2018, Sarafis et al. 2016). Age as a variable appears to be one of the causes of stress in nursing (Chatzigianni et.al 2018, Dagget et al. 2016). In the articles by Chatzigianni et al. 2018 Nurses between 30 and 34 years expressed higher stress in all cases. Discrimination (Chatzigianni et al. 2018, Sarafis et al. 2016) and things such as harassment (Dagget et al. 2016) influenced the factors leading to stress development since they then affect the nurse in a psychosocial manner.

#### 6.1.3 Occupational factors

Results from the study indicate that occupational factors have a major role in causing stress in nursing. Most of the articles studied show that workload in nursing appears to be the major trigger for stress in nursing. Shortages of resources (Dagget et al. 2016), Conflict between workers or with supervisors and unhealthy workplace (Chatzigianni et.al 2018, Canady & Allen 2015, Sarafis et al. 2016) Shortages of nursing staff which is not only physically tiring but mentally exhausting. Relationships between workers (Starc, 2018, Sarafis et al. 2016)

#### 6.1.4 Environmental factors

Results show that environmental factors related to the working life and type of environment result in stress in nursing. Common environmental stressors in the work environment can be stressful to staff (Moustaka & Constantinidis 2010, Najimi et al. 2012, Applebaum et al. 2014) and influence job satisfaction and, ultimately, intention to change jobs. The perceived environmental factors such as odour, noise, light, colour promote stress in the workplace affecting the quality of

job done (Applebaum et al. 2014). The working unit as an environment results in job stress in nursing (Canady & Allen 2015, Dagget et al. 2016). Whereas in (Chatzigianni et al. 2018) it stresses more on the stressors resulting from the job on its own such as dealing with death and dying.

#### 6.2.1 Positive causes of stress in nursing

Work stress is something that is unavoidable in nursing. Results from the study show that stress in nursing can have positive or negative causes. Positive impacts include workload as the best independent predictor of health and well-being status (Moustaka & Constantinidis 2010) hence this will lead to positive outcomes. (Chatzigianni et al. 2018, Starc, 2018, Sarafis et al. 2016, Jordan et al. 2016) indicate that even though the causes usually affect the nurse in a negative manner when stress is accepted in a different manner it might promote nurses to work harder, be more focused thus producing better results.

#### 6.2.2 Negative causes of stress in nursing

Health concerns for nurses e.g. Acute and chronic concern leading to development of diseases due to things such as sleep deprivation when doing long shifts (Roberts & Grubb, 2014, Canady & Allen 2015) Depression and anxiety (stress manifestations Jordan et al 2016, Najimi et al. 2012). Decrease in quality of life of nurses (Canady & Allen 2015, Sarafis et al. 2016) Work related stressors affect quality of care given to the patients (Moustaka & Constantinidis 2010, Roberts & Grubb, 2014, Najimi et al. 2012). More energy of nurses is spent trying to cope with the stressors than doing work (Sarafis et al. 2016). Increase in medication errors due to nurse's state of mind.

### 6.3 Coping methods

All 10 articles (Chatzigianni et al 2018, Canady & Allen 2015, Moustaka & Constantinidis 2010, Starc, 2018, Najimi et al. 2012, Sarafis et al. 2016, Jordan et al 2016, Applebaum et al 2014, Dagget et al 2016, Roberts & Grubb, 2014) used in finding the results indicate the importance of implementing coping methods in nursing practice. There are two main categories which were gathered from the results which include

- Individual strategies
- Organizational strategies

### 6.3.1 Individual strategies

Individual based strategies can be used as coping methods when dealing with stress. Taking time out and time management (Chatzigianni et al. 2018), self-controlling, planned, and arranged problem—solving, and accepting responsibility (Starc, 2018, Canady & Allen 2015, Sarafis et al. 2016). Individual lifestyle related strategies such as exercising, binge eating, alcohol, drugs, substance abuse and practising a sedentary lifestyle are used by nurses as coping methods (Jordan et al. 2016 ). Dealing with one's emotional and psychological state (Chatzigianni et al. 2018, Sarafis et al. 2016, Dagget et al. 2016 ) and having a social support system and use of belief systems .Eslami et al. 2015 mentions that, "according to Poter, coping reactions to stress include activities in the social and spiritual side of human and in fact, it is considered as calming and stabilizing agent which may help individuals in maintaining their mental peace during stressful events ." Other than spiritual methods other nurses' resort to seeking help and preventive monitoring (Jordan et al. 2016).

### 6.3.2 Organizational strategies

Lambert & Lambert (2008) note that authorities have defined coping as cognitive and behavioural attempts to control the internal and external demands in encountering the surrounding environment. As such, organizational strategies appear to be helpful as used in implementing coping methods. (Canady & Allen 2015, Roberts & Grubb 2014, Starc 2018) show that when hospital administration implements stress reduction strategies to ensure health and safety of nurses the incidence and prevalence of stress are reduced. Specific occupational health education (Sarafis et al. 2016, Jordan et al. 2016) interventions such as counselling services provided by the organization also help (Moustaka & Constantinidis 2010). Other methods of coping include developed policies, systems, and work environments that facilitate the adoption and maintenance of healthy behaviours and suitable working conditions and environment like creating a good environment for developing clear professional roles (Chatzigianni et al. 2018, Starc 2018, Moustaka & Constantinidis 2010, Sarafis et al. 2016, Najimi et

al. 2012, Applebaum et al. 2014). Roberts & Grubb, 2014 indicates the benefits of combining and integrating the organisational and person focused strategies of coping in the reduction and prevention of job stress among nursing professionals.

## 7 DISCUSSIONS

Results from the study indicate that nurses are affected by various factors including the nature of the work, stressful working conditions, poor and unsuitable working relationships which results in them developing job related stress. Regardless, of this there seems to be a gap in the research field of the methods used to prevent the stress in nursing practise. Roberts & Grubb (2014) argue that Although a fair amount of work has been carried out to identify and control the physical risks associated with nursing work, such as manual handling, ergonomics, chemical hazards, and biological hazards, there has been disproportionately less progress with regard to developing and implementing evidence-based programs to prevent or reduce job stress experienced by nurses.

Findings from the research show that organizational factors are some of the factors that result in nurses developing stress in nursing practice. Poor management and administration and role confusions are part of institutional factors which have been associated with occupational stress. Despite, these shortfalls' nurses are still required to work in a holistic manner and produce positive outcomes during their work which. Many of the articles used showed that nurses attributed their work stress to poorly planned shifts, disorganized working conditions, undefined roles, poor training all which indicate management and organizational short comings. Thus Sharma et al. (2014) these kinds of stressors can be modified in a positive way using appropriate stress management skills.

Applebaum et al. (2014) study suggests that common environmental stressors in the work environment can be stressful to staff and influence job satisfaction and, ultimately, intention to change jobs. Environmental factors such as odour, noise, light, and colour affect a worker's concentration and how they perform their work. A study by Moradi et al. (2017) revealed that challenges faced by the nurses are due to unbalance between needed environmental motivation to work and the heavy workload. As a result, improving or getting rid of these environmental stressors has the potential to improve staff satisfaction and retention.

Stress in the occupational workplace might bring about both positive and negative outcomes. Tehrani & Ayling (2009) mention that, "stress up to a certain extent, will improve peoples' performance and quality of life because it is healthy and

essential that they should experience challenges within their lives". This leads to workers being more focused and having a willingness for them to push out of their comfort zones and produce better results. Although stress is a part of life and is considered necessary to increase functional capacity not all stress is good stress because when stress is not maintained and kept in check the pressure might be too much for the nurses to handle and affect the way they work. Sharma et al (2014) argue that stress decreases attention, concentration, and decision making, and judgment skills. This also affects negatively the quality of care nurses offer as a result of them having lost their compassion for patients, increasing incidences of mistakes and errors as a result of their impaired attention and concentration.

Based on the research it can be noted that the association between working conditions and stress in the workplace needs to be controlled because it also controls the risk to health for the healthcare worker such as the nurse. Mental problems such as depression, anxiety and insomnia are among the most common diseases which nurses suffer from as a result of job-related stress. This is so because nurses face incidence which can have a toll on them emotionally on a daily such as dying of patients. The rate of which nurses are affected be it emotionally or psychologically varies due to individual traits but is usually a cause of concern leading to burnouts. Stressors at work might affect nurses physically as well leading to the deterioration of their health. Blaug et al. (2007) identify short-term symptoms of stress including headaches, muscular tension, chest pains, indigestion, palpitations, disturbed sleep and increased when susceptibility to respiratory infections whereas McFarlane (2010) argues that excessive stress may lead to the exacerbations of already existing medical conditions. This becomes a major cause for concern when dealing with job related stress.

Research shows that an increase in the stressors faced by nurses' results in decrease quality of health services (Najimi 2012). This makes the topic of raising awareness of stress factors in nursing practises and the need for implementation of effective coping strategies when faced with stressful situations. Coping strategies and measures to reduce sources of stress in a work environment are beneficial since they help not only in improving quality of care given but in protecting a workers' health. Studies have shown that when nurses are presented with coping strategies it is mostly on the positive side. According to Roberts and



Grubbs (2014) when sources of stress at work are identified and the scope of the problem has been assessed, a strategy for creating and implementing an integrated person-focused and organization-focused intervention may be established. According to the Farlex Partner Medical Dictionary(2012) coping is the process of contending with life difficulties to overcome or work through them. As a result understanding and implementing methods which help nurses in coping and managing stress goes a long way in producing better results in the healthcare profession which not only benefits the nurses but even the patients and other healthcare professionals who are part of the care team.

Coping methods may vary according to an individual's personal traits that is way there needs to be individual based coping methods. This is so because many researchers have argued that effects of stress can be both positive and negative. Ersöğütçü & Şener (2019) note that stress is divided into constructive stress, "eustress" and destructive stress distress "distress". According to Brule' & Morgan (2018) constructive stress can arise from vital difficulties caused by pleasant activities whereas destructive stress can arise when they are unpleasant situations which need to be adapted. Donin et al. (2019) mentions that, according to Lazarus and Folkman's the extent to which a situation is perceived as stressful will have a salient effect on the relationship between personal and environmental factors and on personal coping strategies.

Findings show that the methods of coping with based on individual strategies might include three main groups that include taking time out, seeking emotional support and through belief systems. Lifestyle related strategies as a way of relieving stress such as exercising, meditating, doing more things that are relaxing outside working hours appear to help nurses deal with stress. Seeking emotional support be it from loved ones or professional from an individual basis also appear to help nurses in coping with their occupational stress. Other nurses who have a spiritual upbringing use their belief systems such as that of praying as methods of coping. The research also indicates that people nurses tend to use negative methods of coping such as drug and substance abuse, leading a sedentary lifestyle when at home , engaging in illegal activities, binge eating and drinking which lease to them being unhealth and developing chronic illnesses such as obesity and diabetes.

Social support is a universally accepted way of coping and managing stress in nurses. This is so because when an individual has a support system outside of the working place, they will always have somewhere to go to take a breather from the stressful situations. However, based on the study organizational strategies are of importance in the management of stress in the nursing practice. This can be through development of policies and unions which make sure that the rights of the workers are taken care of and that they feel respected and heard and that they are included when decisions are being made. Stress reduction strategies such as offering guiding and counselling services at workplaces might be another way in which nurses might be able to cope with stress at work their workplaces. Management programs which target the improvement of the work culture such as rescheduling shifts and recruitment of adequate nurses and decreasing workloads might go a long way in ensuring a reduction in job related stress.

The results of the research appear to relate to the theoretical basis of Lazarus and Folkman's theory on stress. At the core of the theory are two main concepts which are that of appraisal and coping. Cognitive stress appraisal being a situation in which an individual evaluates and copes with a stressful situation. Findings indicate that is applicable in nursing practice because most articles indicated that when different people were faced with the same stressors they acted differently, some nurses appear to be stressed more as a result of occupational factors such as understaffing, high workloads and high demand in the job. Whereas other nurses appear to be stressed more as a result of psychological or emotional factors such as loss of a patient or violence and conflict at workplaces. Thus, indicating the ability of an individual to perceive stress on their own personal basis and how they decide to act and manage it as suggested by the theory.

Lazarus and Folkman's theory (1984) suggest that there are two types of coping response which include emotional focused coping and problem focused coping. Based on the articles used nurses appear to use this response when dealing with stress factors. For instance, problem-solving when dealing with complicated situations and when dealing with uncooperative workmates to remove or reduce the cause of stress. Time management is another problem focused coping strategy nurse use. Time management is essential to successfully performing and progressing as a nurse along the continuum (Aggar et al. 2017; Maryniak,

2019). Moreover, when there is good time management there is progress, more work is done, and it leads less missed deadlines. This in turn makes one feel like they have a better sense of self-control, improved self-image, and reduces stress thus promoting good time organization. Obtaining instrumental social support from other support system effectively helps with coping with stress.

According to McLeod (2015) emotion-focused techniques might be the only realistic option when the source of stress is outside the person's control. Nurses practice emotional focused strategies through practising such time outs which is a form of distraction, meditation, drug and substance use as well as Cognitive reappraisal. Which is a form of cognitive change that involves construing a potentially emotion-eliciting situation in a way that changes its emotional impact (Lazarus & Folkman 1964, Mcleod 2015)

## 8 CONCLUSIONS AND RECOMMENDATIONS

### 8.1 Conclusions

Conclusively, it can be argued that stress in nursing practise is a growing concern in healthcare practice which should be addressed since it affects the quality of care provided to the patients. Findings have identified organizational, occupational, psychosocial and environmental factors as the categories for the major stress factors in nursing practise. When these factors work in isolation or together, they produce outcomes which not only affect the patient but the nurse as well in terms of their health and wellbeing. How stressors affect an individual depend on the persons on individual traits and their belief system as a result they can be either positive or negative effects. Regardless, a combination of individual and organizational factors appears to be an effective way in which the management and other healthcare institution are using for the nurses to be able to cope and manage with stress in their working place. This is of importance since even though stress is a normality of everyday life not all stress appears to be good stress so when there are coping methods in place stress can be regulated and managed in a way that benefits everyone concerned.

### 8.2 Recommendations

Based on the findings of this research, the author made the following recommendations

- For the management to implement effective coping methods of stress in their respective organizations or units they should first evaluate the nurses and the root causes of stress and from them develop strategies which are specific to their units.
- For there to be effective stress management there should be a close collaboration between the team leaders, nurses and the management when deciding the type of coping strategies to be implemented.
- Nurses should be able to develop stress coping methods on an individual basis so that there are able to manage at a more personal level

- Continuous education on the importance of self-care and taking care of ones on health should be given so that nurses do not neglect their own health whilst they are taking care of their patients in nursing practise
- There should be a clear protocol which guides workers on how to go about their day to day tasks to avoid things such as role confusions and enough supervision and guidance when dealing with stressful situations

Writing this research was helpful in relation to professional growth in the nursing field. The author came to an understanding that nursing is an ever growing and ever evolving profession which requires constant learning to prove ones on personal growth at a professional level. This is the case because when starting the thesis, the author had many assumptions such how nursing is a stressful occupation. However, this assumption does not illustrate how some nurses work better under stress which makes them provide better care to the patients or clients in need of their care which was indicated in the thesis. Another assumption before writing the thesis was that stress is mostly as a result of a mental issue. The study helped and tried to make the author learn and ascertain the presence of other existing factors such as the persons on physical wellbeing or general health, environmental factors which contribute to the outcomes of stress in nursing practice. Researching about this topic gave a basis for the author to be able to investigate job related stress and coping mechanism in another outlook to be able to apply knowledge obtained in the future.

Conclusively, more research needs to be done which is content specific for example dealing with specific stressors so that enough information is obtained, and better methods of coping are implemented for stress management.

## 9 ETHICAL CONSIDERATIONS AND VALIDITY

The thesis was written in accordance to the ethical recommendations for thesis writing at universities of applied sciences. This was of importance because ethics play an important role in all fields of nursing research. This is so because ethical considerations involve strict adherence to set down rules and ethical guidelines for all scientific research and writing (Carver et al. 2011).

The fact that the choice of study was scientific literature review made it of importance to be aware of plagiarism. As a result, the writer managed to acknowledge the use of work of other researchers through properly citing their work in accordance to the Finnish Advisory Board on Research Integrity (2012). The use of data from other researches and findings was also referenced according to the instructions of Lapland University of Applied Sciences (2019). Even though the research was conducted in the form of systematic literature review the author also made use of reading about the ethical codes and conduct for nurses for example from the International Council of Nurses code of ethics (2012). So that information obtained would be applicable in the nursing profession.

The inclusion and exclusion criteria was implemented in the gathering of information to ensure the validity of the study. Heale & Twycross (2015) define validity as the extent to which a concept is accurately measured in a quantitative study. Validity plays an important role in research since it helps in checking whether the research is answering the research questions or if the goals of research are being met.

Moreover, the data analysis approach used in the research (inductive data analysis) helps the author in checking the reliability of the research. This is so because since inductive approach can be used when knowledge is fragmented this helps give base to the researcher and gives significance to the research so that they can search and analyse data in a uniform way based on the different stages of data analysis to categorize data. For instance, Schreier (2012) mentions that the categorization matrix can be regarded as valid if the categories adequately represent the concepts and what was intended. In the case of this, the researcher was able to analyse the data and produce categories which seemed to answer the research questions and topic choice, hence indicating its

reliability. As a result, information used in the study was collected only from valid databases provided by Lapland University of Applied Sciences. This was done through the Finna information search services which provides library access to online articles, journals and online textbooks etc. Gathering information from well-known academic data bases made the measuring of its validity and trustworthiness. This is so because by using data bases such as EBSCO the researcher would have used material which would have scientific backing based on previous research. Thus Elo's et al. 2014 mentions that demonstration of the trustworthiness of data collection is one aspect that supports a researcher's ultimate argument concerning the trustworthiness of a study

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## APPENDIX 1: Summary of Reviewed Research

Author, Year and Title	Study Design	Study Aim	Study Subjects	Assessment Tools
Chatzigianni et.al.2018. <b>“Occupational stress experienced by nurses working in a Greek Regional Hospital: A cross-sectional study”</b>	A cross-sectional study was conducted	to measure perceived stress levels among nurses in a Greek public general hospital.	157 nurses and nursing assistants took part	. A self-administered questionnaire including sociodemographics and Expanded Nursing Stress Scale (ENSS) for stress assessment was used. Analysis was performed using Statistical Package for the Social Sciences version 20.0
Canady, K.E, & Allen, D .2015. <b>“Stressors in the Working Environment of Registered Nurses”</b>	Kurt Lewin’s change theory was used as the framework of the study for The Health and Safety Executive (HSE) 35 item valid and reliable	To provide support for nurse leader interventions that decrease workplace stressors for nurses.	RN, s from 4hospitals were used and out of these hospitals 464 questionnaires were returned	Self-report questionnaire with 35 questions

	questionnaire			
Moustaka, E. & Constantinidis, T.C. 2010. <b>“Sources and effects of Work-related stress in nursing”</b>	A systematic review	The examination of the sources and consequences of occupational stress on nurses’ adequacy, productivity, efficiency.	A systematic review was made in “European Agency for Safety and Health at Work”, “National Institute for Occupational Safety and Health (NIOSH)”, “Job Stress Network” web sites for various publications and abstracts around the exact theme and the “Occupation	Comparing of articles



			al and Environmental Medicine Journal” using as key words «stress, occupational stress, and Nursing».	
Starc, J. 2018. <b>“Stress Factors among Nurses at the Primary and Secondary Level of Public Sector Health Care: The Case of Slovenia”</b>	A descriptive and causal non-experimental method of empirical research	Determine the basic causes of stress and examine the symptoms of stress among healthcare professionals at the primary and secondary level of health care.	The survey was conducted among 370 nurses (14% male, 86% female) – according to data from Nurses and Midwives Association of Slovenia	Questionnaire with 20 questions.
Najimi et.al. 2012. “Causes of job stress in nurses: A cross-sectional study”	A descriptive cross-sectional study.	to determine the causes of job stress in nurses of Kashan, Iran.	189 nurses from Kashan hospitals of different wards were studied.	The data collection tool in this study was Occupational Stress Inventory-Revised

Sarafis et.al.2016. “ <b>The impact of occupational stress on nurses' caring behaviors and their health-related quality of life</b> ”	A correlational study of nurses	to investigate and explore the correlation amidst occupational stress, caring behaviors and their quality of life in association to health	246nurses who worked at public and private were used	Three research instruments: (1) the Expanded Nursing Stress Scale (ENSS), (2) the Health Survey SF-12 and (3) the Caring Behaviors Inventory (CBI)
Jordan et.al.2016 <b>“The Impact of Perceived Stress and Coping Adequacy on the Health of Nurses: A Pilot Investigation”</b>	a cross-sectional observational study	to assess nurses' health status, health behaviours, self-reported stress levels, coping techniques, perceived coping effectiveness, and situation specific self-efficacy to cope with workplace related stress.	Participants included 177 full-time and part-time nurses employed by a community hospital in the Midwestern United States	Survey instrument including pilot study and question asking.
Applebaum et.al 2014. <b>“The Impact of Environmental Factors on Nursing Stress, Job Satisfaction,</b>	A descriptive, correlational study	to investigate relationships between environmental factors of odor, noise, light, and color and perceived stress, job	The sample (n = 116) consisted of medical-surgical nurses working in acute-care settings.	36-item questionnaire

and Turnover Intention”		satisfaction, and turnover intention		
Dagget et.al.2016. <b>“Job related stress among nurses working in Jimma zone public hospitals, South West Ethiopia : a cross sectional study”</b>	Institution based cross sectional study	The aim was to assess job related stress and its predictors among nurses working in Jimma Zone public hospitals	433 nurses from three public hospitals in Ethiopia	Self-administered questionnaire
Roberts,R.K. & Grubb,P.L.2014. <b>“The Consequences of Nursing Stress and Need for Integrated Solutions”</b>	A review of literature	To investigate the impact that job stress has on the health and safety of nursing professionals and the role that working conditions and job characteristics play in fostering job stress	Based on the 2011 survey sponsored by the American Nurses Association ANA findings.	Literature review