

Stress and Burnout in Demanding Nursing Home Care

A literature review of the causes, prevention and coping strategies

Di Yang

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Title of publication Stress and Burnout in Demanding Nursing Home Care A literature review of the causes, prevention and coping strategies		
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Abstract <p>Nursing job is generally related to intense pressure and high-level burnout because of its high demanding, challenging and stressful professional characteristic. Nursing staff in elderly home and long-term care facilities particularly experience higher level of physical job demands, more emotional exhaustion and lower level of job satisfaction than those in other units, thus bringing out higher burnout ratio among the nursing staffs. The main aim of this study was to reveal the causing factors of work strain and burnout among nursing staff in nursing home, and explore the positive interventions and coping strategies of burnout among nursing staffs. The study is a literature review of 11 articles. EBSCO and Science Direct were selected as the main databases for the research. Qualitative analysis was applied as the data analysis method. Results from this study indicated that occupational, organizational, socio-demographic factors are the main contributors to burnout in caregiving in nursing homes. Individual factors also have impacts on stress perceiving among nursing staff. Results from this study also indicated that the improvement and optimization from organizational level can effectively prevent and alleviate the burnout of caregiving in nursing homes. Optimism and redesign of nursing job, sufficient workplace support, participant management, flexible work schedule, and ample work-benefited facilities could be good resolution for nursing burnout. In recommendations, several coping strategies are provided for both health care institutions and for nursing staffs.</p>		
Keywords/tags work strain and burnout, registered nurse/practical nurse, nursing home, causes, coping strategies		
Miscellaneous		

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1 Introduction

Nursing is commonly perceived as a demanding, challenging, and stressful profession. Based on the reviewed studies (AbuAlRub et al, 2004; reviewed in Dhuha 2015), high job demands, lack of job control and social support were the most often-cited job-related stressors reported by nurses. Work settings determine varying levels of job demands. Nurses in nursing home often work demanding schedule to provide 24-hour care. Nurses in elderly home and long-term care facilities usually experience higher level of physical job demands, more emotional exhaustion and lower level of job accomplishments than those working in other fields.

Work stress in nursing was initially assessed in 1960 by Menzies (1960), and he revealed the four sources of anxiety in nursing: patient care, decision-making, taking responsibility, and change. Nurses have been typically regarded as a stress-filled job because of the heavy physical labor, human suffering, and demanding work hours, insufficient staffing, and intricate interpersonal relationships. However, due to more attention and consideration on the nurses' work stress and burnout in the recent decades, nursing job itself and the contextual environment have been improved significantly, with the increasing use of technology, continuing raise in health care expense, more organized work in caregiving, and more accessible stress coping strategies. The main aim of this study is to reveal the causing factors of work strain and burnout among nursing staff in long-term care facilities, and explore the possible solutions and coping strategies of prevention and to resolution of burnout among nursing staff.

2 Background

2.1 Burnout

Burnout is one of the formulation type of the stress response (Jorma, 2005). It is a state of physical, emotional or mental exhaustion, which occurs when an individual doubts about his or her self's competence and the value of his or her work (Freudenberger 1974). Cooper (2001) considered burnout as a feeling of 'depletion of emotional energy and a feeling that one's emotion resources are inadequate to deal with the situation (Cooper et al,2001)'. Maslach (1993) conceptualized burnout as a multidimensional syndrome, which is consisted of three components: emotional exhaustion, depersonalization, and reduced personal accomplishment.

In nursing job, working stress and burnout has profound influence on caregivers and organizations. From an individual caregiver perspective of view, the accumulation of stress perceived from daily work can eventually lead to significant health problems or diseases (Selye H, 1956). For instance, one third of the nurses in Hong Kong were diagnosed with poor mental health status as a result of the daily work stress (Daniel Wong et al, 2001). On the other hand, in the organizational level, work stress and burnout is associated with caregivers' sickness absences from work, turnover, or even staff leave, resulting in shortage of workers, low satisfaction among clients, or difficulties in management (Jennings, 1994).

2.2 Caregiving in Nursing home and Burnout

There are growing numbers of elder people in need of health care as the proportion of older people in many countries is consistently increasing. In many developed countries, the health service for the elderly has shifted from long term care institutions to community-based facilities, such as home care and visiting nursing agencies. Furthermore, older people care has become more medically and technologically competence demanding, which potentially bring about higher level of work strain in nursing staff(Aylward et al. 2003).

Furthermore, clients in nursing homes, in particular, are commonly in deteriorated health conditions and are usually with several disabilities or immobility's. And the symptoms related to dementia among the elderly are loss of memory and declining physical condition and there thus need a lot of assistance and service from the caregivers. Therefore, nursing staff in nursing home are exploded in a high demand of physical and emotional input at work, nursing staff in nursing home confront relatively higher risks of work stress and burnout than those in other units (Aylward, 2003 & Selye H, 1956).

As a conclusion, the fast proceeding of the aging society (Brodaty et al, 2003), the transition of shifting the elderly from long term care institutions to community-based facilities in the older people care and the more medically and technically requiring nursing job, all those factors with significant influence on nursing staffs, have contributed to burnout or existed as a strong predictor of burnout among the nursing staff(Aylward et al, 2003).

2.3 Consequences of Burnout of caregivers

2.3.1 Health related problems of caregivers

Demanding workload, massive paperwork, insufficient involvement in decision-making, shortage of feedback from supervisors regarding job performance, and conflict with other health care providers, are major predictor of burnout and directly effect on the well-being of nursing staff. A representative sample of the Finnish working population over 30 years of age has strongly supported the fact that that burnout is related to ill health (Ahola, 2007). Cardiovascular disease, musculoskeletal problems, and mental health problems were reported to be the most common health-related problems. Nursing stress can also lead to social problems, too, such as job leaving, and psychological negative outcomes, such as poor psychological well-being or low life satisfaction (Daniel Wong et al, 2001).

Burnout and musculoskeletal problems among caregivers

The study of Ahola (2007) found that Finnish nurses carrying on a musculoskeletal disease were represented in 47% of caregivers with severe burnout, 36% of those with mild burnout, and 28% of those without burnout. Moreover, burnout was closely linked with problems among women, while there exists little relevance between burnout and musculoskeletal illness among male caregivers.

A cardiovascular disease was represented in 28% caregivers with severe burnout, in 20% those with mild burnout, and in 14% those without burnout. Severity of burnout had huge impact on cardiovascular conditions among male nurses, while there exists no such relevance among female nurses.

Burnout and mental health problems among caregivers

Over the recent decades, work-related mental health problems have been carefully studied by many health care professionals, attesting that demanding workload has been a great contributor for mental health problems among nursing caregivers (Ahola, 2007). Standard working time in the European countries was established that limit an employer's right to 48-hour working time per week, while employees can choose to work extra hours. Demanding workload leads to extended or extra working time at the working place. Unfortunately, some workers work at off hours or days to meet the financial obligatory regardless of their own health conditions. Extending time spent on work, at the same time, means less free time in personal life. Sufficient resting, development of personal hobbies, family and other social life will be limited or occupied, instead.

As a consequence, low satisfaction of caregivers towards work emerges, the life quality of the caregivers is negatively affected and the quality of the health service becomes unsatisfying (Jeanne et al, 2004). And it eventually leads to the development of mental problems or diseases among nursing staffs. A study of Daniel Wong (2001) found that nursing staff with high job strain generally experienced more episodes of mental disease symptoms, including free floating

anxiety, obsessive neurotic depression, hysterical neurosis, phobic anxiety, and somatic co-occurrence of anxiety.

Mental and physical health is fundamentally linked with one another. Mental disorders include depressive disorders, anxiety disorders, substance abuse, and physical illness including cardiovascular diseases, musculoskeletal disorders, respiratory diseases, and other physical diseases. There are various connections between mental health and physical conditions. Consequently, there appears a tight relation and mutual interactions between these two statuses. Namely, impairment in either status will cause negative impact on the other. The study (Ahola, 2007) showed that burnout co-occurred to a relatively high extent with mental diseases and physical problems. There existed a compact relation between burnout and clinical depression, anxiety disorders, alcohol abuse for both men and women. In addition, burnout are more related to musculoskeletal diseases among women, while being more related to cardiovascular diseases among men.

2.3.2 Consequences of burnout at organizational level

Burnout significantly contributes to work disabilities. According to Ahola (2007), there was a compact association between burnout and long medically certified sickness absences. Sickness absence in this study was considered as a predictor of work disability, including medically certified sickness absences and self-certified absences. The findings of the research showed that burnout moderately contributed to future sickness absences owing to increased risks of mental disorders and the musculoskeletal and circulatory disease.

In addition, another research of Anagnostopoulos and other professionals (2010) studying about health-related of life, and sickness absence of Greek health professionals drew a concordant conclusion as the Finnish study of Ahola. The Greek research, furthermore, showed that the levels of burnout were significant predictors of short-term sickness absence while poor physical health were primary predictors of long-term sickness. The findings also indicated that burnout might cause negative impact on quality of life of health care givers, which could in long term lead to increasing sickness of the care providers potentially. As a result, difficulties of working shift scheduling and institutional organizing, inevitably, appeared to be the most direct and severe consequences of nursing stress and burnout(Anagnostopoulos et al, 2010).

Furthermore, another study (Laura et al, 2008) showed that work strain in caregiving in nursing home, including time pressure and perceived unfair management of caregivers contributes to high prevalence of hypnotic or sedative drug use and pressure ulcers of the elderly in the nursing home. Nurses at nursing home, at certain places or at some situation, are entitled to modify the amount of the use of hypnotic or sedative drug of their clients accordingly. Overwhelming work strain would easily lead to increased use of hypnotic or sedative drug of their patients, although in some cases the administration of those medications were not necessary, which may unfortunately cause unnecessary side effects or tolerance of the applied medications.

Moreover, nurses suffering from tight working schedule and high level work stress usually has very little time in turning the patients or helping the patients in

changing positions frequently. Consequently, the risk of pressure ulcers of patients are significantly increased. In the scope of organizational and institutional of health care, work strain and burnout among nursing staff result in poor quality of caregiving in long term care facilities, and does harm to the safety and recovery of patients (Laura et al, 2008).

3 Theoretical Basis

3.1 Job Strain Model

Karasek Work Strains Model (1979) was selected as a framework of the study, as it provided more comprehensive dimensions compared to the others. Not only the model has considered the nature of the job itself, it also considered the working conditions, and the psychosocial dimension, namely, the level of perceived control an individual has over the situation. The model draws a parallel between internal homeostasis and the external environmental of job control.

The job strain model, known as the demand-control- support model or DCS model (karasek, 1979) is a fairly prevalent occupational stress model, which defined work strain as a response to imbalance between demands on the individuals and resources that they have to deal with the demands. There are basically four domains indicating four different job conditions in this model, which are combined with different job characters, involving active job, passive

job, relaxed job and high strain job, and two processes, including learning process and strain.

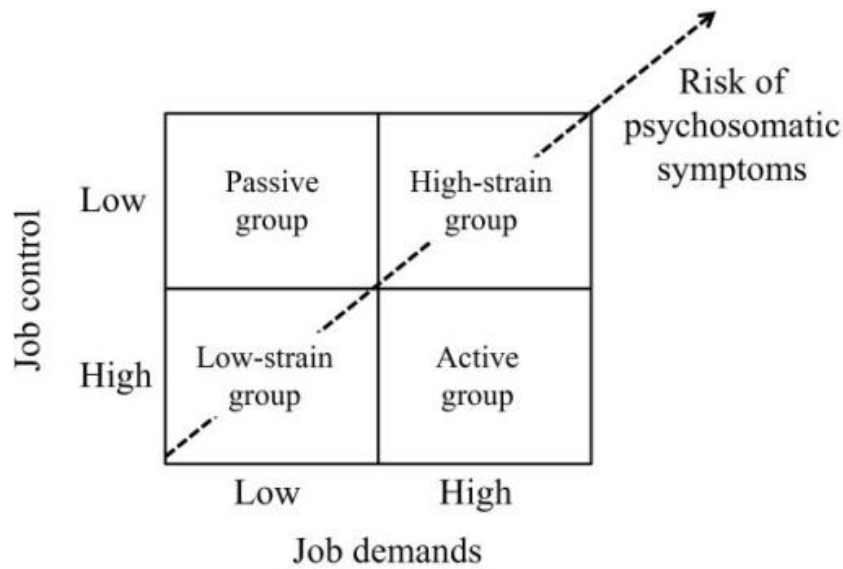


Figure 4. Job Demand Theory by Karasek (1997)

Job demands included physical and psychological efforts or skills that are sustainably required at work, such as work pressure, and emotional demands. Job resources refer to physical, psychological, social, or organizational resource that are available for employees, and those resources help to stimulate personal growth, learning, and development, such as career opportunities, professional training or supervision, autonomy and so on. This DC model found out that, out of surprise, high level of demand alone does not predict stressful outcomes. Instead, it is the level of decision latitude that determines whether high demands lead to strain. Furthermore, it was proved in the study that high-level demand

together with high decision latitude predicts individual learning and development.

There are four main types of jobs on the basis of various combination of different level of work demand and decision control: 1) A combination of high psychological demand of work and high decision latitude brings up an active job, which motivates learning new skills; 2) a combination of high psychological demand of work and low decision latitude brings up a passive job, which dissatisfying workers, and with low stimulation and motivation; 3) a combination of high work demand and little freedom of decision making leads to a high strain job, with high risks of psychological or physical illness; 4) a combination of low work demand and sufficient freedom of decision making leads to a low strain job.

In particular, Karasek defined decision latitude as a designed and planned feature of a job, and it was also known as job control. He claimed that it was the organizational structure of work instead of the demands of work itself has the most significant role in the development of the stress-related illness. Social support at the workplace, as a third job feature has been included the DC model later on. It refers to the availability of helpful social interaction at work from colleagues and employers. Moreover, further stress stimuli has been taken into consideration in the DC model, such as low predictability, innovative organizational climate, fairness of change, equality between two genders, and the functioning of teamwork (Ello et al, 2001) It suggested that work characterized by high demands, low decision latitude, and low support will do damage to health and well-being. By contrast, a combination of high demands and high

level of decision latitude can positively moderate the work stress, with lower risk of health related problems or diseases.

3.2 Maslach Burnout Theory

Burnout is considered as a feeling of "depletion of emotional energy and a feeling that one's emotion resources are inadequate to deal with the situation (Cooper et al, 2001)" It is commonly conceptualized as a multidimensional syndrome is consisted of three components: emotional exhaustion, depersonalization, and reduced personal accomplishment (Freudenberger, 1974 & Maslach, 1993). Emotional exhaustion emerges when emotional resources are used up and caregivers experience the feeling of incompetence fulfilling the work demands. Depersonalization arises when caregivers develop negative cynical attitudes and feelings about their clients. Reduced personal accomplishment occurs when caregivers tend to evaluate themselves negatively in regard of their work with clients (Maslach, 1993). In addition, the formation of burnout is usually a long-term process and develops in an extended period of time (Cooper et al, 2001).

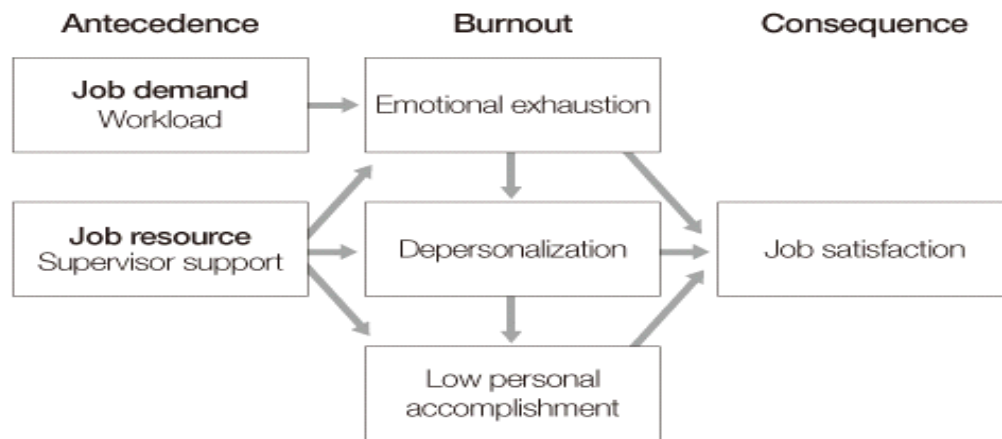


Figure 5. Burnout Theory by Maslach (1993)

According to Maslach (1987), job satisfaction is mainly determined by the burnout factors and its antecedences. A key aspect of the burnout syndrome is increased feelings of emotional exhaustion. It occurs when individuals can no longer give of themselves as a psychological level. Another aspect of the burnout syndrome is the development of depersonalization, where individuals may have a negative or cynical attitude towards their clients. Reduced personal accomplishment is a third aspect of the burnout syndrome. It refers to the tendency to evaluate oneself negatively and a feeling of lacking self-achievement particularly at their work. Studies of Maslach found that the consequences of burnout can be serious. Burnout not only leads to poor quality of caregiving, but also causes job turnover, habitual absence from work, and low job motivation. It also contributes to deteriorate health well-being of workers, causing physical and mental problems and diseases (Maslach, 1987). In the measurement of burnout, Maslach Burnout Inventory Survey (MBI) assesses the three components of the burnout syndrome, and has been solidly proved and widely used as a reliable tool in the measuring of burnout.

3.3 Pearlin Stress Process Theory

Pearlin(1990) et al. developed the stress theory of Lazarus and Folkman to caregivers stress process theory. According to Pearlin, there are four major factors contributing in stress, background and context, primary and secondary stresses, secondary intrapsychic strains, and care giver outcome or quality of life. In addition, the caregiver's individual stress coping strategy and social support resources affect their outcome or quality of life.

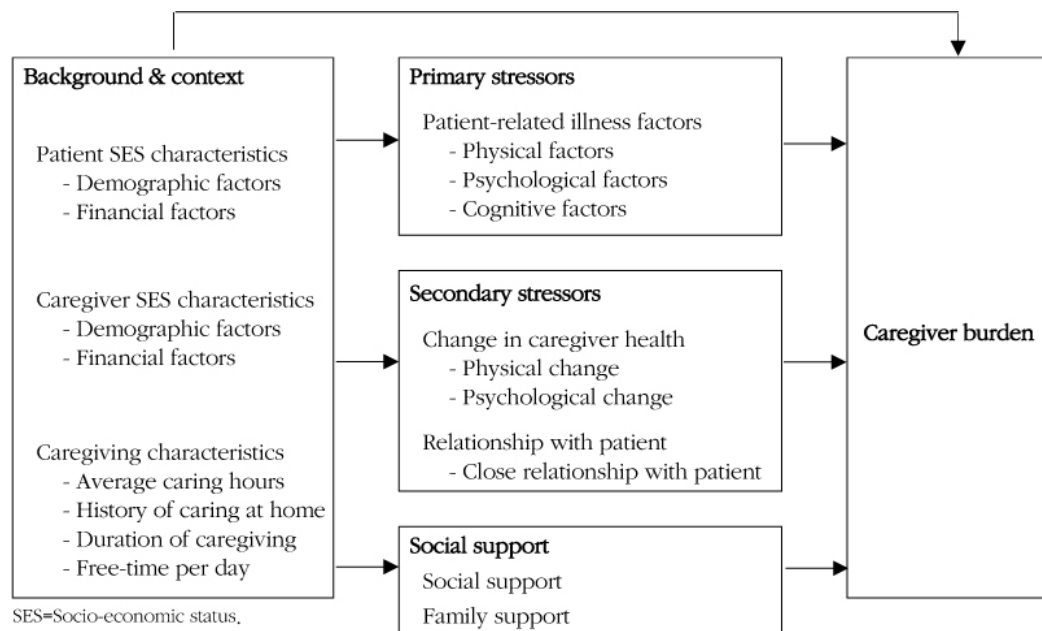


Figure 6. Pearlin Stress Process Theory

The background and context of the stress process refers to the caregiver's age, gender, ethnicity, educational background, economic status, and caregiving history. Sociodemographic characteristics and caregiver network composition are considered as background and contextual antecedents of stress. Researchers have proven that these components have moderate influence on caregiver's outcome or quality of life.

Several studies (Soto et al,1996 & Given et al, 2004)has showed that caregivers with more advanced age would potentially experience more physical problems when taking care of a person with a chronic illness than caregivers at their young age. However, Butler (2005) found out that younger caregivers are more likely to experience distress than the elder colleagues who has higher risks of age-related physical problems.

Although the length and duration of caregiving is usually a convenient and important indicator of caregiver history (Pearlin, 1990), an empirical study of Dorfman (1996) found that prolonged duration of caregiving would not lead to more stress or burden for caregivers. However, Dorfamn also suggested that the length of caregiving time would potentially contribute to caregivers' stress and burden when aged caregivers habituate to the caregiving tasks. Generally speaking, caregivers claim higher stress and burden at the beginning of their caregiving contents, and they claim less stress and burden as they gradually get used to their responsibilities.

4 Aims and research questions

The main aim of this study is to reveal the causing factors of work stress and burnout among nursing staffs in nursing home, and explore positive interventions and coping strategies of burnout among the nursing staffs. The two research questions include:

- A. What risk factors contribute to the work stress or burnout in caregiving in nursing home?
- B. How will work-related stress among caregivers in nursing home be prevented or alleviated?

5 Methodology

The research method of this study was selected as a literature review. Literature review is an overview of previously published research related to the proposed research. Conducting a literature review contains the following steps: formulating a research question, searching for relevant literature, filtering and coding the search results, analyzing and synthesizing the research literature, and evaluating the literature. Importantly, the literature review is supposed to consist of description of the current state of the proposed research domain, illustrating how the proposed research is related to but distinct to currently known research, and revelation of adding value, providing a more advanced and comprehensive knowledge in the research field (Patricia Cronin et al, 2007).

Nursing job is required for the most current and complete evidence of effective approached to guide decision-making and clinical practice. Evidence-based nursing (EBN) therefore becomes an essential principle during the process of nursing research (Oermann et al, 2016). In order to present the research question in a full scaled and scientific based method, a literature review was conducted in this study strictly in accordance with the research principles and standard process of academic research.

Literature search

According to the library guide of Jyväskylä University of applied sciences, major academic databases: Union catalogue of Finnish libraries (Melinda), Academic Search Elite (EBSCO), Cinahl (EBSCO), Elsevier Science Direct, PubMed, the Cochrane Library, National Academies Press, Centre for Reviews and Dissemination produces and supports the use of research based knowledge in health and social care.

The first step involved a general article searching conducted through all the databases using several keywords such as “burnout”, “stress”, “nursing home”, and “coping strategies”. As a result, EBSCO (with 981 articles) and Science Direct (with 1241 articles) produced the most detailed and relevant results in accordance to search key words.

The second research phase was focused on EBSCO and Science Direct while other databases were no longer in the scope of the searching. An advanced search was

conducted in the two selected databases by using different combinations of the keywords “burnout”, “gerontology nursing”, “nursing home”, “causes”, “management”, “prevention”, “coping strategies”, with a result of 184 articles in EBSCO and 98 in Science Direct. The search then refined further based on year of publication (articles in the latest 5 years, 2011-2016), full text, academic journals, and free access, which narrowed the articles from EBSCO to 73, and Science Direct to 32. The author read the abstract and content table of the 105 articles from both databases in relevant to the topic. Four articles among them were ruled out during this process, as they were not written from a nursing perspective, or they were not focused in caregivers in nursing home or long-term care facilities. An article in regard to comparison of working stress of nursing staff between home-based care and nursing home was also ruled out.

Among the remained articles, the filtering and search process was processed for three times following the criteria (table 1) and eventually 11 articles (table 2) were selected as the primary literature for the study. The selected 11 articles were adopted based on their high relevance to the subject and research questions, consisting of all key words, and being published in the latest 5 years. The author read the articles a few times, examine and analyzing them with prudent consideration.

Including criteria	Excluding criteria
1. Relevance to the topic ‘burnout in nursing home’.	1. Articles that did not have a nursing perspective were excluded e.g. ‘burnout of family caregivers’

With a nursing perspective	Articles of which the object were not nursing staff were excluded e.g. 'burnout of family caregivers'
Focused on caregiving at nursing home or long-term care facilities	Articles in regard of caregiving in other units than nursing home were excluded
2. In the English language	2. Articles not available in English were excluded
3. Only recent articles were considered from 2011 to 2016	3. Articles before 2011 were excluded.
4. Full text	4. Articles not in full text were excluded
5. Free of charge	5. articles requiring to be purchased were excluded
6. From only Academic databases e.g. EBSCO, Science Direct, and PubMed.	6. Articles from non-academic databases were excluded.

Table 1. Factors considered for the including and excluding criteria

6 Data analysis

Qualitative content analysis was selected as the analyzing method of this study. Qualitative content analysis has been defined as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005). In order to create valid and reliable statistical inferences, qualitative content analysis demands a set of systematic and transparent procedures for data processing. Validity, reliability, and objectivity are major criteria that is used to evaluate the quality of research during the research processes.

At the first step of qualitative content analysis, the author prepared the data by searching for the relevant articles and literatures on the databases of Jyväskylä University of Applied Science, mainly from Academic Search Elite (EBSCO), Cinahl (EBSCO), and Elsevier Science Direct. Qualitative content analysis uses individual themes as the unit for analysis, and work stress and burnout among nursing staff in nursing home was the analysis theme in the study. As a result, 11 articles were selected for the study based on the literature selecting criteria. The author then started to develop the categories and a coding scheme in relation to the findings about what causes stress and burnout in nursing home and what is the coping strategies or preventions, of which the whole process was based on the previous burnout theories. The findings were grouped into two major categories: causing factors of stress and burnout in nursing home and its coping strategies and preventions. Subcategories were formed and findings in detail were presented respectively.

7 Ethical Considerations

Prior to the thesis writing process, the JAMK guidelines about good academic writings were carefully read and understood by the author. Academic dishonorable behaviors were carefully avoided such as fabrication and plagiarism, practicing fraud, lack of acknowledgement of other researchers' work and so forth. Authorized access to official databases such as EBSCO and Science Direct from JAMK library to avoid illegitimate retrieval of data. The articles chosen for the literature review were carefully analyzed and examined in order to ensure that participants' identity such as names, contacts were withheld. Principles of academic research including respecting people involved,

beneficence and justice were also taken into consideration when choosing the articles. Personal reflections and beliefs were listed only in the introduction, conclusion and discussion chapters thereby making sure that there was no bias.

8 Results

8.1 Causes and risk factors of stress and burnout among nursing staff in nursing home care

8.1.1 Individual factors

Age, marital status and gender

According to a previous Finnish study (Kalimo&Toppinen 1997 & Kalimo, 2000), there was no direct relation between gender and burnout, when burnout condition maintains at a mild or severe stage. The study of Ahola suggested that it is only the level of exhaustion that were gender-determined, and women had relatively higher level of exhaustion than men (Ahola, 2007). However, according to another empirical study (Gerhard, 2000, Novak & Chappell, 1994),it is only the individual demographic factors that would haveimpact on personalization,while neither marital status nor gender had a considerable effect on emotional exhaustion or personal accomplishment(Gerhard, 2000, Novak & Chappell, 1994).

In addition, professional efficacy became lower with the aging process, which hence contributing to higher working demand among the older-aged employees than the younger. Several studies (Soto et al,1996 & Given et al, 2004) gave evidence on that caregivers with more advanced age would potentially experience more physical problems when taking care of a person with a chronic illness compared to the case among the younger caregivers. In fact, the level of burnout was higher among caregivers over 55 year old than among the younger. However, an completely opposite result was presented when the study was combined with performance based self-esteem (Hallsten et al, 2002 & Ahola, 2007). Furthermore, Butler (2005) even found out that younger caregivers were likely to experience distress more than the elder staffs, despite the elder group might experience higher risks of age-related physical problems.

Marital status

A recent population study conducted in Finland (Ahola, 2007) indicated that burnout was more prevalent among unmarried employees than those who got married, and this conclusion was also in accordance with another previous study of Hallsten and other professions (2002). The Finnish study suggested that marital status had great effect on burnout only for the male workers.

Nevertheless, the influence of marital status on burnout among female workers, could not be addressed in the study. Moreover, study of Daniel Wong (2001) in Hongkong found that married nurses had less possibilities to have symptoms of depression than the unmarried nurses. On the other hand, a Swedish population study (Lindblom et al, 2006) claimed that there was no positive correlation between marital status and occupational burnout.

Education

Population studies have showed that both basic education and vocational education had a great influence upon work-related burnout in women. Women who had lower level of education had higher risk to experience high level of burnout than those with higher education level. At the same time, women who had less vocational education were more associated with higher exhaustion and insufficient professional skills than those with adequate vocational education. As for men, education level supported positive associations with burnout only from the aspect of professional efficacy(Ahola, 2007). In addition, the level of burnout has been proposed to be higher among upper-level -manual employees, when a study was combined with educational level of the employees (Kalimo& Toppinen 1997, Lindblom et al, 2006).

8.1.2 Organizational factors

Job Strain

Job strain is the major contributor of occupational burnout. It also often associated with clinical depression, a common but serious mood disorder. Mild burnout gives rise to minor clinical depression while severe burnout brings about major or persistent clinical depression. A reduction in work strain sustains improved emotional exhaustion, depersonalization, and personal accomplishment (Jeon et al, 2012)

The job strain model, known as the demand-control- support model or DCS model is a highly dependable model for measurement of occupational stress. It defined work strain as a response to imbalance between demands on the individuals and resources that they have to deal with the demands. As the major findings, this theory suggested that work characterized by high demands, low decision latitude, and low support decrease health and well-being. Job demands included physical and psychological efforts or skills that are sustainably required at work, such as work pressure, and emotional demands. Job resources refer to physical, psychological, social, or organizational resource that are available for employees, and those resources to stimulate personal growth, learning, and development. It could be career opportunities, professional training or supervision, autonomy and so forth (Karasek, 1979).

Work environment and management

The work environment in nursing home is possibly unpleasant and stressful because of the challenging behaviors of the residents at the place. Challenging behavioral involve aggressive behavior, verbally disruptive behavior, wandering and passive, apathetic behavior (Sascha et al, 2012). Nursing staffs perceive those behaviors in an unpleasant, disturbing, or frightening way. In addition, high level of resident's challenging behaviors, in a turn, can potentially bring out discontent performance of the nursing staffs. As a consequence, firstly, the nursing staff is likely to respond to the residents with negative emotional reactions, feeling less willing to help and communicate with the client (Todd & Watts 2005, Leiter & Maslach, 2009, Simon et al, 2010). Secondly, higher

potentiality of leaving their professions among nursing staff will be generated (Todd & Watts, 2005). Thirdly, It was also harmful to work ability of nursing staff, and relatively low effectiveness at work make it difficult for the nursing staff to complete assigned work tasks on time.

Moreover, challenging behavior of nursing home residents are also associated with poor general health conditions of the residents, causing high burnout and low work satisfaction of nursing staff (Sascha et al, 2012). Deficient coping strategy towards resident's challenging behaviors not only suffers nursing staff, but also challenges the healthcare system. Furthermore, it has adverse impact on life quality of nursing staff, causing a big like hood of nursing profession leaving. In spite of the different level of qualification or occupational position of the nursing staff, the challenging behavior of residents will always have adverse effects on the nursing staff. Furthermore, nurses over 45-year-old age were found to perceive higher work strain than the younger workers (Brodaty et al, 2003, & Sascha et al, 2012).

An empirical study (Laura et al, 2008) showed that time pressure and perceived unfair management of caregivers contributes to high prevalence of hypnotic or sedative drug use and pressure ulcers of clients in nursing home. Unit time pressure was suggested to increase both quality problems of caregiving. Moreover, perceiving unfair management was related to increased drug use. Importantly, another significant stress factor in the nursing working environmental is the doctor-nurse relationship. Reduced self-esteem and reduced job satisfaction of nursing staff will be resulted from nursing staff's being seen only as assisting and supporting the doctors (Daniel Wong et al, 2001).

Working schedule and workload

The concept of workload in health care field fall into five major domains: the amount of nursing time, the level of nursing competency, the weight of direct patient care, the amount of physical exertion, and complexity of care(Alghamdi, 2016). An empirical study (Martone, 1993, reviewed in Cooper, 2016) found high level of workload to considerably increase depersonalization and emotional exhaustion of burnout of care givers. Another study (Daniel Wong et al, 2001) indicated that workload was cited as the most frequent causing factors of stress and burnout among nursing staff, particular among student nurses. Nurses perceive conflicting demands at the working place and they experience difficulty of making priorities among those demanding tasks and patients (Daniel Wong et al, 2001). On the other hand, the care givers benefit from sufficient nursing time reserved for their patient by providing the patient relatively satisfying health care or service (Jeon et al, 2012). For instance, the more time a provider spends on physical care of a patient the less depersonalization they will experience.

Work schedule characteristics included shift work, hours per day and week, days per week, number of weekends per month, number of double shifts per month, breaks, and number of jobs worked. Working two or more double-shifts per month was associated with increased risk for all mental health indicators, and working more than six days per week was associated with depression and somatization (Jeon et al, 2012). Demanding work schedules are fairly common among healthcare workers and it influences both patient well-being and the care giver's health (Jeanne at al, 2004).

Time pressure in nursing home was defined by Karasek (1979) as excessive workload, working hard, or insufficient time to work. According to a survey (Geiger-Brown, 2003), most of the interviewed nurse said that they do not have sufficient time to provide satisfying emotional support to the residents. In addition, a Finnish study (Laura et al, 2008) showed that time pressure and perceived unfair management of caregivers contributes to high prevalence of hypnotic or sedative drug use and pressure ulcers of clients in nursing home. Time pressure reduces nurses' ability to deliver sufficient physical and psychosocial care for the older residents (Pekkarinen et al, 2004). Nurse time pressure has been related to problems in care quality as indicated by nurses' low job motivation (Schaefer, 1996). Moreover, nurses often get more time pressure at work when they are working during off hours, as that is usually the time when staffing is reduced, and the attendant workers have more intensive work assignment and tasks.

8.2 Preventions and Coping strategies

The prevention and coping strategies were reclassified by the author based on the two previous theories of Schaufeli (1998) and Enzmann (2005). According to the subjective that are involved in intervention, Schaufeli and Enzmann made a classification of burnout interventions into three levels: individual level, individual and organizational level, and organizational level. Furthermore, this classification is also in accordance with the organizational of work model established by the National for Occupational Safety and Health (2002), where contextual factors of work were described from three levels: the external context

of work (and organizational level), contextual factors at the organizational level (individual and organizational level), and the individual job characteristics (individual level).

Emerald (2005) classified stress prevention in three stages, primary stage, secondary stage, and tertiary stage. Primary prevention aims at eliminating and reducing the trigger of the stress or the nature of the stressors. Secondary stage prevention, however, emphasizes more on the stress response itself, namely, the way how the individual perceive the stress (Brunce et al, 1997). There are a number of prevention methods that can be implemented by individual themselves at the secondary stage, while the resolutions at the primary stage are mainly associated with the actions of employers or managers. Tertiary method, as the last stage of stress prevention, is aiming at decreasing the overwhelmed distress and cope with inadequately controlled stressors and inadequately controlled stress responses. Crisis intervention is typically involved in this process provided there emerged a critical or severe situation of distress (Emerald et al, 2005).

The primary stress prevention and the trigger prevention are currently mostly conducted at an organizational level, while the secondary prevention is commonly performed at an individual level. Therefore, a reformed classification of the stress prevention and coping strategies were created by the author, including Primary prevention at organizational level, secondary prevention at individual level, and tertiary prevention at organizational level (Brunce et al, 1997).

8.2.1 Coping strategies at organizational level

At the organizational level, prevalent influential elements at work of nursing staff consist of management structures, supervisory practices, production methods, and human resource policies (NIOSH model). By systematically analyzing and categorizing the previous researches (Schaufeli and Enzmann, 1998, Emerald et al, 2005, Brunce et al, 1997), recommended organizational interventions were presented in this article as the followings.

Job optimism and redesign

Job optimism refers to optimizing the job elements including tasks, duties and responsibilities of a certain job or specific work. The purpose of job optimism and job redesigns to give the employees encourages and motivations towards their work or job, coming with higher job satisfaction and better performance at work. The process of job redesign is consist of revising, analyzing, alerting, reforming and rebuilding the job contents, based on the principle of inspiring and encourage employees. In a word, this is a process of placing the right person at the right position, in order to obtain the optimal output.

Nursing staff at nursing home often suffers from a great amount of physical demands, especially when lifting and transferring heavy patients without lifting devices (Myers, Silverstein & Nelson, 2002). Therefore, there emerges an urge to draw attention on developing more reasonable and better designed job content and structure of nursing work at the elderly care facilities. Employment status

and welfare of employer, for instance, are counted in the structural redesign (Charlene et al, 2014).

At the same time, nursing staff at nursing home also confront of heavy emotional demands as they struggle to complete their work assignment or tasks within short or limited unit time, and many nursing staffs feel that they do not have sufficient time to provide satisfying emotional support to their patients (Muntaner & Geiger-Brown, 2003). As a result, the daily specific nursing assignments need to be reconsidered and rescheduled, and should be more reasonably matched with the working hour of nursing staff.

Work-related education and training

Organizational and work climate changes are consistent and inevitable in the health care field, and it requires nursing staff to always keep learning new things and updating their clinical knowledge in their career life. As a consequence, it is very crucial to provide appropriate training and education opportunities for nursing staff. Many studies have showed that deficiency of professional training do harm to the nursing organization, the client, and also the care providers (Chappell & Novak, 1992).

In an empirical study of Cooper (2016), an education intervention on dementia care mapping in elderly long-term care facilities was conducted, and it was proved to significantly reduce emotional exhaustion of burnout among the nursing staff. In addition, another study (Yeatts et al, 2010, reviewed in Cooper 2016) also found the perception of available job training buffered

burnout. Nevertheless, previous education or years of education of nursing staff did not seem to have significant effect on burnout measures (Novak & Chappell, 1996)

Workplace Support

Accessibility of workplace support serves the purpose of reducing negative effect of work strain. This therefore requires the organizational and manageable facilities to establish a set of appropriate work-relevant interventions for the nursing staff. Studies (Charlene et al, 2014) indicated that leadership practices and supervisory support, in particular, was associated with reduced job strain, high level of nursing job satisfaction, and improved retention of nursing profession. The content of an ideal leadership practice in health care field is consist of promoting workers cooperation, listening to workers, recognizing good work and setting clear and rational expectations for the entire team. Positive impacts of ideal leadership practice helps to create a better working environment, and thus potentially reduce nursing strain and burnout among nursing staff.

In many developed countries, work supervision system for new graduated nurses has been established for several decades already. New graduated nurses usually obtain a certain period of time of supervision time at the beginning at working place, in which nurses are oriented and supervised by assigned experienced senior nurses. The access of such workplace support is essential for nursing staffs, and again, great supervisory support significantly determines the job satisfaction and retention of nursing staff. However, studies (Venturato et al 2007) found that the leadership roles in the long- term health care facilities tend

to has been occupied by experienced nurses who are good at clinical care but lack managerial experience or knowledge. It made challenging for the senior nurses to fulfil their supervisory responsibilities, while they were forced to confront certain management tasks that they felt reluctant to deal with. (Charlene et al, 2014)

As organizational and work climate changes are consistent and inevitable in the health care field nowadays, it requires nursing staff to always keep learning new things and updating their clinical knowledge in their career life. Nursing staff should be qualified with capacity to confront the new emerged changes. As a consequence, it is very crucial for the nursing organization to provide appropriate and adequate training and education opportunities for nursing staff. In this way, they can obtain access to support to work efficiently and competently. From the respect of nursing staff at high position such as head nurse and managerial level, training on nursing leadership, interpersonal skills, financial and resources management skills should be particularly equipped among them in order to be competent with the managerial work. From the respect of the general nursing staff, training should be aiming at providing for emotional needs of the clients and their families. Courses on psychosocial care and communication skill were recommended for the care of terminal ill patients and cancer patients (Daniel Wong et al, 2001).

Interventions for stress management from organizational level are of great necessity in nursing working setting. In a few developed countries, several intervention models (Latack, 1986) have been invented and proved to have positive affect on stress management among nursing staff. For instance, a cognitive -behavior group approach model and programs (Daniel Wong et al, 2001 & Latack,1986) have been conducted to assist nurses to examine and

strengthen their positive cognitive coping and problem-solving skills. Besides the mentioned intervention programmers, career advancement opportunities were also suggested to be provided adequately, which is based on its positive relevance to high level of job satisfaction and high ratio of job retention among nursing staff (Charlene et al, 2014).

Participant Management

A Finnish study (Laura et al, 2008) showed that perceived unfair management among caregivers contributes to high prevalence of hypnotic or sedative drug use and pressure ulcers of clients in nursing home. Perceiving unfair management refers to the absence of consistent and ethical managerial, while good management is supposed to engage caregivers in the decision making and promote open communication. As a fact, unfair management have predicted health problems among both organization and nursing staff. It is also considered as a significant predictor of unsatisfied working performance of care givers in a variety of work settings (Colquitt et al, 2001). Consequently, managers of nursing home should cautiously review the managerial process and promote effective and open communication and collaboration among the care givers, in order delivery satisfying and quality care for the client (Laura et al, 2008).

Participant management is a method of bonding the managers and nursing staff together. Nursing staffs from all levels can participate in the settings of the organizational goals and decisions, and problem solving strategies that is associated with them, and they are entitled and encouraged to contribute ideas and express opinions towards those issues. A consistent study (Chuan et al, 2008) was designed to explore the impact of management conditions on work stress on

workers. The result of the study suggested that nursing staff should be more involved in the decision-makings and development of the facilities, which are at present mainly initiated by managers. In addition, a periodical meeting involving all staff was recommended in the study, as well, in which the development goals of the facilities are discussed, in order to enhance the workers' influence in making of important changes within the organization.

Flexible work schedules and sufficient unit time

A reasonable work schedule is of great significance for the sake of well-being of nursing staffs. Organizational initiatives should be aimed at reducing time pressure by review the work load of the caregiver in nursing home carefully. Flexible work schedules are an alternative to traditional settled working hours. It allows employees to vary their arrival or departure times. It requires an agreement between the employers and the employees. It certainly comes with several advantages, which make it easier for employees to build a balance between their work and personal or family life. On the other hand, a cautious consideration has to be done by the managers towards the decision, as there is a risk of staff shortage if the working shifts are not arranged appropriately.

Furthermore, work schedule measures have been suggested to be implemented in order to ensure reasonable periods of resting and recovery time of nursing staff. In the absence of reporting the hours of work of nursing staff, other indicators like staff turnover rates, worker injury rates and staffing ratios may serve to alert consumers to problems with adverse working conditions that may include unhealthy work schedules (Harrington et al, 2003 & Jeanne et al, 2004).

Optimal technology implementation

Nursing home nurses not only confront the increasing demands of health care for clients, but also are burdened by increasing state and institutional regulations, where nursing staff are required to complete a large quantity of nursing documentation and relevant paperwork at their daily work. In Finland and other Scandinavia countries, the documentation process has been computerized, and a large number of PDAs have been utilized for decades in hospitals and other health care departments. However, nursing home seems to be an exception, where either the use of technology remains rare or there exists insufficient technical facilities (Syeda et al., 2009)

Syeda (2009) suggested that nursing home facilities could significantly benefit from the use of economical alternatives and small technical devices such as personal digital assistants (PDAs). Clinical decision-based support systems can be selectively implemented on the device, which makes nursing work and tasks that are presented as a shift time schedule visible on the device straightforward. Owing to the increasing prevalence of dementia symptoms among the clients at nursing home, behavioral problems like resistance of medication, lack of self-control, agitation and feeding problems also come along among the clients. A nurse assigned with care of a dementia client, with the utilization of PDAs, potentially benefits from obtaining information on dementia and other relevant information, such as prescribed medications, information provided by the family and other consultants. Moreover, evidence-based knowledge about dementia and personal experience about dementia caring from other care givers can be obtained as well.

An empirical study(Syeda et al,2009) indicate that, the implementation of PDAs helped to saving time from tedious documentation, simplifying work scheduling, making it unnecessary to go to nurse office every time to look for reference materials.

On the other hand, implementation technology in nursing home facilities also confront several difficulties: lack of information about technologies and market among nursing home residents, lack of financial support to developed long-term care technologies, lack of regulations to purchase consistently updating technology, industry's lack of standards for device production, and provider's or user's lack of knowledge and experience with technology implementation and management.

8.2.2 Coping strategies at individual level

Self-monitoring

The purpose of self-monitoring of nursing staff is to draw attention to symptoms of distress and strain by themselves, which makes the appearance of burnout more anticipatable and more preventable. A convenient and reliable instrument is a stress- diary or a personal record of stress symptoms, the time they occurred, the situation and the location, the feelings and the thoughts, and the reactions.

This record should be kept for a month (Ndwula, 2012). Researchers have showed that the negative influence from the working day relatively increases the

number of stressful events that a person may experience (Ndwula, 2012 & Jorma, 2005 & Novak & Chappell, 1994).

An individual is at high risk of burnout if he or she has prolonged and frequent stressful events. It is necessary to consider those symptoms as a warning of burnout. Numerous questionnaires for self-assessment of burnout are reliable and accessible for people to measure their stress level. For instance, the Maslach Burnout Inventory (MBI) is a highly recommended instrument for assessment of burnout. It has been recognized for more than a decades as the leading measure of burnout, within the scope of study of emotional exhaustion, depersonalization and personal accomplishment (Maslach et al, 1996).

Establishing positive appraisal of job

Subjective appraisal of job refers to the way how individual perceive and consider the objective working environment. Obviously, people act and behave personally and differently towards a similar task or in a similar working environment. Job enjoyment, reaction to patient, behavior, optimism, pleasantness of tasks and feelings of identity are major components of positive job appraisal (Novak & Chappell, 1994). Establishing positive appraisal of the nursing job, patients and tasks can significantly reduce feelings of emotional exhaustion.

Latack (1986) classified individual coping into positive coping and negative coping. Behaviors of positive coping are direct action, helping seeking and

positive thinking, while the negative coping behaviors are associated with avoidance, resignation and alcohol use.) The study of Daniel Wong (2001) found that the more nurses utilized adaptive coping strategies, the less stress and better mental health condition they would have. On the other hand, avoidance coping such as denial or suppression of feelings would likely result in failure of stress management. Excellent adaptive coping strategies include problem-solving and active coping strategies, for instance, trying to solve the problem by talking to colleagues about the problem. Utilizing personal networks, broadening the scope of professional concerns, and identifying problem-solving resources were also highly recommended as stress coping strategies (Latack, 1986).

Physical exercise and Relaxation Technique

Physical health condition and mental health condition have always been interacted with one another. Improved physical wellbeing not only give strength to caregivers in the heavy physical work, like lifting weighted patient, but also make them more resistant towards emotional distress. In order to maintain a good body function, it is of great significance to establish a healthy lifestyle. Sufficient physical exercise, appropriate nutrition, weight control, avoiding smoking or alcohol abuse, adequate sleep, and breaks for recreation during workday. Furthermore, it was proved by numerous study (Leonard, 1994) that aerobic exercise, weight training, or muscle conditioning are all effectively help to improve body's physical stress reaction, hence preventing physical deterioration caused by stress.

People going through a burnout is often associated with difficulties of relax which cause a vicious circle of exhaustion and frustration. Relaxation is included in every stress management program, because it is considered as a primary solving method to release stress and strain. Study (Higgings, 1986) showed that conducting various relaxation techniques effectively reduce the levels of emotional exhaustion. Relaxation training (Brunce & West, 1996) are usually presented as deep breathing and mental imagery of a relaxing scenario. Self-induced hypnosis is also considered as a relaxation method but rarely used by individual in practice. As a result, relaxation training improve immediate emotional disposition and enable a clear mental focus.

Time managing technique

Although time pressure is an organizational problem, the caregivers have to handle this wisely by efficiently using their time at work. There are some practical suggestions for caregivers at nursing home about time management (Ann M. T, 2000):

- Set up your schedule in advance: visualizing your day in advance and setting up a loose schedule can go a long way. Allocating specific time to responding patients, administrative work, and personal chores ensures a productive day.
- Prioritize: Prioritizing is a critical skill for medical caregivers. Identifying the most important activity and getting it completed as early as possible.

- Minimize distractions: Cell phone turns out to be one of the most distracting things at work. Finding proper time to check your message and for screening.
- Keep things organized: Taking a few minutes at the beginning and the end of each workday to organize the staff. Keeping things clean and ready to use will save plenty of time.

Interpersonal Skills

Relationship with clients, colleges, supervisors, and managers can moderate the level of stress and burnout. Nursing job, in particular, intelligent interpersonal skills are more demanded than the general other professions. Because nursing work involves helping, comforting, dealing with non-cooperation, providing optimal care for clients according to their individual status and situations.

As doctor-nurse relationship plays a significant role in the nursing working environmental, therefore an equal, cooperative, and harmonious relationship, in particular, should be established among the elderly care facilities. Reduced self-esteem and reduced job satisfaction of nursing staff will be resulted from nursing staff's being seen only as assisting and supporting the doctors (Daniel Wong et al, 2001).

Cognitive Behavior therapy

When the primary and secondary methods fail to work, it leads to the tertiary stage of prevention. At this phase, a crises intervention programmer by the manager will be recommended to the employees. Cognitive appraisal refers to “the individual’s cognitive process of that allows the person to determine the degree to which his encounter with another person or with the environment is perceived as stressful” (Lazarus & Folkman, 1984)

Cognitive Behavior therapy (CBT), for instance, is an ideal solution for the tertiary prevention. Researches have shown that individuals’ emotional reactions are derived from their own interpretations of an event instead of the event itself. CBT is founded on the concept that the thoughts, the feelings, the physical sensations and the actions of individuals are interconnected. The purpose of CBT is to help people to change their negative patterns of perceiving process, thus improving the way they feel. In particular, CBT aims at solving current problems, rather than focusing on issues from the past. It is basically a taking therapy, and several sessions with a therapist constitute an integrated treatment. During the session, participants with their therapist will break down their problem into smaller parts, such as thoughts, physical feelings and actions, and the therapist help to analyses and determine the unhelpful thoughts or behavior and help participants to change it. The ultimate goal of the treatment is to enable individuals to apply the coping strategies to daily life.

Results from this study indicate that occupational, organizational, socio-demographic factors are the main contributors to burnout in caregiving in long-term care facilities. Factors related to burnout from organizational level include nursing job strain, work environment and management, work shift and workload, and job relevant education and training.

Causes of burnout not only involve institutional settings but also relate to individual factors. Age, gender, marital status, educational background and stress appraisal of individuals have impacts on stress perceiving among nursing staff. According to the Demand- Control- Support model by Karasek, the nursing job at long-term care facilities is characterized as a job with high demand, low decision latitude, and low support, which will potentially do damage to well-being of the nursing staffs. The job nature of nursing work in nursing home is demanding due to the heavy working tasks, insufficient unit time, and the challenging behaviors of the clients. Nursing staffs perceive them in an unpleasant and frightening way, and it thus leads to work strain and burnout. Besides the stressful working environment, unfair or unconscionable management also contributes to burnout among nursing staff. Prolonged working time, hectic working shift, and demanding workload are considered as the most causing factors of stress and burnout among nursing staff. Insufficient work-related training and education can increase emotional exhaustion of care givers.

From the individual perspective of view, social demographic factors of an individual have direct impact on how the individual perceive the stress from work. There shows no significant associations between age and gender and work

stress and burnout. Nevertheless, several studies have revealed that advanced ages and the status of being unmarried may be potentially related to the risk of work strain and burnout. Both basic and vocational education had a great influence upon work-related burnout among nursing staff. Moreover, caregivers claim higher stress and burden at the beginning of their caregiving contents, and they claim less stress and burden as they gradually get used to their responsibilities.

Results from this study also indicate that efforts from the nursing institutions and organizations can help to prevent burnout in caregiving in long-term care facilities. Job redesign and optimism, workplace support, participant management, flexible work schedule and sufficient unit time, job-related training and occupational education, and improved working environment can be brilliant resolution for the prevalence of burnout in nursing care.

In recommendations, the establishment of work stress reduction interventions for the nursing staff is highly recommended from the institutional level. From the individual level, nursing staff are recommended to implement self-monitor awareness, positive stress appraisal, sufficient physical exercise and relaxation techniques, wise time management technique and good interpersonal skills.

Nursing staff shortage is a worldwide concern in the health care field. There are growing numbers of elder people in need of health care as the proportion of older people in many countries is consistently increasing. In many developed countries, the health service for the elderly has shifted from long term care institutions to community-based facilities, such as home care and visiting nursing agencies.

On the one hand, the fast process of aging society and the organizational reform requires more nursing staff working in the field of elder people caring. On the other hand, it has indicated that the older receiving care in nursing home have more disabilities or diseases and requiring more health care from caregivers than before, which results in burnout or strong predictor of burnout among the nursing staff. Apparently, there has emerged a dilemma between the shortage of nursing staff in elderly care and the high risk of burnout in the field. Therefore, it becomes more significant to draw attention to burnout in health care field and more research should be conducted.

As recommendation, the establishment of work stress reduction interventions for the nursing staff is highly recommended from the institutional level. From the individual level, nursing staff are recommended to implement self-monitor awareness, positive stress appraisal, sufficient physical exercise and relaxation technique, wise time management technique and good interpersonal skills.

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Appendix

Author and Country	Article	Journal and Year	Purpose of study	Methods / Instrument	Key findings
Sacha G. Schnidr, Martin N Dichter, Rebecca Palm and Hans Martin Hasselhorn (German)	Distress experienced by nurses in response to the challenging behavior of residents – evidence from German nursing homes	Journal of Clinical Nursing (2012)	to explore the degree of working stress of nurses in response to the challenging behavior of nursing home residents and their impact on nurses	self-report questionnaire of 731 registered nurses and 56 practical nurses at nursing home in German	residents' challenging behavior-related stress was at high level, and it negatively affected nurses' life quality
Sarah L. Cooper, Heather L. Carleton, Stephanie A. Chamberlain, Greta G. Cummings, William Bambrick, Carole A. Estabrooks (Canada)	Burnout in the nursing home health care aide: A systematic review	Faculty of Nursing, University of Alberta, Level 5, Edmonton Clinic Health Academy, Edmonton (2016)	to review the factors that influence burnout in nurses working in nursing home	analysis and synthesis of selected research from two search engines and five databases	Only personal life greatly buffer burnout, as well as dementia care mapping and organizational training.
Jeanne Geigerbrown, Cariles Muntaner, Jane lipscomb & Alison (USA)	Demanding work schedules and mental health in nursing assistants working in nursing homes	Department of Behavioral and Community Health, University of Maryland School of Nursing (2004)	to reveal how demanding work schedules affect nurses' mental health in nursing home	cross-sectional questionnaire of 539 nursing aids in West Virginia nursing home	Depressive disorders was more associated with demanding work schedules than other mental health problems of nurses.
Betty Wilborn-Lee (USA)	The Effects of Stress and Burden on Caregivers of Individuals with a Chronic Illness	Walden University, College of Social and Behavioral Sciences (2015)	to investigate the effect of many variables on nursing staffs based on stress theory	a cross-section questionnaire based on Pearlin's Caregiver Stress Theory conducted among 320 selected caregivers working in chronic-disease care in America	Caregiver demographic variables of age, employment status and income are significant predictors of caregiver quality of life. The age of caregivers had a positive effect on caregivers' outcome
Heejung Kim, Mido Chang, Karen Rose&Sunha Kim (USA)	Predictors of caregiver burden in caregivers of individuals	Journal of Advanced Nursing (2011)	an empirical national study of predictors of caregiving stress in taking	telephone survey of randomly selected persons in seven states analyzed by	Poor function in care-recipients caused to caregiver burden, and interacted with demographic and caregiving-related factors.

	with dementia		care of individuals with dementia	National Alliance for Caregiving and American Association of Retired Persons	
Charlene H. Chu, Walter p. Wodchis & Katherine S. Mcgilion (Canada)	Turnover of regulated nurses in long-term care facilities	Journal of Nursing Management (2012)	to reveal the association between nursing staff turnover in nursing home and organizational factors	Distinct survey based on Stress Process Model to measure organizational factors and personal and job-related sources of stress respectively	Higher leadership source decreased nurse turnover ratio. Higher administrator turnover lowered the nurse turnover rate.
Jorma Mäkitalo (Finland)	Work-related well-being in the transformation of nursing home work	Faculty of Medicine, Department of Public Health Science and General Practice, University of Oulu (2005)	develop a hypothesis of the present developmental phase of nursing home work activity in City Home and Country Home	developmental work research by systematically synthesized and analyzed the previous relevant literatures and studies	The development dimensions of elderly care was from standard rule-oriented care to customized negotiated care and from institutional services to mixed serviced supporting living at home; Tiring events of elderly care included schedule duties, residents' situation and residents' safety and placement, while strength-giving events included fulfilling the duties, spending time with and satisfying nice residents, residents' rehabilitation, company of nice workmates, getting salary, feeling accepted and important, and doing various things outside work; Residents' resistants' towards nurses increased extra work from negating and physical efforts.
Ndwula Maria (Finland)	Burnout among staff nurses. Examining the causes, coping strategies and prevention	Arcada Department of Helath and Social Work (2012)	to draw attention to burnout problem in nursing, and explore causes, and coping strategies	a literature review of 14 previous research	Nursing managers and organizations, and psychographic and social-demographic factors had significant impact on nursing burnout. Positive interventions buffered nursing working stress.
I-Chuan Li, Yu-Ching Chen and Huai-Ting Kuo (Taiwan)	The relationship between work empowerment and work stress perceived by nurses at long-term care facilities in Taipei city	Journal of Clinical Nursing (2015)	to explore the association between work empowerment and work stress among nursing staff in nursing home	questionnaire among 178 nurses in Taiwan	Both psychological empowerment and structural empowerment were found to be significantly associated with work stress. The four significant predictors of job satisfaction were age, resources, meaningful work and impact.

Daniel Fu Keung Wong, Sharon Shui King Leung, Christopher Ko On So,DebbieOi Bing Lam (Hong Kong)	Mental Health of Chinese Nurses in Hong Kong: The Roles of Nursing Stresses and Coping Strategies	Online Journal of Issues in Nursing (2011)	to examine the causing factors of stress and mental health of nurses and its functions of coping strategies in Hong Kong		One-third of the nurses were with poor mental health and supervisory role caused most stress. Direct action coping and positive thinking were positive interventions.
KirsiAhola (Finand)	Occupational burnout and health	Finnish Institute of Occupational Health Helsinki, Finland (2007)	to investigate the impact of occupational burnout on employer's health conditions	A multidisciplinary epidemiological health study involving 8028 persons was carried out in five Finnish university hospitals	Work burnout might lead to physical or mental illness. And burnout was more related to stressful work characteristics than depressive disorders are.

Appendix. List of articles chosen for the literature review and their contents