Original Article

Professional Burnout: Models Explaining the Phenomena in Nursing

Antigoni Fountouki, MSc, PhD(c)
Clinical Lecturer, Nursing Department, International Hellenic University, Greece

Dimitrios Theofanidis, MSc, PhD
Assistant Professor, Nursing Department, International Hellenic University, Greece

Correspondence: Antigoni Fountouki, Nursing department, International Hellenic University, Greece, email: antifountou@yahoo.gr

Abstract
Introduction: Burnout is a syndrome defined by emotional exhaustion leading to depersonalization and reductions in personal accomplishments at work. The negative consequences can be negative for the efficiency of the organization, reducing productivity and quality of care.
Aim: The purpose of this critical review is it to elaborate on the main theoretical models that describe and interpret professional burnout in contemporary nursing.
Methods: For this paper's needs a systematic review following the Preferred Reporting Items for Systematic Reviews was conducted. The search engines used were PubMed, CINAHL, PsychInfo, Scopus, and Embase. The inclusion criteria were any primary studies examining models of burnout in nurses in peer-reviewed journals, and published in English dating back to mid-1970s until 2022.
Results: Many theoretical models have been developed by researchers who attempted to interpret burnout syndrome and how it interacts with the individual and the environment. Hereafter are listed the most common models for describing and explaining burnout syndrome. Thus, our search revealed nine main models which are: *Job-Demand-Control-Support; Stages of Disillusionment; Staff Burnout Model; Model of 3 Dimensions; Unfairness and Fairness Model; 12-Phase Burnout Check; Effort-Reward Imbalance Model and Job Demands Resources Model.*
Discussion: Many studies emphasize the relationships between burnout, job dis-satisfaction and declining mental health coupled often with cynicism. Within the theoretical analysis though, the same factors arise which are viewed either as predictors of burnout or may be also viewed as outcomes of it. This observation highlights a further characteristic of the burnout literature in nursing, namely the similarity of the findings and the cross-sectional nature of the evidence. Yet, in order to promote theoretical understanding of burnout, research needs to set priorities on the use of more routine but concrete empirical data on employee behaviors such as attrition levels, absenteeism and turnover.
Conclusions: Nurses around the world need to recognize that burnout is a solid occupational hazard per se that affects not only themselves but patients, organizations, health care systems and even society in general. In this context, burnout in nursing is also associated with worsening safety and quality of care.

Keywords: burnout, models, factors, nursing, nurses, professional, exhaustion.

Introduction

A lack of healthcare provision is a major concern worldwide. A 2006 World Health Organization (WHO) report addressed the issue of shortcomings of healthcare services, in particular the shortage of nurses and how this affects national and international efforts to enhance the health and well-being of the world's population (WHO, 2006). This shortage of nurses is related to both working and personal conditions, such as unrealistic job expectations, poor working conditions, work demands that go beyond resources, poor collective relationships, increased workplace risks (Cao et al., 2019;Luan et al., 2017). These factors have contributed towards feelings of discontent and exhaustion amongst nurses worldwide.

Changes in working conditions of nursing staff in recent years have shown to affect the working environment and may influence negatively areas such as work satisfaction, burnout, perceived quality of care and patient well-being (Khamisa et al., 2016; Akman et al., 2016; Van Bogaert et al., 2014). Worldwide current budget cuts for health care have made the working environment more difficult for nurses in general and especially for nurses working in surgical units, because the workload has increased and waiting lists for surgical interventions have also increased. As a result, stress levels have risen significantly and may become a burnout factor among nurses in surgical units (Maslach & Leiter, 2016; Manzano-García & Ayala-Calvo, 2014).

Nurses in this clinical area have the responsibility of the patient throughout the postoperative process and their role is to ensure the quality of peri-operative care and the safety of surgical patients (Kotrotsiou et al, 2021). However, some stress factors limit the ability of nurses to work to provide better patient care. Several studies have shown that in surgical units the working environment, work stress and burnout are related to factors such as increased workload, time pressure, patient safety, insufficient communication between team members, feeling unprepared for surgeries and endless demands for continuous learning (Zhang et al., 2020, Schmitz et al., 2020, Eskola et al., 2016).

The surgical sector of a hospital has a major role in the intended results of a health organization as a whole. In contrast, with all the other departments of a hospital the issue of the exhaustion of staff in such units has been relatively poorly researched as few publications have focused on the exhaustion of nurses working in this clinical area (Zangaro, et al., 2022; Johnson et al., 2017; Nantsupawat et al., 2017).

Burnout is a syndrome defined by emotional exhaustion leading to depersonalization and reductions in personal accomplishments at work (Maslach and Jackson, 1986). The negative consequences can be negative for the efficiency of the organization, reducing productivity and quality of care (Dutra et al., 2018; Roch et al., 2014). Burnout is thus linked to negative effects for nurses, preventing their development and evolution of nursing, the objectives of which are to achieve the best results for patients. There is no doubt that burnout is a serious issue facing the nursing profession (Li et al., 2021; Boamah & Laschinger, 2016).

Numerous studies have documented the negative impact of burnout. Burnout reduces the quality of life of nurses, the level of performance and organizational commitment which may increase their intention to leave their jobs (Aiken et al., 2002). Burnout also adversely affects the quality of nursing care (Hayes et al., 2006, Kanai-Pak et al., 2008; Tsolakidis et al., 2022).

The scientific world began to take a special interest in burnout syndrome after the publication by Haebert Freudenberger in a psychology journal in 1974. In this article he described a set of symptoms that he observed the workers and volunteers in the psychiatry unit he was working in, defining burnout as a "state of mental and physical exhaustion caused by one's professional life" (Freudenberger, 1974).

Yet, the most commonly accepted definition of burnout is that given by Christina Maslach, defining burnout as "a multidimensional state of emotional exhaustion, depersonalization, and a sense of reduced professional achievement" (Maslach, 1982).

Burnout is included in the 11th Review of the International Classification of Diseases (ICD-11) as a professional phenomenon. According to the World Health Organization (WHO, 2019), burnout syndrome is defined as a set of symptoms resulting from long-term work stress. The syndrome results from unsuccessful treatment of chronic work stress and is characterized by the following symptoms: feeling of lack of energy, exhaustion, professional distancing, negativity, cynicism as well as a decrease in job performance. Moreover, WHO stresses that burnout refers specifically to occupational phenomena and should not be applied to describe experiences in other areas of life thus in that respect it is not classified as a medical condition (WHO, 2019).

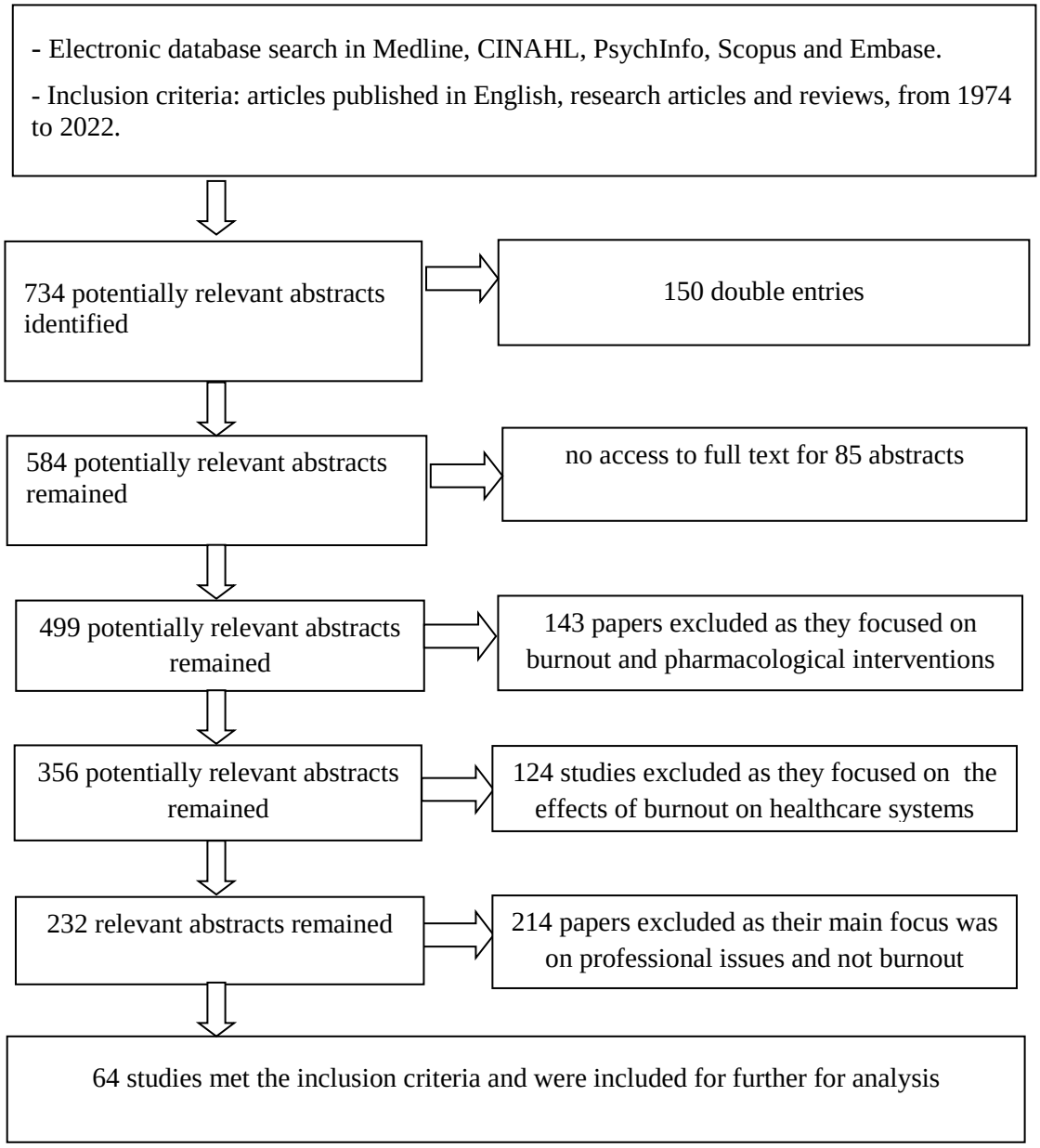
Aim: The purpose of this critical review is it to elaborate on the main theoretical models

that describe and interpret professional burnout in contemporary nursing.

Methods: For this paper's needs a systematic review following the Preferred Reporting Items for Systematic Reviews was conducted. The search engines used were PubMed, CINAHL, PsychInfo, Scopus, and Embase. The inclusion criteria were any primary studies examining models of burnout in nurses in peer-reviewed journals, and published in English. Due to the historical nature of the theories and their development, the search included references dating back to mid-1970s until 2022.

Therefore, keywords used were 'burnout', 'models', 'factors', 'nursing', 'nurses', 'professional', 'exhaustion', together with the Boolean operator 'AND' appearing in both the title and the full text. Search strategy with reasons for inclusion-exclusion and the final number of papers (i.e. 64) included can be found in figure 1 below:

Figure 1: Flow chart of systematic search



Results

Many theoretical models have been developed by researchers who attempted to interpret burnout syndrome and how it interacts with the individual and the environment (Dekker and Schaufeli, 1995).

Hereafter are listed the most common models for describing and explaining burnout syndrome. Thus, our search revealed nine main models as shown in chronological order in table 1.

Table 1: Main theoretical models for burnout

Model	Year	Authors
Job-Demand-Control-Support	1979	Karasek R.
Stages of Disillusionment	1980	Edelwich J., Brodsky A.
Staff Burnout Model	1980	Cherniss C.
Model of 3 Dimensions	1981	Maslach C., Jackson S.
Unfairness and Fairness Model	1988	Pines A., Aronson E.
12-Phase Burnout Check	1992	Freudenberger H., North G.
Effort-Reward Imbalance Model	1996	Siegrist J.
Job Demands Resources Model	2001	Demerouti E., Bakker, A.B., Nachreiner, F., Schaufeli, W.B.
Copenhagen model	2006	Borritz M, Rugulies R, Bjorner J, Villadsen E, Mikkelsen O, Kristensen T.

Job-Demand-Control-Support

Karasek's model of requirements and control is a well-known theory that explains how the characteristics of labor affect the psychological welfare of workers (Karaesk 1979). The model illustrates how work requirements can cause stress to workers. Such requirements can be: a heavy workload, vagueness of roles and the pressure associated with work (Karasek and Theorell, 1990). However, the model argues that individuals can manage these requirements, using job skills that allow them to gain autonomy and control over their work. The model works when the employee uses the following principles:

1. Gaining autonomy in decision-making at work,

2. Support from Superiors, Co-workers and Alternates; and

3. Tackling the stressful demands of work.

Stages of Disillusionment

Edelwich and Brodsky (1980) defined four stages of gradual disappointment, therefore explaining the beginning of burnout.

1. Excitement: It is the feeling that usually comes to us when we start a new job. In the first stage the worker works hard, devotes a lot of time to the work, invests in relationships with colleagues and patients, sets high expectations and goals that are often not realizable.

2. Stagnation: At this stage, the worker begins to realize that the work does not meet the expectations and objectives one had set and is getting disappointed.

3. Disappointment and Cancelation: In this third stage, the worker's frustration is increasing and they are beginning to reconsider their aims and expectations.

4. Apathy: In the final stage, the worker feels an emotional void for the work that was once fascinating, now they feel inadequate to meet the needs of patients and continue to work for purely personal income reasons.

Staff Burnout Model

According to Cherniss (1980) burnout is a process associated with the worker's frustration with work over time and consists of three stages:

1. Stress stage: Work stress is created when the resources available are insufficient to meet the expectations and objectives set by the worker.

2. State of exhaustion: At this stage begins the emotional exhaustion of the worker as signs of fatigue, helplessness and lack of interest in their work begin to appear. The worker becomes frustrated and can be led to resignation.

3. Defensive end stage: The third and final stage is characterized by the negative change in attitude and behavior either to patients or to colleagues.

Model of 3 Dimensions

In the multidimensional model of Maslach and Jackson (1981), burnout consists of three dimensions:

1. Emotional exhaustion: Emotional exhaustion occurs when a person feels excessive fatigue and exhaustion from the many emotional demands of their professional or personal life. The most common sources of emotional exhaustion are the workload and personal conflicts at work.

2. Depersonalization: Depersonalization occurs when a worker is apathetic and cynical with those receiving a service or care; it is usually the result of intense emotional exhaustion and is a defensive mechanism, providing an emotional protective ‘shield’ from the work environment.

3. Reduced Personal Achievement: Reduced personal achievement occurs when a worker considers themselves ineffective and inadequate in fulfilling their duties and the ability to care for others.

Unfairness and Fairness Model

According to the Pines and Aronson’s model, burnout is defined "as a state of physical, emotional and mental exhaustion caused by long-term exposure to emotionally demanding conditions" (Pines and Aronson, 1998).

The authors argue that the working environment plays a primary role in the appearance of the syndrome and individual characteristics are responsible only for the time of its triggering. They treat burnout as a one-dimensional concept assessed by a single scale that gives an overall score (Pines et al., 1981).

Within the healthcare workplace, the concept of ‘unfairness’ tends to be moderated by a variety of stressors associated with difficulties in the occupational field which are mainly not addressed or confronted.

Yet, more importantly, there is evidence to suggest that the effects of unfairness may affect not only the psychological health but the physiological state of the individual who is clearly experiencing ‘unfairness’.

Thus, a sense of injustice in workplace exacerbates stress and strain levels and hence work efficacy. In this context, Fountouki & Theofanidis, (2021) suggest that ensuring workplace fairness is essential for improving both mental health promotion and disease prevention.

12-Phase Burnout Check

The 12-phase model of burnout was developed by psychologists Herbert Freudenberger and Gail North in 1992, with the aim for clients/patients to review personal and professional orientation. However, it should be noted that the phases do not need to occur in the same order (Freudenberger & North, 1992)

1. Forcing to prove oneself: At this stage, the worker wants to do their job very well (perfectionism) and the idea that being less than 100% devoted to it seems scary.

2. Increased Commitment: Getting the feeling that everything must be done by oneself and quickly; this indicates that they are irreplaceable since they can do so much work without asking other people for help.

3. Neglecting one's own needs: In this phase the first small errors appear. Lifestyle practices become unhealthier and social obligations are considered secondary.

4. Offset Collisions: Conflicts in the workplace and in the family environment increase. Yet, the appearance of the first symptoms often passes unnoticed.

5. Value Revision: The way things are perceived changes. One becomes emotionally tough, and those who were important in their lives become secondary because one looks only at the present.

6. Problem Denial: One begins to treat the environment cynically, with reduced performance at work and the first complaints appear.

7. Retire: Family and friends are now treated as a burden, often even as hostile. Criticism can no longer be tolerated.

8. Change in Behavior: In this phase, there is increasingly indifference, everything is perceived as targeted aggression towards them. Any additional work is regarded as a burden and excuses are given to avoid it.

9. Depersonalization: In this phase, one feels no longer oneself and may describe themselves as "a machine that has to work". They see their life as meaningless and inevitable. They also neglect their own health.

10. Inner Space: Phobias and panic attacks appear.

11. Depression: This is characterized by deep despair, self-hatred, exhaustion and even suicidal thoughts.

12. Total Exhaustion: At this stage there are physical disorders, psychological and emotional collapse.

Effort-Reward Imbalance model (ERI)

ERI which was first proposed by German medical sociologist Siegrist (1996), is a theoretical model of a psychosocial work environment with adverse effects on the health and well-being of workers that focuses on a mismatch between high efforts spent and low rewards and recognition received at work (Ren et al., 2019).

This theoretical model assesses adverse health effects of stressful work experiences. Moreover, the focus of this particular model stresses the importance of high-cost/low-gain occupational conditions which are considered to be particularly stressful. Where there is low reward and little opportunity for improved job status in association with high extrinsic or intrinsic factors, there is increased risk for cardiovascular events in employees within the demanding healthcare arena. Under this light, the study of adverse health effects within the context of high-effort and low-reward conditions seems appropriate, especially in view of the current global uncertainties (Colindres, et al., 2018).

Job Demands-Resources Model (JD-R)

The central tenet of the JD-R model is based on the imbalance between the demands of labor (labor resources) and the labor resources available to the worker to meet these demands (Demerouti, et al., 2001).

Under this light, work requirements are defined as the psychological, physical, or organizational aspects of work, which require physical and psychological effort on the part of the worker, such work requirements may be high workload and organizational changes. Working resources are defined as the physical, mental and organizational aspects available to the employee to meet the requirements of the job.

Working resources may include, work control, decision-making, career development opportunities and Head of Unit feedback (Bakker and Dermouti, 2007). This implies that job resources gain their motivational potential particularly when employees are confronted with high job demands.

For example, when employees are faced with high emotional demands, the social support of colleagues, friends and family become more important and more instrumental in sustaining job satisfaction and staff retention.

Therefore, interactions between excessive job demands and limited job resources are determining factors for job strain and de-motivation. Thus, according to the JD-R model, positive job resources may buffer the effect of job demands preventing job strain and burnout (Dhaini et al., 2018; Bakker et al., 2003).

It is important to recognize which specific job resources may buffer the specific effects of different job demands. Many depend on the work environment, including social interactions. Under this light, it can be argued that the combination of excessive job demands and low resources may cause various levels and types of job strain.

Constructive and positive performance feedback and social support are known to be examples of having potential to buffer high job demands and associated strain in the healthcare arena (Liu et al., 2018; Lavoie et al., 2018; Schaufeli et al., 2009).

The Copenhagen model

The Copenhagen model is the latest model of burnout and was created by Borritz et al., (2006), during the Danish Project on Burnout, Motivation and Job Satisfaction (PUMA) a long-term study on 2,391 employees from different organizations in the human service sector on the burnout of human service workers launched in 1997.

The Copenhagen model consists of three scales measuring personal burnout, burnout and client-related burnout, for use in different areas. Thus, the authors during their 5-year prospective intervention study comprising collected data at baseline and at two follow-ups in order to develop a new burnout tool. This was to cover work-related, client-related, and personal burnout levels.

Their findings suggest that potential determinants of burnout include the psychosocial work environment, various social relations outside work, general lifestyle factors, and finally personality profiles.

Moreover, the consequences of burnout extent to low job satisfaction, fast turnover, increased absenteeism and overall poor health.

Discussion

This review aimed to identify the main theoretical models that explain the relationships between nursing and burnout, in order to elaborate on the factors known to be associated with burnout in nursing. We found nine models whereby associations of nursing work-life and burnout are generally clarified (Bagheri Hosseinabadi et al., 2019; Vidotti et al., 2018).

The findings show that adverse job characteristics such as intense workload, inadequate resources, low staffing levels, high job demands, long shifts and frequent night shift-work, low control over working conditions, work-schedule inflexibility, high psychological demands, low task variety, time pressure, low professional-autonomy, conflicting professional roles, negative nurse-nurse and nurse-physician relationships, poor supervisor support and inadequate leadership, negative team spirit and job insecurity were all associated with burnout in nursing (Khatatbeh et al., 2022; Lewis & Cunningham, 2016; Rouxel et al., 2016).

The field is vital for supervisors and nursing staff to recognize the vast complexities involved when trying to prevent burnout (Lee et al., 2019; Giorgi et al., 2018). This critical review identifies the key models involved in understanding, explaining and quantifying burnout and thus, possibly serves as a primary checklist for tackling the ‘pathways’ leading to burnout on nursing staff (Shao et al., 2018; Moloney et al., 2018).

Moreover, many studies emphasize the relationships between burnout, job dis-

satisfaction and declining mental health coupled often with cynicism. Within the theoretical analysis though, the same factors arise which are viewed either as predictors of burnout or may be also viewed as outcomes of it (Liu & Aungsuroch, 2018).

This observation highlights a further characteristic of the burnout literature in nursing, namely the similarity of the findings and the cross-sectional nature of the evidence (Cimiotti, et al., 2012).

Yet, in order to promote theoretical understanding of burnout, research needs to set priorities on the use of more routine but concrete empirical data on employee behaviors such as attrition levels, absenteeism and turnover (Laeeque et al., 2018; Marques-Pinto et al., 2018).

Addressing these issues, may provide an improved evidence of the nature of burnout in nursing, thus helping to suggest evidence-based solutions which promote motivate work-place change. Therefore, better insights for preventing and tackling burnout within healthcare organizations can be obtained (Anwar & Elareed, 2017; Griffiths et al., 2016).

On an individual level, reducing the negative consequences of burnout, will not only improve delivery of care but also enhance staff morale whose previous negative work conditions may have resulted in them being emotionally exhausted, detached, and less able to do the job properly (Boamah et al., 2017; Dall'Ora et al., 2016).

Conclusions

Patterns identified across the nine theoretical models suggest consistently that adverse workplace characteristics are associated with burnout in nursing. The potential consequences for staff are severe as burnout compromises relationships and the ability to function fully and provide optimal patient care.

At times, burnout has been viewed as an individual's personal issue. Yet, the available theoretical models described in this critical review, establishes burnout as an organizational and collective phenomenon.

Thus, recognizing these wider issues reframes burnout as an emerging workplace 'hazard' that needs prompt and tactful tackling.

Finally, nurses around the world need to recognize that burnout is a solid occupational hazard per se that affects not only themselves but patients, organizations, health care systems and even society in general. In this context, burnout in nursing is also associated with worsening safety and quality of care.

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