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Master’s Examination Option (please check one):

- Literature Review
- Problem Solving Exam
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My area of specialization is: **Leadership in Nursing and Health Care Systems**

The problem, within my area of specialization, which I have addressed, is **Preventing and Reducing Burnout Among Staff Nurses**

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Preventing and Reducing Burnout Among Staff Nurses: A Literature Review

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University of Missouri
Abstract

The purpose of this paper is to provide a better understanding of why burnout develops in order to guide interventions to prevent and reduce burnout among staff nurses. The Cumulative Index to Nursing and Allied Health Literature (CINAHL), Ovid, and PsycINFO databases were searched for articles regarding the causes, effects, and treatments of burnout. The author reviews and discusses 27 articles based on the theory of burnout described by Maslach and Leiter (1997) and Maslach, Schaufeli, and Leiter (2001). This literature review explores contributing factors of burnout, areas of nursing most impacted by burnout, and methods of reducing burnout as well as analyzes strengths and weaknesses of current burnout literature. The paper concludes with suggestions for future research.
Preventing and Reducing Burnout Among Staff Nurses: A Literature Review

Freudenberger (1974) first acknowledged the importance of recognizing, preventing, and overcoming burnout over 35 years ago. Since then, staff burnout has been an area of concern and a popular research topic in the professional world. This psychological condition is characterized by work-related emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 1982; see also Maslach & Leiter, 1997; Maslach, Schaufeli, & Leiter, 2001). Nurses and other service professionals are at an increased risk because of the emotionally demanding nature of helping other people (Maslach). A 1998-1999 study of 13,471 Pennsylvania nurses found 43.2% of participants were experiencing high levels of burnout (Aiken et al., 2001). Burnout has also become a popular research topic in health care because of its impact on nurse retention and patient outcomes (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). Multiple studies have found that nurses experiencing high levels of burnout often plan to leave their current jobs or the nursing profession altogether (Aiken et al., 2001; Aiken, Clarke, Sloane, et al., 2002; Leiter & Maslach, 2009; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004). Aiken, Clarke, Sloane, et al. (2002) found 43% of nurses experiencing high levels of burnout intend to leave their current positions within a year. Patients of nurses suffering from burnout experience significantly lower levels of satisfaction with their care (Vahey et al.) and higher mortality rates (Aiken, Clarke, Sloane, et al., 2002).

The purpose of this paper is to provide a better understanding of why burnout develops in order to guide interventions to prevent and reduce burnout among staff nurses. This literature review will explore contributing factors of burnout, areas of
nursing most impacted by burnout, and methods of reducing burnout as well as analyze strengths and weaknesses of current burnout literature. The Cumulative Index to Nursing and Allied Health Literature (CINAHL), Ovid, and PsycINFO databases were searched for articles regarding the causes, effects, and treatments of burnout. The results were limited to peer-reviewed research articles published in the English language. Articles were selected based on their relevance to the research topic.

Studies conducted in other countries were evaluated for relevance and generalizability to nursing as a profession. Articles focusing specifically on nursing care in countries other than the United States were excluded. Although no limits were placed on the years of publication, it should be noted that all of the reviewed articles were published since 2000. This indicates that this topic is relatively new in the realm of nursing research. Twenty-seven articles were included.

This literature review presents a thorough description of current burnout research. However, this review also reveals several gaps in knowledge regarding the prevalence of burnout in different areas of nursing as well as possible methods of reducing burnout among staff nurses. A discussion of research methods and findings pertaining to the contributing factors of burnout, areas of nursing most impacted by burnout, and methods to reduce burnout will be explored followed by an analysis of strengths and weaknesses of current burnout research. Inconsistencies between studies and suggestions for future research will also be discussed.

Theoretical Framework

This literature review is based on the theoretical framework of burnout presented by Maslach and Leiter (1997) as well as Maslach et al. (2001). This framework is based
on the idea that a person’s degree of job burnout is based on the degree of match or mismatch of the person with his or her work environment. The person is less likely to experience burnout when he or she experiences a better match with the work environment. Unlike other similar frameworks that link the degree of fit directly to work outcomes, this theory links the degree of fit to burnout and the degree of burnout to work outcomes. This model identifies six specific areas of mismatch that lead to job burnout: workload, control, reward, community, fairness, and values.

Burnout is characterized by emotional exhaustion, depersonalization (also referred to as cynicism), and reduced personal accomplishment (Maslach, 1982). The six proposed mismatches in the framework by Maslach and Leiter (1997) and Maslach et al. (2001) influence these three components of burnout. In this framework, workload encompasses physical and emotional demands as well as the type of work and skills required. Control relates to the authority and resources to complete a job efficiently and responsibly. A mismatch in reward indicates inadequate financial and social recognition for work. Community entails positive connections and a shared sense of values with coworkers while fairness involves respect and equity. Values entail ethics and aspirations and may influence the other five areas. The degree to which mismatches in each of these six areas influence emotional exhaustion, depersonalization, and reduced personal accomplishment varies from person to person. In the literature review section of this paper, the author will link the six areas of mismatch described by this theory with contributing factors to burnout identified by current research studies.

Review of Literature

Contributing Factors to Burnout
Workload.

Studies have repeatedly shown that nurses experiencing burnout have undergone long periods of work-related stress. This stress is often linked to workload and staffing levels. Workload is one of the six areas of mismatch identified by Maslach and Leiter (1997) and Maslach et al. (2001) that contribute to mismatch. In a landmark study Aiken, Clarke, Sloane, et al. (2002) mailed surveys to a random sample of Pennsylvania nurses asking about work history, workload, job satisfaction, and perceived levels of work-related burnout. These surveys consisted of a four-point Likert-type scale for job satisfaction and the emotional exhaustion subscale of the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986). Results from the 10,184 returned completed surveys showed that each patient added to a nurse’s base workload of four patients increases the odds of burnout by 23% and the odds of job dissatisfaction by 15%. The researchers also analyzed data from 168 of the 210 adult acute care Pennsylvania hospitals in 1999. These 168 hospitals were selected based on having discharge data for surgical patients from the targeted diagnosis related groups (DRGs), structural characteristics reported in the American Hospital Association Annual Survey or Pennsylvania Department of Health Hospital Questionnaire, and at least 10 survey responses from staff nurses. Researchers evaluated the outcomes of 232,342 general surgical, orthopedic, and vascular patients aged 20 to 85 who had undergone procedures at the 168 studied hospitals between April 1, 1998, and November 30, 1999. Analysis of the hospital data revealed that each patient added to a nurse’s base workload of four patients increases the odds of patient mortality by 7%. These findings provide scientific evidence that inadequate nurse staffing can have
detrimental effects on both nurse and patient outcomes. The study’s theoretical framework was not described.

The results from the study by Aiken, Clarke, Sloane, et al. (2002) linking nurse staffing to burnout prompted other researchers to conduct similar studies. Halm et al. (2005) conducted a cross-sectional, correlational study at a 572-bed acute care hospital in the greater Twin Cities area. Unlike Aiken et al. who based their results on data from 10,184 nurses, 232,342 patients, and 168 general hospitals across Pennsylvania, Halm et al. only used data from 2,709 patients and 140 registered nurses (RNs) on staff at one hospital. Halm et al. measured job satisfaction by asking nurse participants to rank their overall job satisfaction on a 4-point Likert scale. Halm et al. also asked the participants if they planned to leave their current jobs within the year. Burnout was measured using the MBI (Maslach, Jackson, & Leiter, 1996). No theoretical framework was discussed.

The study by Halm et al. (2005) had considerably different findings than the study by Aiken, Clarke, Sloane, et al. (2002). Seventy percent of the nurse participants indicated they were satisfied or very satisfied with their jobs. While 43% of participants in the Aiken et al. study had high emotional exhaustion scores, only 25% of participants in the Halm et al. study had high emotional exhaustion scores. Although their estimated staffing levels for 2002 prevented them from linking emotional exhaustion to nurse-patient ratios like in the Aiken et al. study, Halm et al. were able to link emotional exhaustion to years of service. For these participants, every year of employment was associated with a 5.2% increase in their risk of emotional exhaustion. When considering the differences between the Aiken et al. study and the Halm et al. study, it is
important to consider the differences in sampling and data collection procedures. It should also be noted that the researchers in the Halm et al. study were conducting an in-house study, so there is a potential for bias. Participants may have been uncomfortable or unwilling to provide unfavorable responses to researchers from their own hospital, and the researchers may have interpreted their findings based on a desire to improve their hospital’s image.

One of the biggest differences between the studies by Aiken, Clarke, Sloane, et al. (2002) and Halm et al. (2005) was the timing of data collection regarding patient information and nurse staffing levels. Aiken et al. collected hospital data at the time of the study and measured staffing levels by asking nurse participants how many patients they were assigned during their last shift. Halm et al. collected hospital data retrospectively based on hospital and death records from 2002. Staffing levels for 2002 were calculated based on the average nurse-to-patient ratio for each of the 52 weeks for every nursing unit.

**Job demands.**

Similar to workload, job demands can also contribute to work-related stress. Demerouti, Bakker, Nachreiner, and Schaufeli (2000) distributed surveys to 185 German nurses working at a particular hospital or one of two nursing homes. The study was based on general stress theories (Lazarus & Folkman, 1984; Hobfoll, 1989) and the framework that job demands and job resources contribute to stressful working conditions for nurses. The surveys measured life satisfaction, burnout, job demands, and job resources using a four-item life satisfaction survey (Rice, 1984), the Oldenburg Burnout Inventory (OLBI) (Ebbinghaus, 1996), and a 21-item working condition
assessment. The results of the 109 completed surveys linked high job demands to emotional exhaustion and a lack of resources to disengagement. The results also showed that burnout has a negative impact on life satisfaction.

In a similar study also conducted in Germany, Bakker, Killmer, Siegrist, and Schaufeli (2000) investigated how efforts and rewards affect burnout based on the effort-reward imbalance framework (Siegrist, 1996). A sample of 204 nurses working at a university hospital completed the MBI (Maslach & Jackson, 1986) and three unnamed questionnaires to measure extrinsic efforts (Siegrist & Peter, 1996), intrinsic efforts (Matschinger, Siegrist, Siegrist, & Dittmann, 1986), occupational rewards, and effort-reward imbalance (ERI). The results linked ERI to emotional exhaustion, depersonalization, and reduced personal accomplishment, especially among nurses with high levels of intrinsic effort. These results support the theoretical framework by Maslach and Leiter (1997) and Maslach et al. (2001) that identified reward as one of the six areas of mismatch that lead to job burnout.

Work environment.

The work environment can also increase stress and lead to burnout. Aiken, Clarke, Sloane, Lake, and Cheney (2008) studied how the hospital care environment affects nurse outcomes. The researchers did not use a theoretical framework. The study was based on 168 of the 210 adult acute care Pennsylvania hospitals in 1999. These 168 hospitals were selected based on having 100 or more surgical discharges studied by the Pennsylvania Health Care Cost Containment Council, structural characteristics reported in the American Hospital Association Annual Survey or Pennsylvania Department of Health Hospital Questionnaire, and having an adequate
number of nurse survey respondents to provide a reliable assessment of the care environment. Researchers evaluated the outcomes of 232,342 general surgical, orthopedic, and vascular patients aged 20 to 85 who had undergone procedures at the 168 studied hospitals between April 1, 1998, and November 30, 1999. Nurse participants were recruited based on surveys mailed to a 50% random sample of Pennsylvania registered nurses. Over 40,000 completed surveys were returned. Of these, 10,184 surveys from nurses currently working at the studied 168 hospitals were analyzed. Hospital data were collected using the 1999 American Hospital Association Annual Survey and the 1999 Pennsylvania Department of Health Hospital Survey. Nurse participants completed the Nursing Work Index (PES-NWI) (Lake, 2002), emotional exhaustion subscale of the MBI (Maslach & Jackson, 1986), and unnamed surveys measuring job dissatisfaction, intent to leave within the next year, and perceptions of quality of care.

Aiken et al. (2008) found nurses in hospitals with care environments ranked “poor” on the PES-NWI experienced higher levels of burnout and job dissatisfaction and were more likely to leave their current positions within the next year. Findings also showed that each patient added to a nurse’s mean workload increased the odds of burnout by one-fifth. Although it is not addressed in the article, the research methods used in this study are identical to those described by Aiken, Clarke, Sloane, et al. (2002), thus suggesting that the same data were used for both studies despite a six-year difference in publication dates.

Instead of evaluating the work environment as a whole like Aiken et al. (2008), some researchers have chosen to evaluate specific aspects of the work environment.
In a study by Sadovich (2005), 106 commissioned nurse officers and federal civil service nurses accessed a website to complete the Work Excitement Tool (Erbin-Roesemann & Simms, 1995) and MBI (Maslach et al., 1996). Sadovich recruited these participants using the Public Health Service Nursing Professional Advisory Committee listserv. The study was based on the work excitement model (Simms, Erbin-Roesemann, Darga, & Coeling, 1990). This model indicates work arrangements, growth and development, variety of experiences, and working conditions impact work excitement, which is necessary for quality care and outcomes. The results of the study showed that emotional exhaustion and depersonalization decrease as work excitement increases and personal accomplishment increases as work excitement increases.

A study by Vahey et al. (2004) also researched how nurse work environments affect nurse burnout levels and patient satisfaction. The researchers did not base their study on a theoretical framework. Participants included 820 nurses and 621 patients from 20 hospitals across the United States. Nurses completed the revised Nursing Work Index (NWI-R) (Kramer & Hafner, 1989), MBI (Maslach & Jackson, 1986), and La Monica-Oberst Patient Satisfaction Scale (LOPSS) (Aiken, Sloane, Lake, Sochalski, & Weber, 1999) regarding personal characteristics, unit and hospital characteristics, burnout, and intent to leave. Patients were interviewed about their medical history, care preferences, satisfaction with nursing care, and care measures. The results showed nurses were more likely to experience emotional exhaustion, depersonalization, and intent to leave in work environments with inadequate staffing, poor administrative support, and poor nurse-physician relationships. Patient satisfaction was also negatively impacted by these nurse work conditions in addition to the overall level of
nurse burnout. The findings regarding the impact of administrative support and nurse-physician relationships on emotional exhaustion, depersonalization, and intent to leave support the theory that mismatches in the area of community contribute to burnout (Maslach & Leiter, 1997; Maslach et al., 2001).

Also concerned about how the work environment impacts nurses, Garrett and McDaniel (2001) studied how environmental uncertainty and social climate affect nurse burnout. They based their research on the conceptual framework by Elliott and Eisdorfer (1982) that explains how perceived environmental uncertainty leads to professional burnout and how this response is mediated by a nurse’s personal characteristics. Garrett and McDaniel collected data regarding admissions, discharges, transfers, and midnight census at a 493-bed acute care hospital in the Midwestern United States. Seventy-seven full-time registered nurses completed the Work Environment Scale (Moos, 1994), MBI (Maslach et al., 1996), and Perceived Environmental Uncertainty Scale (Salyer, 1996) regarding social climate and burnout. Results showed that perceived environmental uncertainty increases the likelihood of burnout and supervisor support reduces the likelihood of emotional exhaustion and depersonalization.

The findings by Vahey et al. (2004) and Garrett and McDaniel (2001) that supervisor support reduces the likelihood of emotional exhaustion and depersonalization are supported by a 2007 study by Kanste, Kyngas, and Nikkila. This study was based on the multifactor leadership theory (Bass, 1985; Bass & Avolio, 1997), which describes five transformational leadership styles, three transactional leadership styles, and a non-transactional laissez-faire leadership style. Kanste et al.
used a non-experimental survey design to investigate how these nine leadership styles affect burnout. A stratified random sample of 601 Finnish nurses, public health nurses, and head nurses completed the MBI-Human Services Survey (Maslach et al., 1996) in addition to the Multifactor Leadership Questionnaire (Bass & Avolio) based on the leadership styles of their immediate supervisors. Results indicated that rewarding transformational leadership helps prevent depersonalization, as does active management-by-exception. Management-by-exception also helps increase personal accomplishment. Conversely, passive laissez-faire leadership increases the risk of emotional exhaustion and reduced personal accomplishment. Nurses under the age of 40 are more likely to experience depersonalization, and supervisors and nurses working irregular shifts (e.g. night shifts) are more likely to experience reduced personal accomplishment. While Vahey et al. and Garrett and McDaniel demonstrated how supervisor support can help reduce burnout, Kanste et al. demonstrated how a supervisor’s leadership style can have a positive or negative effect on burnout.

**Inadequate coping skills.**

Multiple studies have demonstrated that work-related stress is more likely to lead to burnout when nurses lack adequate coping skills. Garrosa, Rainho, Moreno-Jiménez, and Monteiro (2010) investigated how job stressors, hardy personality, and coping resources impacted burnout levels. The study was not based on a theoretical framework. A convenience sample of 98 baccalaureate-prepared Spanish nurses attending a post-work course completed the Nursing Burnout Scale (NBS) (Garrosa, Moreno-Jiménez, Liang, & González, 2008; Moreno-Jiménez, Garrosa, & González-Gutiérrez, 2000), which measures burnout, job stressors, hardy personality, and coping.
Unlike the other cross-sectional studies included in this literature review, Garrosa et al. (2010) attempted to reduce common method bias by asking participants to complete the surveys again four weeks later to evaluate for temporal effects. Results linked active coping with lower depersonalization and higher personal accomplishment, and higher levels of control and social support were linked to lower levels of emotional exhaustion. This finding supports the theory that a mismatch in the area of control can lead to burnout (Maslach & Leiter, 1997; Maslach et al., 2001). Garrosa et al. also found that role ambiguity and lack of cohesion are negatively related to personal accomplishment. Female participants were more likely to experience feelings of reduced personal accomplishment than male participants. The finding linking a lack of cohesion to reduced personal accomplishment supports the theory by Maslach and Leiter (1997) and Maslach et al. (2001) that a mismatch in community can lead to burnout.

The findings by Garrosa et al. (2010) regarding role ambiguity are similar to those of Tunc and Kutanis (2009). Tunc and Kutanis analyzed the correlations between burnout, role conflict, and role ambiguity. No theoretical framework was used. Participants included 170 physicians and 81 nurses working at a 220-bed university hospital in the western Black Sea region of Turkey. The participants completed the MBI and Rizzo’s Role Conflict and Role Ambiguity Scales (Rizzo, House, & Lirtzman, 1970). Results demonstrated a strong relationship between high scores on both instruments, thus indicating a positive correlation between role conflict, role ambiguity, and burnout. The nurse participants scored higher levels of role conflict, role ambiguity, and burnout than the physician participants.

Glasberg, Eriksson, and Norberg (2007) also explored the relationship between
coping, personality, social support, and burnout. More specifically, they investigated how “stress of conscience”, personal and work variables, social support, and resilience affect emotional exhaustion and depersonalization. They based their study on the theoretical assumptions that “stress of conscience”, social support, resilience, and personal and work demographics impact burnout. A sample of 423 Swedish health care personnel with patient contact completed a Swedish version of the MBI (Maslach et al., 1996), Perception of Conscience Questionnaire (Dahlqvist et al., 2007), Stress of Conscience Questionnaire (Glasberg et al., 2006), Social Interactions Scale (Lindström et al., 2000), and the Resilience Scale (Wagnild & Young, 1993). The results of these questionnaires revealed that “stress of conscience” related to work demands such as time and “having to deaden one’s conscience” increases emotional exhaustion and depersonalization. This supports the theory that a mismatch in the area of values can lead to burnout (Maslach & Leiter, 1997; Maslach et al., 2001). From a more social standpoint, Glasberg et al. found that participants who felt unable to live up to others’ expectations experienced more depersonalization.

Also interested in how coping skills affect burnout, Montoro-Rodriguez and Small (2006) conducted a study based on the stress models used by Ramirez, Teresi, Holmes, and Fairchild (1998) and Cohen-Mansfield and Noelker (2000). The stress model by Ramirez et al. indicates that work demands and resources influence nursing outcomes including job satisfaction and burnout. The stress model by Cohen-Mansfield and Noelker is more complex and explains how job satisfaction and stress are impacted by organizational features, unit organization, relationships with and care of patients and families, and staff members’ personal lives. The theory goes on to explain how staff
dissatisfaction and stress have a negative impact on patient outcomes. Montoro-Rodriguez and Small had a convenience sample of 161 nurses from five nursing homes in Ohio and two nursing homes in Vancouver complete and mail in a shortened version of the Psychiatric Epidemiology Research Instrument (Dohrenwend, Shrout, Ergie, & Mendelshon, 1980), MBI (Maslach et al., 1996), and staff job satisfaction survey (Cantor & Chichin, 1990) to determine how individual characteristics, work demands, work resources, and conflict resolution styles affect staff morale, burnout, and job satisfaction. They found that staff who use confrontational or avoidance conflict resolution styles are more likely to experience lower morale. The results also showed that confrontational conflict resolution styles increase emotional exhaustion and depersonalization.

While Montoro-Rodriguez and Small (2006) studied the effects of avoiding conflict, Iglesias, Vallejo, and Fuentes (2010) studied the effects of avoiding certain negative experiences in general, a phenomenon known as experiential avoidance. Iglesias et al. evaluated the relationships between burnout, experiential avoidance, health habits such as smoking, sociodemographic factors, and job related factors. No theoretical framework was used. Eighty full-time critical care nurses who had worked for at least a year in a critical care unit in one of five major hospitals in the Northern State of Spain participated. Participants completed the MBI (Maslach & Jackson, 1981), Acceptance and Action Questionnaire (AAQ) (Hayes, Strosahl, & Wilson, 1999), and a survey regarding age, gender, marital status, hospital type, years of critical care experience, nurse-patient ratio, and tobacco dependence greater than six months. Overall, the participants demonstrated high levels of emotional exhaustion, moderate
levels of depersonalization, and low levels of personal accomplishment. High scores on
the AAQ were correlated with high emotional exhaustion and depersonalization scores
and low personal accomplishment scores on the MBI. Participants over the age of 30
who had more than 10 years of critical care experience were more likely to experience
emotional exhaustion. Participants who smoked were more likely to experience
depersonalization. Gender was not related to scores on the MBI or AAQ. Married
nurses tended to score higher on the personal accomplishment subscale of the MBI
than single nurses.

Areas of Nursing Impacted by Burnout

Comparison of burnout levels among different nursing specialties.

Very few researchers have compared burnout levels among different nursing
specialties. Scores on the MBI-General Survey (Schaufeli, Leiter, Maslach, & Jackson,
1996), Primary and Secondary Control Scale (Maher, Misajon, Heeps, & Cummins,
2001), and 12 neuroticism items from the NEO Five-Factor Inventory (Costa & McCrae,
1992) from 104 Australian nurses regarding burnout, control, and neuroticism revealed
that there is no difference in burnout or neuroticism levels between acute and chronic
care nurses (Allen & Mellor, 2002). The study was not based on a theoretical
framework. Scores on the MBI (Maslach et al., 1996) and 28-item version of the
General Health Questionnaire (Hare, Pratt, & Andrews, 1988) from 180 nurses working
at five hospitals in Shiraz, Iran, revealed that nurses working on psychiatric wards are
more likely to experience burnout than nurses working on burn, surgery, or internal
medicine wards (Sahraian, Fazelzadeh, Mehdizadeh, & Toobaee, 2008). No theoretical
framework was described.
**Burnout levels in individual specialty areas.**

Some researchers have chosen to explore the incidence of burnout among individual specialty areas without comparing them to other specialties. Building on the results of Sahraian et al. (2008) and others who have found mental health nurses experience high levels of burnout, Hanrahan, Aiken, McClaine, and Hanlon (2010) studied how the psychiatric nurse work environment affects psychiatric nurses' burnout levels. The study was not based on a theoretical framework. Hanrahan et al. reviewed the data from the study by Aiken, Clarke, Sloane, et al. (2002) and extracted the data from 353 psychiatric nurses providing direct patient care at one of 67 general hospitals with psychiatric inpatient units with a minimum of six psychiatric beds and three psychiatric nurses. Based on the survey results from these nurses during the Aiken et al. study, Hanrahan et al. reaffirmed the relationship between better nurse work environments and lower levels of emotional exhaustion and depersonalization. They also confirmed that manager skill and leadership are negatively related to emotional exhaustion and depersonalization.

Similar to the results from the Vahey et al. (2004) study, Hanrahan et al. (2010) found emotional exhaustion and depersonalization were strongly linked to poor nurse-physician relationships. This finding further supports the theoretical framework that a mismatch in community contributes to burnout (Maslach & Leiter, 1997; Maslach et al., 2001). Hanrahan et al. also confirmed the findings from the Aiken, Clarke, Sloane, et al. (2002) study linking inadequate nurse staffing with an increased risk for burnout, thus providing additional evidence for Maslach and Leiter (1997) and Maslach et al.’s (2001) theory that mismatches in workload also contribute to burnout.
Focusing on a more specific area of nursing, Flynn, Thomas-Hawkins, and Clarke (2009) explored burnout among chronic hemodialysis nurses based on the nursing organization and outcomes model (Aiken, Clarke, & Sloane, 2002). The nursing organization and outcomes model describes how nurse staffing levels/workloads, work environments, and care processes affect patient and nurse outcomes. Flynn et al. mailed survey packets to 2,000 registered hemodialysis staff nurses based on a random sample of American Nephrology Association members. Of the 1,015 nephrology nurses who returned the survey, 422 nurses from 47 states who currently worked in dialysis facilities were included in the study sample. The survey packets included the emotional exhaustion subscale of the MBI (Maslach & Jackson, 1986), surveys regarding intent to leave their current position or employer, workload subscale of the Individual Workload Perception Scale (Cox, 2003), practice environment scale of the Nursing Work Index–Rev (PES-NWI) (Lake, 2002), and surveys derived from previous studies (Aiken et al., 2001; Sochalski, 2001) asking which of seven nursing activities they had left not completed during their last shift because they did not have time to do them. Thirty-one percent of participants experienced high levels of emotional exhaustion. Participants with the highest workloads were five times as likely to experience burnout compared to those with the lowest workloads, and participants with the least supportive environments were four times as likely to experience burnout compared to those with the most supportive environments.

Choosing a much smaller and more specialized area, Gallagher and Gormley (2009) explored burnout among pediatric bone marrow transplant nurses using a descriptive non-experimental design. They surveyed a convenience sample of 30 bone
marrow transplant nurses at a large pediatric medical center in the United States. This study was not based on a theoretical framework. Participants completed the MBI (Maslach et al., 1996) and a demographic informational questionnaire about work experience, work-related stress, and support systems in the unit. Results showed 73.7% of participants experienced moderate to high levels of emotional exhaustion, and 33.3% of participants experienced moderate levels of depersonalization. Day shift nurses felt more socially supported at work than night shift nurses. Emotional exhaustion and depersonalization decreased and personal achievement increased as years of nursing and bone marrow transplant experience increased. This is in direct contrast to the finding by Halm et al. (2005) that every year of employment was associated with a 5.2% increase in their risk of emotional exhaustion.

**Impact of burnout on nurses working in private vs. public hospitals.**

Expanding on burnout research into individual specialty areas, Ersoy-Kart (2009) explored not only how burnout affects emergency nurses, but how burnout affects emergency nurses working in the private sector compared to those working in the public sector. Her study also evaluated the relationship between burnout, anger, and perceived social support. This study was not guided by a theoretical framework. The participants consisted of 53 emergency room nurses working in public hospitals and 47 emergency room nurses working in private hospitals in Ankara, Turkey. Each participant completed the Turkish adaptation of the MBI (Maslach & Jackson, 1981), Turkish adaptation of the Trait-Anger and Anger Expression Scale (Spielberger, Jacobs, Dussel, & Crane, 1983), Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), and a demographic information form. Results showed
that both private and public emergency room nurses are able to express their anger more easily when they perceive higher levels of social support. Both groups were also similar in the fact that depersonalization was linked to high internal anger scores. However, private emergency room nurses have better control of their anger and do not express their anger as easily. Public emergency room nurses who do not successfully control their anger experience lower feelings of personal accomplishment. Public emergency room nurses with high trait anger scores experience more emotional exhaustion and lower levels of personal accomplishment.

**Impact of burnout on nurses of different generations.**

Instead of focusing on nursing specialty areas, some researchers have explored how nurses of different generations are impacted by burnout. Leiter, Jackson, and Shaughnessy (2009) used the same theory of burnout by Maslach and Leiter (1997) and Maslach et al. (2001) that has guided this literature review to design their study regarding the differences in nursing burnout, turnover intention, control, value congruence, and knowledge sharing between Baby Boomers and Generation X. For this study, Baby Boomers were defined as those people born between 1943 and 1960. Generation Xers were defined as those people born between 1961 and 1981. Participants for this Canadian study were recruited from acute care facilities in Nova Scotia, New Brunswick, Newfoundland, and Prince Edward Island. Of the 2,436 surveys that were sent out, only 667 were returned. Surveys could be completed on paper or online and included the MBI-General Scale (Schaufeli et al., 1996), 3-item turnover intention survey (Griffeth & Hom, 2001), control and values subscales of the Areas of Worklife Scale (Leiter & Maslach, 2006), and an unnamed survey regarding
knowledge sharing (Leiter, Day, Harvie, & Shaughnessy, 2007). The results showed that nurses belonging to Generation X were more likely to experience burnout and quit due to a value mismatch than nurses belonging to the Baby Boomers. Nurses in Generation X were also more likely to experience mismatches in the area of control, and they were less likely to participate in knowledge sharing than Baby Boomer nurses.

Santos et al. (2003) also evaluated differences between different generations of nurses. The researchers did not use a theoretical framework. In this multi-site, mixed methods study, three generations were considered: Matures, Baby Boomers, and Generation Xers. The birth years for the Baby Boomers and Generation Xers were slightly different than those used for the Leiter et al. (2009) study. Santos et al. defined Matures as those people born between 1919 and 1945, Baby Boomers as those people born between 1946 and 1964, and Generation Xers as those people born between 1965 and 1979. Of the 694 participants, 55 were Matures, 368 were Baby Boomers, and 246 were Generation Xers. The study used a voluntary sample of registered nurses from four Midwest hospitals representing rural, urban, suburban, and specialty institutions. All participants completed the Occupational Stress Inventory-Revised Edition (Osipow, 1998). Following completion of the surveys, the researchers clarified findings from the surveys by using semi-structured interview questions with follow-up focus groups. The study found that Baby Boomers had worse scores than the other two generations on the role overload, role insufficiency, role ambiguity, role boundary, and interpersonal strain subscales. Overall, the worst scores for stress and strain were for physical environment and responsibility. Specifically, Generation Xers had worse scores for physical environment than the other two generations. The combined findings of Leiter et al. and
Santos et al. demonstrate that while multiple generations are negatively impacted by poor working environments, Generation X nurses experience more strain from mismatches in values and control than other generations and Baby Boomer nurses experience more strain from role-related stressors.

**Interventions to Reduce Burnout**

Unfortunately, few studies have investigated methods of reducing or preventing burnout among nurses. While research has revealed much regarding what factors contribute to the development of burnout, few studies have explored how to reduce burnout once it has occurred. Of these, most have focused on social support as a method of reducing burnout. This supports the theory that a mismatch in the area of community may contribute to burnout (Maslach & Leiter, 1997; Maslach et al., 2001). Some researchers have explored the used of group-based therapies. A randomized controlled trial by Bittman, Bruhn, Stevens, Westengard, and Umbach (2003) researched the use of a group-based six-session recreational music-making protocol using drums and keyboards to reduce burnout and total mood disturbance (TMD) among 112 long-term care workers at a retirement community in Pennsylvania. The theoretical framework was not described. Participants completed the MBI (Maslach et al., 1996) and Profile of Mood States (McNair, Lorr, & Droppleman, 1992) immediately prior to the study, at the end of six weeks, and at the end of twelve weeks. Results showed that the recreational music-making protocol reduced burnout and TMD levels.

While Bittman et al. (2003) evaluated whether a group-based activity improves burnout, other researchers have focused on group-based discussion as a method of decreasing burnout levels. A randomized controlled trial by Peterson, Bergstrom,
Samuelsson, Asberg, and Nygren (2008) investigated the use of a peer-support group to improve nurses’ perceived health, burnout, and work conditions. They based their study on unspecified social support, change, and communication theories. Of the 3,719 physicians, registered nurses, nursing assistants, social workers, occupational therapists, physiotherapists, psychologists, dental hygienists, dentists, service staff, administrators, teachers, and technicians working in a County Council area in Sweden who completed the General Nordic Questionnaire for Psychological and Social Factors at Work (Dallner et al., 2000) and a Swedish version of the OLBI (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), 660 scored above the 75% percentile of the exhaustion dimension on the OLBI. Of these, 131 participated in the study. Those in the intervention group met for two hours every week for ten weeks. All participants completed questionnaires at the beginning of the study as well as seven and ten months after the intervention, and researchers analyzed qualitative session content. At the end of the study, the intervention group reported less stress and burnout along with other improvements.

Multiple other studies endorse the use of social support to reduce burnout. A pilot study by Barnard, Street, and Love (2006) explored the relationship between stress, work supports, and burnout among oncology nurses. The researchers did not describe a theoretical framework. One hundred one registered nurses in Australia completed an unnamed questionnaire about work supports, the Stressor Scale for Pediatric Oncology Nurses (Hinds et al., 1990), and the MBI (Maslach et al., 1996). Results showed that most oncology nurses’ support comes from peers and that this support decreases stress and increases personal accomplishment. LeBlanc, Hox,
Schaufeli, Taris, and Peeters (2007) also studied peer support among oncology nurses. A quasi-experimental design based on participatory action research was used. The sample consisted of 664 physicians, nurses, and radiotherapy assistants working on 29 oncology wards of 18 hospitals in the Netherlands. Nine of the wards were randomly selected to receive the peer-support group intervention. Participants completed a Dutch version of the MBI’s emotional exhaustion and depersonalization scales (Maslach & Jackson, 1986) before the program began, after the program ended, and six months after the program ended. The results showed that the participants in the intervention group experienced less emotional exhaustion and depersonalization following changes in perceived job demands, job control, and social support.

Estryn-Behar et al. (2007) studied 28,561 nurses from a stratified sample of ten European countries to determine how social work environment, teamwork characteristics, burnout, and personal factors affect a nurse’s intent to leave. No theoretical framework was described. Participants completed a 260-item questionnaire developed for the NEXT research project about their work history, private lives, work environment and demands, and future plans (Hambleton, 1994). Multiple factors including quality of teamwork and interpersonal relationships were shown to affect participants’ intent to leave.

**Strengths of Literature**

**Reliable and Valid Measurement Instruments**

In quantitative research, it is necessary for measurement instruments to be reliable and valid (Polit & Beck, 2008). Most of the studies in this literature review provided internal consistency data for the measurement instruments used. Very few of
these had Cronbach alpha values less than 0.7, thus indicating that the measurement instruments used by these studies were reliable. Many of the studies also provided in-text citations for studies demonstrating the validity of the instruments. It is important to note the high majority of studies that used all or part of the MBI. This consistency in measurement instruments makes it easy to compare findings among various studies and provides a firm precedent for future burnout research.

**Consistency of Results**

Research regarding contributing factors to burnout has yielded consistent results. Although Gallagher and Gormley (2009) and Halm et al. (2005) disagree about the impact of years of experience on emotional exhaustion, other studies have had similar findings concerning the impact of workload (Aiken, Clarke, Sloane, et al., 2002; Hanrahan et al., 2010), job demands (Bakker et al., 2000; Demerouti et al., 2000), work environment (Aiken et al., 2008; Garrett & McDaniel, 2001; Sadovich, 2005; Vahey et al., 2004), supervisor support (Garret & McDaniel; Kanste et al., 2007; Vahey et al.), nurse-physician relationships (Hanrahan et al.; Vahey et al.), and coping skills (Garrosa et al., 2010; Glasberg et al., 2007; Iglesias et al., 2010; Montoro-Rodriguez & Small, 2006; Tunc & Kutanis, 2009) on burnout levels. This consistency in results as to the contributing factors of burnout provides a solid basis for future intervention studies.

**Current Studies**

As mentioned at the beginning of this paper, all of the studies included in this literature review have been published since 2000. Although the concept of professional burnout was first described over 30 years ago (Freudenberger, 1974), the topic of burnout in nursing is much more contemporary. The studies in this literature review
provide current evidence for interventions to prevent and reduce burnout among today’s staff nurses.

**Weaknesses of Literature**

**Reliance on Self-Report Instruments**

All of the studies included in this literature review used self-report questionnaires to measure burnout and other variables. These questionnaires allow researchers to measure participants’ feelings and beliefs in a quantifiable manner, but it is impossible to know if the participants are answering questions truthfully (Polit & Beck, 2008). The psychological and social aspects of these studies may have led some participants to answer questions in ways they felt were more compatible with professional and public expectations, thus increasing the risk for social desirability response bias (Polit & Beck).

**Lack of Generalizability**

Several of the reviewed studies were conducted outside of the United States. Several studies were conducted in European countries including Finland (Kanste et al., 2007), Germany (Bakker et al., 2000; Demerouti et al., 2000), the Netherlands (LeBlanc et al, 2007), Spain (Garrosa et al., 2010; Iglesias et al., 2010), Sweden (Bittman et al., 2003; Glasberg et al., 2007), and Turkey (Ersoy-Kart, 2009; Tunc & Kutanis, 2009). Estryn-Behar et al. (2007) included nurses from ten European countries in their study. Other countries outside of the United States and Europe included Australia (Allen & Mellor, 2002; Barnard et al., 2006), Canada (Leiter et al., 2009), and Iran (Sahraian et al., 2008). While this literature review focused on the nursing profession in general and was not limited to studies conducted in the United States, the results of these international studies may have been affected by cultural differences and therefore may
not be entirely applicable to nursing in the United States.

**Lack of Theoretical Frameworks**

Of the 27 reviewed studies, only 11 were based on theoretical frameworks. None of these 11 used the same theoretical framework to guide their research. Polit and Beck (2008) state that while some studies do not require theoretical frameworks because they have obvious practical goals, it is often difficult to integrate isolated nursing studies that lack theoretical foundations. The theoretical framework by Maslach and Leiter (1997) and Maslach et al. (2001) that guided this literature review provided a basis for assimilating the results of all 27 studies, but it would have been otherwise difficult to combine all of these results into a guide for preventing and reducing nurse burnout without understanding the conceptual framework behind most of the studies.

**Studies Not Limited to Nursing**

While most of the reviewed studies focused solely on the nursing profession or considered nurses separately from other groups of participants, some studies included many types of health care workers. Glasberg et al. (2007) included all health care personnel with patient contact. The study by Peterson et al. (2008) included physicians, registered nurses, nursing assistants, social workers, occupational therapists, physiotherapists, psychologists, dental hygienists, dentists, service staff, administrators, teachers, and technicians. LeBlanc et al. (2007) studied physicians, nurses, and radiotherapy assistants. Because the results of these studies are based on all of the participants and not just nurses, the results may not be as applicable as the results of those studies that focused solely on nursing.

**Convenience Sampling**
Most of the studies included in this literature review used convenience samples. Although it is the most common form of sampling, convenience sampling is also the weakest (Polit & Beck, 2008). The results of these studies would have been strengthened if participants had been randomly selected.

**Low Response Rates**

In addition to poor sampling methods, several studies suffered from low response rates. Polit and Beck (2008) state that a response rate greater than 65% is usually necessary to minimize nonresponse bias. Nonresponse bias occurs when low response rates lead to samples that are not representative of the entire population, thus limiting the generalizability of the results. Many of the studies included in this literature review had response rates less than 65%: 59% (Demerouti et al., 2000), 56% (Barnard et al., 2006), 52% (Aiken et al., 2008; Aiken, Clarke, Sloane, et al., 2002; Allen & Mellor, 2002; Flynn et al., 2009; Hanrahan et al., 2010; LeBlanc et al., 2007), 42% (Halm et al., 2005), 27% (Leiter et al., 2009), 26% (Garrett & McDaniel, 2001), and 24% (Sadovich, 2005). The studies by Bakker et al. (2000), Ersoy-Kart (2009), Estryn-Behar et al. (2007), Gallagher and Gormley (2009), Montoro-Rodriguez and Small (2006), and Santos et al. (2003) did not provide response rate data, thus hampering the ability to determine if these were representative samples.

**New Studies Using Old Data**

While all of the 27 reviewed studies were published since 2000, some of the data used in these studies are more than 10 years old. For example, the study by Vahey et al. (2004) analyzed data that was collected in 1991. The studies by Aiken et al. (2008); Aiken, Clarke, Sloane, et al. (2002); and Hanrahan et al. (2010) were all based on the
same data collected between 1998 and 1999. Although these studies were all published recently, their conclusions based on old data may not be entirely applicable to today’s nurses.

**Single Site Studies**

Several of the reviewed studies were conducted at a single hospital or facility (Bakker et al., 2000; Bittman et al., 2003; Garrett & McDaniel, 2001; Gallagher & Gormley, 2009; Halm et al., 2005). Future studies would be strengthened by recruiting participants from multiple facilities. Multisite studies provide larger, more diverse samples that increase the generalizability of results (Polit & Beck, 2008).

**Suggestions for Future Research**

**Randomized Controlled Studies**

Of the 27 studies reviewed, most were descriptive studies. The high proportion of descriptive studies is typical for nursing research, but correlational research does not allow researchers to demonstrate causal relationships (Polit & Beck, 2008). Polit and Beck credit experimental designs with producing the strongest evidence of causal relationships, but there is a limited number of experiments regarding burnout in nursing. Of the studies reviewed, only Bittman et al. (2003) and Peterson et al. (2008) performed randomized controlled trials, and LeBlanc et al. (2007) conducted a quasi-experiment. While correlational studies are needed to evaluate relationships between burnout and possible contributing factors, more experiments are needed to identify methods of preventing and reducing burnout.

**Longitudinal Studies**

More longitudinal studies are also needed. Gallagher and Gormley (2009) and
Halm et al. (2005) disagree regarding whether years of experience are associated with an increase or decrease in emotional exhaustion. This topic would benefit greatly from a longitudinal design in order to track changes in emotional exhaustion over time rather than relying on cross-sectional data.

**Differences in Burnout Between Male and Female Nurses**

There is a major gap in the literature regarding the differences between how male nurses experience burnout compared to female nurses. The only articles found on this topic were excluded from this literature review because they focus on nursing in specific countries rather than nursing as a profession. Al Ma’aitah, Cameron, Armstrong-Stassen, and Horsburgh (1999) explored the impact of gender on nurses’ quality of work life in Jordan, a country where nursing is viewed as a low-status profession. Hsu, Chen, Yu, and Lou (2010) investigated job stress and burnout among male nurses in Taiwan, where only 0.8% of nurses are male. Currently, 6.6% of nurses in the United States are male, and this number is growing (U.S. Department of Health and Human Services Health Resources and Services Administration, 2010). Future research should evaluate the differences in burnout levels between male and female nurses in the United States and other countries where nursing is viewed as a more respectable profession for both genders.

**Summary and Conclusions**

Burnout is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 1982; see also Maslach & Leiter, 1997; Maslach, Schaufeli, & Leiter, 2001). The degree of job burnout a person experiences is based on the degree of match or mismatch with the work environment. Six areas of
mismatch include workload, control, reward, community, fairness, and values (Maslach & Leiter; Maslach et al.). These six areas are influenced by staffing (Aiken, Clarke, Sloane, et al., 2002; Hanrahan et al., 2010), job demands (Bakker et al., 2000; Demerouti et al., 2000), work environment (Aiken et al., 2008; Garrett & McDaniel, 2001; Sadovich, 2005; Vahey et al., 2004), supervisor support (Garret & McDaniel; Kanste et al., 2007; Vahey et al.), nurse-physician relationships (Hanrahan et al.; Vahey et al.), and coping skills (Garrosa et al., 2010; Glasberg et al., 2007; Iglesias et al., 2010; Montoro-Rodriguez & Small, 2006; Tunc & Kutanis, 2009).

Limited research is available regarding which nursing specialties are impacted most by burnout. Generation X nurses are more likely to experience burnout related to mismatches in the areas of values and control than Baby Boomer nurses (Leiter et al., 2009). Matures, Baby Boomers, and Generation Xers all experience strain from poor working environments. Baby Boomers experience more strain related to their roles (Santos et al., 2003). There is little research available regarding interventions to reduce burnout. Most successful burnout interventions are based on increasing social support (Bittman et al., 2003; LeBlanc et al., 2007; Peterson et al., 2008).

Most studies regarding burnout in nursing have focused on contributing factors to burnout. Future research should focus on burnout among different genders and nursing specialties in order to identify those areas that are most at risk in order to focus interventions to prevent burnout from occurring. Future studies should also evaluate methods of reducing burnout such as the peer-support group described by Peterson et al. (2008) using longitudinal, multi-site experimental designs.
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