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The Impact of Stress Management on Nurse Productivity and Retention

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Executive Summary

- Throughout the history of nursing there is a seeming legacy of personnel shortage, lack of funds, and, based on the nature of the role and related services, heightened levels of stress involved in patient care.
- The future of the profession, and more imminently, patient care and the health of nurses, may be significantly impacted by repeated challenges where current levels of stress and burnout are contributing to organizational problems, burnout, and attrition.
- Employee stress and burnout commonly lead to myriad health-related problems that result in significant organizational consequences.
- There are many methods of stress management, and sometimes the best and most effective begin with simple recognition, validation, and visible and committed efforts by the nurse executive.
- Regardless of the technique or approach, what is clear is that there is a need for nurse executives to include the development and enhancement of comprehensive stress-management programming for employees as a priority item to avoid burnout and attrition.

"Nurses are short-handed, understaffed, and overworked. We are only an accidental needlestick or body fluid splash injury away from exposure to deadly diseases. We get aches and pains from lifting and tugging on people bigger than we are. We watch people die. We see families grieve. Often we work double shifts to meet the needs when staffing is overstretched. We are tired. Yet we love nursing — most days. But we need support and help to cope" (Turley, 2005b).

Nursing has evolved as both a science and service profession despite ongoing adversity. During the early efforts of Florence Nightingale in the barracks of Scutari amidst the Crimean War, there was, notably, a significant shortage of funds, supplies, and trained personnel to care for the seemingly countless numbers of young men dying from disease and battle wounds (Gill, 2004). Many of these problems persist today, including the current severe shortage of nurses working at the bedside. The profession of nursing has thrived over the past century into a respected and necessary member of the health care arena. However, the future of the profession, and more imminently, patient care and the health of nurses, may be significantly impacted by repeated challenges in the contemporary era where current levels of stress and burnout are contributing to organizational problems, burnout, and attrition.

According to the American Nurses Association (ANA, 2001), there have been countless articles, presentations, and interviews about the contemporary nursing shortage, specifically noting that it is of a different type than in the past. This is of particular importance as the key differentiators (the aging nurse workforce, the general workforce shortages in ancillary professions

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and support labor, and the global nature of this shortage) are generationally unique when historically compared to previous shortages (ANA, 2001). In addition, the exponential expansion of scientific knowledge and clinical approaches and the significantly shortened length of time to provide comprehensive patient care to the "sicker," and to do so "quicker," subsequently increase the pressure and stress related to efficient and efficacious care across the continuum of health care. Nursing is, without question, a demanding profession and typically represents the largest number of core personnel resources for health care agencies; to maintain and enhance performance, nurse executives are now confronted with addressing the stress and high levels of burnout which are affecting the workforce, including recruitment, retention, and above all, patient care.

Scope of the Problem

Approximately one-third of the current nursing workforce is over 50 years of age and the average age of full-time nursing faculty is 49 years of age (ANA, 2001). By 2010 40% of nurses will be 50 years old or older and thus approaching retirement (Buerhaus, 2000). In a review of 6 months of news articles throughout the United States about the nursing shortage, *every* story noted the need for creative strategies; disappointingly, few described any new interventions (ANA, 2001).

The general work environment in the United States is different than at the time of the last nursing shortage and must be considered when developing strategies to manage stress. Particularly, there is intergenerational conflict as members from each of four generations often work together on the same unit. "Never before have so many generations in nursing been asked to work together" (Swearingen & Liberman, 2004, p. 54) where "the current intergenerational conflict is not enticing Generation X [the currently employable 'new' generation] to seek or maintain careers in nursing, thus exacerbating the nursing shortage" (Swearingen & Liberman, 2004, p. 54). Another significant contributor to stress in the nursing workforce is the blurring between what has been the traditional roles of the *manager* and *the managed*, as well as the evolving conceptualization of work and home (ANA, 2001). The following overarching contemporary trends and issues affect all work environments and provide a context, including divergent intergenerational views, for stress and burnout (Hymowitz, 2000; Lancaster, 1999; Shellenbarger, 1999; Swearingen & Liberman, 2004).

- *Time over money*. Many employees today seek more personal time versus financial compensation.
- *Professional vs personal role*. Most employees want to be active, both at work and at home, not feeling compelled to choose between the two.
- *Rising superclass of employees*. As more employees opt for less stressful work and more personal time, a subgroup of employees, often characterized as more driven, are carrying the load of travel, relocation, and long hours.
- *Integration of home and work*. Employers are increasingly being asked to offer services to reduce the stress of managing professional and personal lives. These services include child and elder care, dry cleaning, housecleaning, on-site full-service banking, and even yard care.
- *Generation X entrepreneurs*. Employees in their 20s and 30s typically view the workplace differently than their previous generation counterparts, preferring greater autonomy and less bureaucracy. They are "loyal" to the *work* versus the *employer*. Thus, many are choosing independent work/freelancing, such as the temporary agencies in health care.
- *Collaborative management*. Traditional models of administrative structures are also in a state of flux with flattening of hierarchies and increased team structures. People who can create environments of teamwork and creativity are the definition of strong managers. No longer is top down control seen as desirable.

Turley (2005a) notes many causes of stress for nurses, including the critical nature of the work with its potential for serious injury to others if careless for even a moment; staffing shortages requiring fewer nurses to care for more patients with less help; working double shifts or returning to work 8 hours after one shift ends to meet the needs of patients and the facility; inadequate rest because of working rotating schedules so that bodies have difficulty knowing when to sleep; working closely with deadly diseases and knowing that an accidental needlestick or body fluid splash can easily result in infection; struggling with aches and pains from lifting and pulling patients; seeing some coworkers permanently disabled because of on-the-job back injuries; watching people suffer and coping with family grief in the front lines of human need; touching, bathing, applying dressings and wound care to those who are indecent or rude; providing physical care to those who are unclean; job layoffs, mergers, company failures, job insecurity; difficulties with co-workers or supervisors; unfair evaluations or expectations; and the potential for lawsuits.

Even as bench scientists continue to tease out the molecular and cellular events undergirding the stress response (Ember, 1998), there is a significant need to provide realistic stress-reduction approaches that are immediately usable and promote a decrease in burnout. Consider the following context:

> In a world that changes so rapidly that computers are outdated the moment they are marketed, our body's response to physical and psychological threats has

> hardly changed a wit since our ancestors were busy hunting mammoths. We survive challenges by maintaining homeostasis, a delicate, dynamic equilibrium. If that harmony is disrupted, an exquisite repertoire of neural and biochemical events in the brain and immune system is jolted into action to counter the effects of the physical or psychological stress and to re-establish homeostasis. If homeostasis is not present, debilitating illness results (Ember, 1998, p.12).

It is posited that burnout in nurses is a direct reflection of this bio-psycho-social cascading process; specifically, if the nurse, who is continually exposed to high levels of stress, both physical and psychological, is unable to successfully manage that stress, then burnout, as a debilitating condition, both personal and professional, will likely result.

Consequences of Stress

Employee stress and burnout commonly lead to myriad health-related problems that result in significant organizational consequences. Stress-related physical illnesses include heart disease, migraines, hypertension, irritable bowel syndrome, muscle, back and joint pain, duodenal ulcers, and mental health problems such as anxiety, depression, insomnia, and feelings of inadequacy (American Psychological Association [APA], 2004; Benson, 2000; Wong, Leung, So, & Lam, 2001), all of which can directly contribute toward absenteeism, decreased work performance, and ultimately, burnout. Nurses, encountering ongoing stress, are also more likely to eat poorly, smoke cigarettes, and abuse alcohol and drugs, all of which can lead to negative health conditions affecting personal well-being and subsequently, the quality and efficacy of patient care (Burke, 2000).

The consequences of these conditions can have a significant impact on individual nurses and the ability to accomplish tasks; specifically, poor decision making, lack of concentration, apathy, decreased motivation, and anxiety may impair job performance, possibly resulting in lethal threats to patient safety. In addition, absenteeism due to stress-related problems requires the administrative use of unplanned and expensive replacement staff from agencies, or mandatory overtime for staff nurses, which further contributes toward an environment of stress and burnout. Interpersonal difficulties commonly stemming from stressful situations may compromise group cohesion, thus impacting the efficient functioning of the complex work units within the health care organization, and ultimately adding work to the already over-burdened middle and senior management teams. The bottom line for nursing administrators is that employee stress and burnout incur significant financial obligations to agencies; specifically, estimates, nationally, based on government, industry, and health groups, place the cost of stress at approximately $250 to $300 billion annually (Jones, Tanigawa, & Weisse, 2003). This includes estimates of the dollar effects of reductions in operating effectiveness, poor decision making, medical expenses, and attrition resulting from stress.

Organizations must address some of the variables that lead to nurse attrition or they will find themselves confronted with the dire consequences related to patient care delivery and meeting national patient safety goals. Of note, other than retirement, one in five nurses will leave her/his job due to dissatisfaction, notably including burnout and stress (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). Of related significant concern, current annual registered nurse turnover rates are estimated by the Joint Commission on Accreditation of Health Care Organizations (2002) to range from 18% to 26 %, with recent cost estimates for each nurse-turnover ranging from $62,100 to $67,000 (Jones, 2005). Specifically, this can *add $1 million* in additional costs to an organization *for every 15 nurse positions* that are left vacant due to turnover.

When base staffing levels are low, due to high attrition rates, hospitals are forced to increase use of overtime or contract personnel. These labor costs are "forced costs" and generally are higher since they are of a staffing crisis intervention nature rather than a negotiated or strategically planned expense. With the current national situation of greater demand than supply of nurses, stress-related attrition simply adds greater labor costs to health care organizations, which are not recoverable from private or public insurance sources, and threatens safe patient care (Aiken, Clarke, Sloan, Sochalski, et al., 2002).

Low job satisfaction, controversial issues related to mandatory overtime, and poor staffing patterns create a ready culture for unionization. Consequently, additional costs to organizations will be incurred to deal with the union representatives, convene educational and public-hearing and community-relations related meetings, as well as manage the related distraction from the routine daily business of patient care. Union nurses are more willing to decline overtime and schedule changes to accommodate organizational demands resulting in less flexibility in staffing plans and more use of unplanned and expensive replacement staff from agencies (Berney, Needleman, & Kovner, 2005). As such, interventions to prevent stress and burnout and retain nurses are critically necessary to ensure efficient and quality patient care and to potentially save hospital organizations billions of dollars annually.

Current Interventions

The tremendous financial cost of stress and burnout for hospitals, as well as the resultant impact to job performance and quality of life for nurses has not been successfully addressed to date. Much of the contemporary extant literature focuses on greater recruitment efforts, organizational support, and improved

clinical knowledge through continued education (Aiken, Clarke, & Sloane, 2002; Garrett & McDaniel, 2001; McGowan, 2001; Rambur, McIntosh, Palumbo, & Reinier, 2005; White & Tonkin, 1991). Other suggested approaches have targeted relaxation training and the teaching of coping strategies such as positive self-talk (Grant, 1993; Tsai & Crockett, 1993). Unfortunately, stress and burnout among nurses persist (ANA, 2001; Turley, 2005a).

Stress management can produce positive changes physically, mentally, and emotionally for innumerable populations (Benson, Klemchuk, & Graham, 1974; Deckro et al., 2002; Mandle, Jacobs, Arcari, & Domar, 1996; "Sample Relaxation Studies," 2004), yet coping strategies alone appear to be insufficient at thwarting burnout for nurses. Many of these approaches are not seen as realistic by most nurses (Turley, 2005a). Additionally, social support systems can be effective buffers against stress (Cohen & Wills, 1985; Johnson, 2005; Measurement Excellence and Training Resource Information Center [METRIC], 2005), yet, aside from advocating for system change, nurses have little control over the type of systemic support being provided. What appears to be needed is a comprehensive nurse burnout prevention program coordinated by nurse executives that includes *both* nurse-centered stress management and executive system support. More importantly, this program must be seen as realistic, viable, and applicable by the front-line nurse who works in a chaotic environment, most likely in an understaffed setting, and who must learn to employ stress-reduction techniques during a steady flow of patient and family care.

Proposed Interventions

Exploring brain and behavior correlates of stress management. When individuals are stressed, the sympathetic nervous system stimulates the body to release adrenalin and cortisol in preparation for a "fight or flight" response to actual or perceived alterations in the surrounding environment. By virtually effecting the entire body and mind with neurohormonal and neurochemical level shifts, this often overlooked primitive brain function has significant power over perceptions of crisis situations and subsequent decision making. For those experiencing chronic stress, the body is continually activating the sympathetic nervous system which can exhaust the body, result in repetitive response patterns to emergent and effectively charged situations, and ultimately result in health problems such as those previously described. The brain is responsible for interpreting events and psychosocial situations as stressful or not; therefore, when the brain perceives stress, the nervous system reacts with a stress response. Conversely, when individuals effectively gain control over affective and behavioral responses to events through stress-management techniques, the brain subsequently has become able to examine the event, interpret it within a proactive frame of possible solutions, including previously established self-soothing techniques, and alternate effective responses follow (APA, 2004; Benson, 1975).

Learning to elicit the relaxation response through various stress management techniques is related to improvement in myriad stress-related health problems. The *American Journal of Nursing* ("Sample Relaxation Studies," 2004) and Mandle and colleagues (1996) provided reviews of numerous studies linking relaxation training to improved patient functioning with conditions such as chronic neck and back pain, tension headaches, high blood pressure, anxiety, and sleep disturbance. In the various studies, patients were trained in one or more of the following techniques: controlled breathing, guided imagery, stretching, muscle relaxation, and/or music therapy. Similarly, Herbert Benson, founder of the Benson-Henry Institute for Mind Body Medicine at Harvard, has spearheaded countless studies linking the learned elicitation of the relaxation response to improved physical and mental health of patients including stress-related illnesses such as insomnia, anxiety, headaches, and hypertension (Benson et al., 1978; Benson, Rosner, Marzetta, & Klemchuk, 1974; Jacobs, Benson, & Friedman, 1996).

Many of the described patient conditions improved by stress-reduction techniques in the studies mentioned previously, similarly afflict nurses and result in stress and burnout (ANA, 2001; Wong et al., 2001). Conversely, nurses who implement various stress-coping strategies exhibit fewer mental health problems such as anxiety, depression, and feelings of inadequacy (Wong et al., 2001); however, stress-management strategies do not come naturally for everyone. Self-care techniques to prevent and/or alleviate stress-related problems can be learned. Providing nurses with opportunities for learning a multitude of stress management strategies and self-soothing techniques directly applicable to the nursing environment and easily utilizable on the job can be of significant benefit. It is feasible that a comprehensive stress-management program for nurses, drawing from strategies taught to patients for reducing stress and tailored to nurses, could positively impact nurses' health and well-being, and consequently result in greater productivity, and ultimately, a decrease in related burnout and attrition.

Mind and body. The Mind Body Institute's Education Initiative (Benson-Henry Institute, 1989) was designed to teach the relaxation response to educators and students. It can decrease stress in teachers, improve student attendance and academic performance, and reduce impulsivity (Benson et al., 1994; Benson et al., 2000; Deckro et al., 2002). This program utilizes several relaxation strategies including the use of biodots (a small adhesive thermometer placed on the hand to measure one's temperature and thus indicate level of blood flow

throughout the body) to assist individuals in using biofeedback to reduce stress by regulating the body's blood circulation, controlled diaphragmatic breathing and breath focus, mindfulness or obtaining a present focus, stretching, music therapy, guided imagery, "minis" (techniques quickly and spontaneously utilized throughout the day to elicit the relaxation response), nutrition, and exercise (Benson-Henry Institute, 1989).

Utilizing a program such as the Mind Body Institute's Education Initiative with nurses may translate toward improved health and, consequently, fewer missed days of work, enhanced patient care, and improved relations within and among nurses, staff, and patients. Trained facilitators in comprehensive stress-management programs are available to conduct workshops and can be located through a variety of sources such as the Benson-Henry Institute for Mind Body Medicine at Harvard, the American Institute of Stress, the Stress Education Center, National Speakers Association (see Table 1 for contact information), as well as local directories listing counselors and psychologists specializing in stress reduction, and local colleges and universities employing faculty with expertise in stress management. It should be noted that the immediate expense of hiring outside professionals to conduct regular stress-reduction training for nurses is sure to outweigh the inestimable long-term expense of nurse burnout.

Social support. In conjunction with regular nurse-centered stress-management training, nurse burnout prevention programming would benefit from a supportive work environment. Cohen and Wills' (1985) seminal work on the stress-buffering hypothesis describes the link between social support, stress, and various health states. By buffering stress, social support is able to "moderate an individual's emotional, behavioral, and physiological reactions to stressful life events, thereby reducing the impact of stress on health" (METRIC, 2005). Greater levels of social support correlate significantly with longevity of life, better immune functioning, and greater adherence to self-care regimens (Berkman & Syme, 1979; Gordon & Rosenthal, 1995; Humphreys, Moos, & Cohen, 1997; Uchino, Cacioppo, & Kiecolt-Glaser, 1996; Wen, Parchman, & Shepherd, 2004). Based on these results, nurses within a positive, supportive environment may experience reduced stress, fewer health-related problems, and greater adherence to self-care practices such as regular use of stress-reduction techniques.

Table 1.
Contact Information for Organizations Conducting Stress Management Workshops Applicable to Nurses

Organization	Contact Information
Harvard's Benson-Henry Institute for Mind Body Medicine	http://www.mbmi.org/home/
The American Institute of Stress	http://www.stress.org/
Stress Education Center	http://www.dstress.com/seminars.htm
National Speakers Association	http://www.nsaspeaker.org/

Social support refers to the provision of resources that enhance one's sense of personal value, connectedness to a communicative network, and commitment to others and/or work (Centers for Disease Control and Prevention, 2005). Support can be provided emotionally (for example, positive feedback), materially (for example, rewards), instrumentally (for example, assistance with tasks), and informationally (for example, trainings) (METRIC, 2005). With considerably little effort, nurse executives can coordinate the implementation of these supports in the nursing environment.

Fostering the building of relationships within the workplace can contribute to emotional, instrumental, and informational support. Individuals given opportunities to relate, vent about stressors, and commune with co-workers may feel emotionally affirmed and reassured, instrumentally assisted through mutual problem solving, and potentially informed of knowledge and resources not previously known (Mind Tools, 2006). This environment fosters a team approach to completing tasks and determining system needs.

To coordinate the establishment of a collegial environment, nurse executives can encourage the use of breaks as opportunities to consult with one another about work concerns, promote and encourage opportunities for socializing around holidays and special events, establish a mentoring program for new employees, create a warm and inviting break room that is conducive to socializing, and expect professional respect among nurses and nurse supervisors. Material support can be offered to nurses through the positive reinforcement of publicly acknowledging the benefits of healthy communication and mutual problem solving.

Specific to informational support, nurses with greater levels of professional competence feel less anxious about their jobs (Rambur et al., 2005; White & Tonkin, 1991), thus emphasizing the importance of providing ample opportunities for continued education both within the hospital and through outside sources such as professional organizations and higher education institutes. Nurses can be rewarded for attending these training sessions in both tangible and intangible ways (material support). Public recognition of those invested in professional development could be relayed to hospital executives, certificates of attendance could be given, meals could be provided, raffle drawings

for gift certificates (to obtain a massage, for example) could be offered, course fees could be waived, or nominal monetary compensation for attendance could be given. In addition to continued education for professional competence and skills, opportunities for attendance and participation in stress-management workshops addressing relaxation strategies, nutrition, and exercise such as those mentioned previously, could potentially contribute to emotional, informational, material, and instrumental support.

Individuals experiencing high levels of work-related stress and burnout may also benefit from professional counseling (APA, 2004). However, when it is assumed that others will view counseling as a weakness, individuals are less likely to seek professional help (Farina, 1982). Therefore, specific to emotional support, stigma around seeking professional counseling should be removed, and instead, a system-wide attitude normalizing counseling as an option for addressing typical life stressors should be adopted and proclaimed. For example, reframing and rephrasing such an activity as "supervision" maintains a sense of professionalism and reinforces to peers that the nurses are doing what they need to do to enhance their ability to provide quality care to their clients and advance their personal level of professionalism. Information about quality local professional counselors and their specialty areas should be made readily available to nurses and an active referral system should be in place. Nurse executives may also request that employee assistance programs offer group counseling addressing nurse burnout and encourage attendance among staff.

Key Points for Consideration and Intervention

Throughout the history of nursing there is a seeming legacy of personnel shortage, lack of funds, and, based on the nature of the role and related services, heightened levels of stress involved in patient care. In contemporary times, these stressors persist, and in fact, history has shown that there is likely to be a perpetual increase in such stress. Nurse executives, by virtue of their position (and likely from their own previous experiences at the bedside), have not only an understanding and concern for those with whom they work, but are also able to provide a foundation and platform for incorporating stress management into health care organizations to promote job satisfaction and enhance retention levels of nursing personnel. Just as front-line employees are stressed, so too are most nurse executives. Vis-a-vis a shared effort, creating an environment where stress reduction techniques are facilitated and subsequently successful, is a reality. The following key points are suggested for consideration by nurse executives.

- Recognize and acknowledge that the stress being encountered by front-line employees is real and of significant concern. Often, simply verbalizing the obvious provides a sense of support and validation, and subsequently, a foundation for proactive communication and suggestions for problem solving.
- Provide positive reminders that although the events surrounding employees may often be out of their control, their personal responses to those stressors are under their control.
- Offer stress-management continuing education programming and provide incentives to attend these events. This promotes employees to consider the serious nature of developing such techniques, and also provides an opportunity to explore methods and approaches without being distracted by unit activities.
- Encourage "on the spot" and "immediate" measures for stress reduction. For example, cover the unit for 3 to 5 minutes while encouraging a seemingly stressed employee to simply take a "stretch break." If there is not a private place to stretch, the employee can go into a unit bathroom, lock the door, roll the head from side to side to release neck tension, and/or stretch the arms up over the head to obtain an instant sense of reduction in tension and stress. Nurses may even be reminded to stretch their back, roll their head, take a deep breath, or count to ten while engaging in work tasks. Such mini-techniques can provide lasting effects, and there is a notable message of care from the nurse executive to the employee that may also have long-lasting benefits.
- During staff meetings or other inservices, add a 3 to 5 minute segment to the agenda where employees are taken through a stretching exercise, deep-breathing technique, or, in an approach that has been successful and brings many smiles and laughs, have everyone do a 2-minute shoulder massage on the person to the left, then turn and do a 2-minute shoulder massage on the person to the right. This simple activity not only provides stress reduction, but promotes fun and casual "chat" between employees, subsequently enhancing communication and a sense of team building.

Conclusion

Regardless of the technique or approach, what is clear is that there is a need for nurse executives to include the development and enhancement of comprehensive stress-management programming for employees as a priority item to avoid burnout and attrition. There are many methods of stress management, and sometimes the best and most effective begin with simple recognition, validation, and visible and committed efforts by the nurse executive. Stress is detrimental to employees; however, it is unlikely that the stressful nature of the health care setting will decrease significantly in the time ahead; as such, what is needed is an increase in

stress-management approaches to counteract this rise. With each nurse executive beginning with small, realistic, and reasonable approaches, leading toward initial reductions in employee stress levels, there is a great potential for evolution toward employees, and nursing units as a whole, being able to self-manage work-related stress and find satisfaction in being able to focus on enhancing patient care.**$**

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