

Transforming nursing education: a review of stressors and strategies that support students' professional socialization

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Abstract: Nurse educators are facing the challenge of creating new ways of teaching and facilitating enhanced learning experiences in clinical practice environments that are inherently complex, highly demanding, and unpredictable. The literature consistently reports the negative effects of excess stress and unsupportive relationships on wellbeing, self-efficacy, self-esteem, learning, persistence, and success. However, understanding contributing factors of stress, such as the student's experiences of uncaring and oppressive interactions, is clearly not adequate. The transformation of nursing education requires a paradigm shift that embraces collegiality, collaboration, caring, and competence for students and the faculty. This paper reviews the literature on stress and its effects on nursing students. Grounded in theory related to stress and human caring, this paper focuses on the clinical environment and faculty-student relationships as major sources of students' stress and offers strategies for mitigating stress while fostering learning and professional socialization of future nurses.

Keywords: stress, faculty-student relationships, stress management, caring learning environment, incivility

Introduction

When viewed from the lens of student-centered learning environments, the need to transform nursing education practices and reduce stressors to facilitate student persistence and academic success becomes imperative.¹⁻³ Gibbons, Dempster, and Moutray suggest that a certain amount of stress or "eustress" is necessary for mental and physical wellbeing. Although moderate amounts of stress may motivate and enhance performance, it is well-documented that excess stress or "distress" negatively impacts students' physical and mental health, self-efficacy, learning, persistence, and academic success.^{4,5} Understanding the nature and causes of students' stress is a prerequisite to creating supportive learning environments called for by nursing education leaders. This paper reviews relevant literature on stress and its effects on nursing students. Grounded in theory related to stress and human caring, the paper focuses on stressors in the clinical environment including faculty-student relationships and offers strategies for mitigating stress while fostering the success and professional socialization of future nurses.

Theoretical underpinnings

Stress theory

Lazarus and Folkman⁶ defined stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her

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resources and endangering his or her wellbeing". They posit that cognitive appraisal of a stressor determines whether the stressor is interpreted as a challenge, threat, or harm/loss, and defined challenge as the aptitude for mastery or growth, threat as the possibility of harm, and harm/loss as an injury or loss which has already occurred. An event will be perceived as stressful if the individual evaluates that event as threatening (primary appraisal) and also perceives a lack of personal resources and depleted coping capacity to deal with the threatening situation (secondary appraisal). Furthermore, Lazarus and Folkman suggest an inverse relationship between stress and learning; that is, as stress increases, learning decreases.

Watson's human caring theory

Watson⁷ embraces the universal effects of caring and the social, moral, and scientific contributions that nurses make that foster human development. Watson explains that human interaction that is guided by a caring ethic promotes knowledge, wellbeing, and health. Further, Watson supports the notion that congruence of perceptions and experience are critical elements in achieving harmony within the person, between person and environment, and in transpersonal interactions. Within this context, stress has the potential for leading to perceptions of disharmony, a lack of wellbeing, and difficulty in acquiring knowledge.

A caring learning environment promotes harmony and supports the collaborative engagement of faculty and students in a process that leads to mutual respect and regard as both parties advance professionally. Each person becomes an active contributor to the learning process. As they progress through the educational experience, students and faculty become transformed and empowered.

Current knowledge

Stress in nursing education is gaining the attention of nurse educators and nurse researchers as the effects of stress on learning, persistence, academic success, and student satisfaction have been recognized. The following section focuses on current knowledge on stress from several perspectives.

Stress in nursing students

A substantial amount of research has explored students' experience of stress in baccalaureate nursing education.^{8-13,18} Sources of nursing students' stress have been categorized as academic, clinical, and personal/external. However, stressors reported by students, such as feeling overworked and negative

relationships with the faculty, often encompass more than one category. Within this context, stress emerges from "... the lack of professional knowledge and skills; clinical assignments, workload, and lack of support; taking care of patients; classroom and clinical evaluations; environment, nursing faculty, and clinical staff; and the effect of clinical practice on family and social activities".¹⁴ Further, research supports the inherent stressful nature of clinical work for the student nurse making exploration and evaluation of student perceptions of the clinical experience essential.

The effects of stress on nursing students include somatic anxiety, psychic anxiety, depressive symptoms, cognitive symptoms, neurovegetative symptoms, and common symptoms.¹⁴ Within this context, student coping behaviors that emerged in Sheu, Lin, and Hwang's¹⁵ study included physical symptoms (nausea, vomiting, diarrhea, vertigo, chest pressure), emotional symptoms (anxiety, nervousness, fear, depression), and social behavioral symptoms (lack of optimism, inability to work, think clearly, and/or make decisions, feel undervalued). The effects of stress extend beyond physical, emotional, and behavioral symptoms as students may experience difficulty in attaining educational goals. In this regard, the nursing student's ability to cope with multiple stressors is recognized as an important determinant of retention.^{12,16} Wells investigated the reasons that a sample of eleven students withdrew from their baccalaureate nursing program. These included: disillusionment with the nursing profession and nursing program practices; perceived lack of support and caring from teachers and/or nursing staff; disillusionment related to campus life; and external stressors not related to the institution. Wells'¹² findings revealed that the accumulation of two or more academic, social, and/or external stressors was associated with academic failure or voluntary departure from nursing school.

The overall atmosphere for learning is largely determined by the clinical instructor and the type of learning climate created.^{17,18} Although the faculty is positioned to modify nursing students' stress by creating supportive learning environments, the literature reveals that some faculty exacerbate students' stress. These findings suggest the paramount role that faculty-student relationships play in nursing students' education and socialization.

Stress in the clinical environment

Most of the studies reviewed identified the clinical learning environment as a primary source of nursing students' stress.^{8-11,14} The clinical learning environment presents multiple challenges to nursing students who must demonstrate

the ability to provide competent patient care in complex and unpredictable clinical practice settings in order to be successful. In addition, students may be held to high expectations for performance despite an unfamiliar clinical setting, a new clinical instructor, and unfamiliar, newly assigned patients. Magnussen and Amundson¹⁹ described the experience of being a nursing student as exciting but “filled with obstacles and stress”. Twelve students enrolled in a six-semester nursing program were interviewed. Four major themes were identified: a) meeting conflicting demands, b) feeling overworked, c) feeling unprepared, and d) seeking respect and support from the faculty. Students’ perceived some teaching practices in nursing education as adversarial and stressful.

Mahat¹⁰ categorized students’ stressors into five areas: initial experiences, interpersonal relationships, ability to perform, heavy workload, and feelings of helplessness. Not surprisingly, initial clinical experiences (giving injections, providing care, communicating with clients, and performing physical exams) were also reported as stressful. Kleehammer, Hart, and Keck²⁰ sought to identify anxiety-producing clinical experiences for 92 baccalaureate nursing students and found that students were anxious about making clinical mistakes. Other major stressors identified in the literature include feelings of inadequacy, lack of confidence with decision-making, and unfamiliar clinical settings.^{18,20,21}

Students may experience additional stress as they work to demonstrate competence in unfamiliar clinical settings. Levett-Jones et al²² investigated the duration of clinical placements and nursing students feelings of belonging. They found that students experienced anxiety and uncertainty at the start of each new clinical placement, and needed a period of time to “settle in”, establish collegial relationships, and adjust to the routines and norms of the clinical environment. Likewise, Reutter et al²¹ noted that every time a student rotated to a new clinical unit they had to adapt to a new clinical instructor. However, faculty expectations often varied and students had to adjust their behavioral responses accordingly. Students also had to learn the clinical unit’s formal and informal norms and locate supportive nursing staff each time they began a new clinical rotation, a process typically experienced as stressful.

The literature suggests social support as an important mediating factor for coping and persistence. In a study of 458 current and former associate degree nursing students, Shelton²³ found that students who perceived greater faculty

support were more likely to persist to graduation from a nursing program. Shelton measured students’ perceptions of 24 different aspects of faculty support. Two specific types of support were identified – psychological support, directed at facilitating a sense of competency, self-efficacy, and self-worth and functional support, aimed at the accomplishment of academic tasks. Psychological support meant “faculty being approachable, demonstrating respect for and confidence in students, correcting students without belittling them, listening, acknowledging when students have done well, being patient with students, and having a genuine interest in students”. Shelton found that psychological support was just as important to student persistence as functional support. Within this context, the effects of relationships with the faculty and faculty behaviors on student perceptions of support are explored.

Faculty-student relationships

Research identified unsupportive relationships with nursing instructors as a major source of nursing students’ stress.^{8,10,11,17,20} Mahat¹⁰ found that negative instructor-student relationships were identified by 45% of junior baccalaureate students who reported that unsupportive and demeaning faculty members made them feel incompetent. Beck and Srivastava⁸ surveyed 94 baccalaureate nursing students to examine their perception of level and sources of stress and found that the students experienced significantly high levels of stress. Students ranked relationships with faculty members as their fourth greatest stressor.

Oermann¹⁷ compared the perspectives of 211 associate degree nursing (ADN) students and 204 baccalaureate nursing (BSN) students about their clinical experiences. For both ADN and BSN students, stress increased as students progressed through their program. The predominant stressor identified by ADN students was the clinical instructor, while for BSN students it was patient care, and then the clinical instructor. Relationships with clinical faculty members and faculty behavior play a significant role in nursing students’ experience of stress.

Faculty behaviors

Within the teacher-student relationship, a major source of anxiety for nursing students is direct observation by faculty members and the perceived focus on the evaluation of students’ performance in the clinical setting rather than student learning.^{11,20,24–26} Wilson²⁶ examined senior baccalaureate nursing students’ experiences of learning in a clinical setting with acutely ill infants. Participants

perceived the clinical learning environment as one involving constant evaluation of their performance against a standard of perfection, which included answering all of the instructor's questions correctly and making no mistakes. Furthermore, "students perceived that they were involved in a contest where the student tried to look good and the instructor tried to make the student look bad".

Other researchers report similar findings regarding dimensions of clinical evaluation that students perceived as threatening. In several studies, students described faculty members "hovering" as an additional stressor that contributed to an adversarial climate and hindered learning.^{24,27,28} Gillespie²⁷ studied connected and unconnected teacher–student relationships in clinical nursing education and found that students learned less and perceived a lack of connection with evaluator teachers who tended to "grill them with questions", continually criticize, and "watch them like a hawk". Other researchers have reported similar findings. Poorman et al²⁸ examined the experiences of 20 self-identified at-risk nursing students. While students wanted and expected teachers to be present during clinical experiences they reported that faculty who hovered over them during clinical experiences increased their anxiety and hindered learning. More recent research indicates that some of these practices reflect faculty incivility that is increasingly acknowledged as a common practice across nursing programs.

Faculty incivility

An emerging body of recent research points to faculty incivility as a major source of nursing students' stress.^{24,29,30,31} Students in these studies reported encounters with faculty they described as aloof, intimidating, demeaning, arrogant, and unfair. Perceived faculty incivility created a negative learning environment that increased students' stress and inhibited learning and confidence.^{24,29} Marchiondo et al³¹ examined the effects of faculty incivility on BSN students' program satisfaction. They reported that 88% of study participants reported at least one experience of faculty incivility. Furthermore, 35% of the students reported feeling anxious, nervous, or depressed in response to faculty incivility.

Within the educational context, faculty incivility may represent a threat for a number of reasons. It may result in a restriction of needed resources or positive reinforcements for the development of a professional identity, a sense of professional self-efficacy and successful outcomes. Bandura³² posits that positive feedback from others,

especially others who are perceived as experts or authority figures such as teachers, influence the individual's emerging sense of competence, self-efficacy, and self-esteem. Incivility confronts the student with negative feedback and hinders the development of self-esteem and self-efficacy. Lowered self-efficacy and self-esteem contributes to poor performance.³² The effects of incivility are exacerbated by an inability to resolve the associated negativity and the appraisal of the situation as unmanageable. Negative interpersonal interchanges interfere with the development of social supports in the environment. Women in particular are affected by restricted social supports because women "tend and befriend" as a coping strategy in aversive situations.³³ Incivility restricts the amount of social support received, which is essential for coping with and buffering stressful events or environments.³⁴ Finally, the teacher-centered perspective inherent in faculty incivility is the antithesis of caring. As such it conflicts with nursing's ideology and results in additional stress due to its incongruence with students' expectations and their experience.^{12,24,35}

Future directions for managing stress

Interventions for the stress experienced within nursing education requires changing the current/traditional models of the educational environment and empowering students to better cope with the stress they may encounter. Nursing faculty are positioned to create caring and supportive learning environments that facilitate students' coping and persistence, perceived self-efficacy, and success in nursing. This section provides direction for strategies students and faculty can implement to enhance learning.

Peer and staff mentorships and modeling

Peer support³⁶ and personal mentoring^{37,38} can be effective strategies to reduce student anxiety in clinical settings. Aston and Molassiotis³⁶ explain that with the support of senior nursing students in the role of mentors, beginning junior nursing students can be guided in patient care assignments within the clinical setting. This relationship fosters confidence as students communicate freely and ask questions without fear of reprisals from nursing instructors. Nursing students support each other in a student centered, non-threatening learning environment that minimizes the student's anxieties when first entering unfamiliar clinical settings.

Through mentorships, senior students serve as positive role models for their peers and also provide opportunities for students to develop communication and leadership skills

in their new role as a mentor. This relationship nurtures self-esteem and self-efficacy among senior nursing students as they perceive themselves as valued by peers and evolve personally and professionally. Papp, Markkanen, and von Bonsdorff³⁹ expand on this concept by suggesting that clinical staff act as mentors for students. Outcomes that supported the effectiveness of staff mentors found a greater appreciation for students in the clinical setting; greater cooperation between academia and clinical staff; a valuing of clinical practice shared by students; and development of greater self-direction in students.

Caring learning environments

A caring learning environment can mitigate students' anxiety and feelings of stress. The students in Hughes'⁴⁰ study described a caring climate as one in which the teacher acknowledged and responded to "the feelings of stress and anxiety that are experienced by students". Bankert and Kozel⁴¹ suggested that creating a caring environment that demonstrates value, respect, and support as a collaborative enterprise between faculty and learners not only fosters relationships but also promotes learning in a nonstressful manner. They explain a caring learning environment is based on genuine dialog, engagement, and reflection. Further, the development of formal and informal support systems with faculty, staff, and peers optimizes academic and social connections and provides essential resources to proactively address stress and positively impact retention and satisfaction.^{5,9,42,43} In the end, creating a caring learning environment and providing diverse support networks increases self-esteem, promotes success and satisfaction, and increases the number of professional nurses available to deliver high-quality health care for global populations.⁵

Watson's⁷ theory on caring provides a framework for establishing relationships that support academic success, professional evolution, and collegial relationships. A caring learning environment actively engages faculty members and students in learning through mutual respect and genuine presence; this relationship requires a student/faculty partnership, collaboration, commitment, self-direction, and creativity. Engagement of the learner and faculty members as equal partners in the learning environment fosters connections, promotes self-efficacy, and serves to transform participants. This process facilitates meaningful learning opportunities.

As participants become immersed in their learning, they begin to experience a new way of learning through dialog; dialog with self and dialog with other participants. Newman⁴⁴

supports this transforming presence, and what emerges is a collective commitment to learn; a new way of being with each other as the student and faculty roles transform to one of active participants in the learning environment with a common goal to optimize learning. A caring, humanistic relationship within the academic and clinical environments helps students to cope with the challenges and stress inherent in nursing education and nursing practice.

Using the caring, humanistic model to guide proactive and interventional stress reduction among nursing students facilitates stress management, retention, and program success. Furthermore, relationships that support professional actualization provide a sound framework not only for academic success, but also for transition into the practice arena. Within this caring framework, several initiatives can aid in stress reduction.

Faculty role and behaviors

It is well-documented that the very presence of the clinical instructor has a negative impact on nursing student's behavior and elevates fear of failure and feelings of incompetence.^{20,25} The student role as that of a learner who is allowed to make mistakes and who may not be able to perform proficiently is one strategy that can change how the instructor is viewed. In this facilitator paradigm, faculty behavior moves into one that embraces teaching moments and "teaches" rather than critically "evaluates" student performance in the clinical setting. Focusing on the teaching role while de-emphasizing the evaluator role is one strategy that can promote an open and supportive learning environment where the instructor is welcomed as a role model and facilitator of learning. This positive learning environment can result in enhanced learning and a collaborative relationship for all involved.

The student participants in Del Prato's²⁴ study identified the teachers' ability to de-emphasize their evaluative role as an important dimension of the supportive learning environment that helped students to overcome feelings of anxiety and stress. Informants explained that supportive teachers recognized when students felt anxious and worked to put them at ease by establishing rapport and communicating words of encouragement. Student participants often verbalized appreciation for these caring teachers who "gave" them confidence and helped them to believe in themselves as future nurses.

Reflective learning model

Promoting a supportive learning environment can readily become incorporated into the educational experience

within the classroom and clinical settings by implementing reflection. This strategy integrates personal knowledge, clinical practice, and faculty–student engagement within a structured learning environment. Key to experiential learning, an inherent attribute to the practice of nursing, the reflective learning model allows the student to critically examine one’s practice by reflecting on one’s interactions and interventions. Reflection builds upon sharing one’s personal knowledge and experience to better understand the implications of one’s care and explore alternatives. Bevis and Watson³⁵ support this notion and suggest the sharing of one’s learning experiences promotes collaboration, fosters interpersonal relationships, and creates new knowledge.

Social support and professional networks

The provision of academic, social, and behavioral support systems and networks are effective for reducing distress and preventing unhealthy levels of stress. Social support in conjunction with coping strategies and identification of personality styles can lead to effective management of encountered stressors.^{5,42,43} Since the process of nursing education carries the potential for increased stress among nursing students,⁴⁵ preparing students for the reality of nursing education and expectations, exploring the incidence of stress and effective interventions, and having in place services that support a positive learning experience are suggested.^{5,9,42,43,46} Further, teaching stress identification and stress reduction techniques provides learners with an effective tool for use personally and in the clinical arena.^{47,48} Finally, utilization of innovative teaching methodologies and stress reduction interventions in all learning environments can optimize learning while decreasing stress.

Empowering students: mindfulness

Students who are able to cognitively cope with incivility are in a better position to deal with the stress, learn from the experience, and perform well. One strategy that shows promise for reducing the stress for nursing students is mindfulness based stress reduction (MBSR). Kabat-Zinn⁴⁹ popularized the technique of MBSR at the University of Massachusetts with his work with chronic pain patients. Mindfulness requires the individual to attend to his/her conscious experience with a detached, objective, and open attitude. As a result, the individual gains insight into the nature and frequency of their thoughts and feelings along with the ability to separate the thought from the feeling and/or behavior, and a more balanced emotional state leading to decreased stress.⁵⁰ While there are only a few studies of MBSR with nursing students, those

studies point to the efficacy of incorporating mindfulness training as part of the curriculum.⁵¹

Proactive learning strategies

Implementation of traditional and innovative academic strategies can be effective for reducing stress among nursing students. In this regard, numerous interventions have been recommended to support students in the learning environment. Peer and professional tutoring can assist students to master course content, which improves confidence, self-esteem, and satisfaction.⁵ Nursing faculty members can take a proactive approach by providing timely and constructive feedback on assignments, establishing reasonable and purposeful course requirements, exploring innovative strategies for instruction and evaluation of learning, and by preparing students for the clinical experience and supporting them as they administer care.^{14,15,45,52} Faculty availability, approachability, and fairness have been identified as sources of support and reassurance for students.^{23,24,52} Informal faculty support has been identified as being as significant and as effective as that received from family and peers in empowering students to cope with stress.⁵² In the end, nurse educators must create environments that support learning, promote wellbeing, and are conducive to successful outcomes.

Summary

The need to transform nursing education is well-documented and calls for the creation of innovative and supportive learning environments that center on the active participation and collaborative engagement of faculty and students.^{1,3,53} One area identified by research as in need of change involves managing the stress experienced by nursing students, which requires deliberate and meaningful changes in how nursing students are educated. Student-centered learning environments that focus on caring, humanistic relationships within the academic and clinical settings supports the student’s ability to cope with the challenges and stressors inherent to their practice discipline and educational experience. A caring, supportive learning environment transforms faculty–student relationship into a collaborative partnership that promotes professional socialization and empowerment. Newman⁴⁴ describes this transformation as the evolution of a collective commitment to, and way of being with each other that occurs through the active engagement of students and faculty in the learning environment. As students and faculty members change, they gain skills to promote collaborative and collegial environments centered on caring partnerships. This evolving relationship mitigates stress levels as stress becomes manageable, new ways of coping

are integrated into practice, and new ways of teaching and learning are nurtured. The call for change is imperative as nurse educators are challenged to create student-centered learning environments that will afford educational spaces and teaching moments as a forum for learning to promote persistence and success, and model professional expectations.

Disclosure

The authors report no conflict of interest in this work.

References

- Hopkins TH. Early identification of at-risk nursing students: a student support model. *J Nurs Educ*. 2008;47(6):254–259.
- Johnson C, Johnson R, Kim M, McKee J. Personal background preparation survey for early identification of nursing students at risk for attrition. *J Nurs Educ*. 2009;48(11):606–612.
- Prymachuk S, Easton K, Littlewood A. Nurse education: factors associated with attrition. *J Adv Nurs*. 2009;65(1):149.
- Edwards D, Burnard P, Bennet K, Hebden U. A longitudinal study of stress and self-esteem in student nurses. *Nurs Educ Today*. 2010;30(1):78–84.
- Gibbons C, Dempster M, Moutray M. Stress and eustress in nursing students. *J Adv Nurs*. 2007;61(3):282–290.
- Lazarus R, Folkman S. Stress, appraisal, and coping. New York, NY: Springer, 1984.
- Watson J. Caring science as sacred science. Philadelphia, PA: FA Davis, 2005.
- Beck D, Srivaska R. Perceived level and sources of stress in baccalaureate nursing students. *J Nurs Educ*. 1991;30(3):127–133.
- Junious D, Malecha A, Tart K, Young A. Stress and perceived faculty support among foreign-born baccalaureate nursing students. *J Nurs Educ*. 2010;49(5):261–270.
- Mahat G. Stress and coping: junior baccalaureate nursing students in clinical settings. *Nurs Forum*. 1998;33(1):11–12.
- Pagana K. Stresses and threats reported by baccalaureate students in relation to an initial clinical experience. *J Nurs Educ*. 1988;27(9):418–424.
- Wells M. Dreams deferred but not deterred: a qualitative study on undergraduate nursing student attrition. *J Coll Stud Ret*. 2007;8(4):439–455.
- Yucha C, Kowalski S, Cross C. Student stress and academic performance: home hospital program. *J Nurs Educ*. 2009;48(11):631–637.
- Jimenez C, Navia-Osorio P, Diaz C. Stress and health in novice and experienced nursing students. *J Adv Nurs*. 2009;66(2):442–455.
- Sheu S, Lin HW, Hwang SL. Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: the effect of coping behaviors. *Int J Nurs Stud*. 2002;39(2):165–175.
- Glogowska M, Young P, Lockyer L. Should I go or should I stay? A study of factors influencing students' decisions in early leaving. *Active Learn Higher Educ*. 2007;8(1):63–77.
- Oermann M. Differences in clinical experiences of ADN and BSN students. *J Nurs Educ*. 1998;37(5):197–201.
- Beck D, Hackett M, Srivastava R, McKim E, Rockwell B. Perceived level and sources of stress in university professional schools. *J Nurs Educ*. 1997;36(4):180–186.
- Magnussen L, Amundson MJ. Undergraduate nursing students experience. *Nurs Health Sci*. 2003;5(4):261–267.
- Kleehammer K, Hart A, Keck J. Nursing students' perceptions of anxiety-producing situations in clinical settings. *J Nurs Educ*. 1990;29(4):183–187.
- Reutter L, Field P, Campbell I, Day R. Socialization into nursing: nursing students as learners. *J Nurs Educ*. 1997;36(4):149–155.
- Levett-Jones T, Lathlean J, Higgins I, McMillan M. The duration of clinical placements: a key influence on nursing students' experience of belongingness. *Aus J Adv Nurs*. 2007;26(2):8–16.
- Shelton E. Faculty support and student retention. *J Nurs Educ*. 2003;42(2):68–76.
- Del Prato DM. The lived experience of nursing education: conditions and barriers in the learning environment that shaped students' learning, identity development, and success. [Dissertation]. Syracuse, NY: Syracuse University, 2010.
- Kushnir T. Stress and social facilitation: the effects of the presence of an instructor on student nurses' behavior. *J Adv Nurs*. 1986;11(1):13–19.
- Wilson M. Nursing student perspective of learning in a clinical setting. *J Nurs Educ*. 1994;33(2):81–86.
- Gillespie M. Student-teacher connection in clinical nursing education. *J Adv Nurs*. 2002;37(6):566–578.
- Poorman S, Webb C, Mastorovich M. Students' stories: how faculty help and hinder students at risk. *Nurs Educ Today*. 2002;27(3):126–131.
- Clark C. Student voices on faculty incivility in nursing education: a conceptual model. *Nurs Educ Pers*. 2008;29(5):284–289.
- Clark C, Springer P. Thought on incivility: student and faculty perceptions of uncivil behavior in nursing education. *Nurs Educ Persp*. 2007;28(2):93–97.
- Marchiondo K, Marchiondo L, Lasiter S. Faculty incivility: effects on program satisfaction. *J Nurs Educ*. 2010;49(11):608–614.
- Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev*. 1977;84:191–215.
- Taylor S. Tend and befriend: biobehavioral bases of affiliation stress. *Curr Dir Psych Sci*. 2006;15(6):273–277.
- Jimmieson N, McKimmie BM, Hannam RL, Gallagher J. An investigation of the stress-buffering effects of social support in the occupational stress process as a function of team identification. *Group Dyn Theory Res Pract*. 2010;14(4):350–367.
- Bevis E, Watson J. Toward a caring curriculum: a new pedagogy for nursing. New York, NY: National League for Nursing, 1989.
- Aston L, Molassiotis A. Supervising and supporting student nurses in clinical placements: the peer support initiative. *Nurse Educ Today*. 2011;23(3):202–210.
- Frankel A. Nurses' learning styles: promoting better integration of theory into practice. *Nurs Times*. 2009;105(2):24–27.
- Papastavrou E, Lambrinou L, Tsangan H, Saarikoski M, Leino-Kilpi H. Student nurses experience of learning in the clinical environment. *Nurs Educ Pract*. 2010;10(3):176–182.
- Papp I, Markkanen M, von Bonsdorff M. Clinical environment as a learning environment: student nurses' perceptions concerning clinical learning experiences. *Nurs Educ Today*. 2003;23(4):262–268.
- Hughes L. Faculty-student interactions and the student-perceived climate for caring. *Adv Nur Sci*. 1992;14(3):60–71.
- Bankert E, Kozel V. Transforming pedagogy in nursing education: a caring learning environment for adult students. *Nurs Educ Pers*. 2005;26(4):227–229.
- Gibbons C, Dempster M, Moutray M. Surveying nursing students on their sources of stress: a validation study. *Nurse Educ Today*. 2009;29(8):867–872.
- Gibbons C, Dempster M, Moutray M. Index of sources of stress in nursing students: a confirmatory analysis. *J Adv Nursing*. 2009;65(5):1095–1102.
- Newman M. Transforming presence: the difference that nursing makes. Philadelphia, PA: FA Davis, 2008.
- Burnard P, Edwards D, Bennett K, Thaibah H, Tothova V. A comparative longitudinal study of stress in student nurses in five countries: Albania, Brunei, the Czech Republic, Malta, and Wales. *Nurs Educ Today*. 2008;28(2):134–145.
- Luo Y, Wang H. Correlation research on psychological health impact on nursing students against stress, coping way, and social support. *Nurse Educ Today*. 2009;29(1):5–8.
- Consolo K, Fusner S, Staib S. Effects of diaphragmatic breathing on stress levels of nursing students. *Teach Learn Nurs*. 2008;3(2):67–71.

48. Murdock C, Naber J, Perlow M. Stress level and stress management skills of admitted baccalaureate nursing students. *Kentucky Nurse*. 2010; 58(2):8.
49. Kabat-Zinn J. *Wherever you go, there you are*. New York: Hyperion Books, 1994.
50. Teasdale JD, Moore SJ, Moore RG, Hayhurst H, Pope M, Paykel ES. How does cognitive therapy prevent relapse in residual depression? Evidence from a controlled trial. *J Consult Clin Psych*. 2001;69(3): 347–357.
51. Beddoe AE, Murphy SO. Does mindfulness decrease stress and foster empathy among nursing students? *J Nurs Educ*. 2004;43(7):305–312.
52. Weitzel M, McCahon C. Stressors and supports for baccalaureate nursing students completing an accelerated program. *J Prof Nurs*. 2008; 24(2):85–89.
53. Benner P, Sutphen M, Leonard V, Day L. *Educating nurses: a call for radical transformation*. San Francisco, CA: Jossey-Bass, 2010.

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