

ASSESSMENT OF THE LEVEL OF HEALTH PROMOTION AMONG
UNDERGRADUATE NURSING STUDENTS AT RHODE ISLAND COLLEGE:

A QUANTITATIVE AND QUALITATIVE ANALYSIS

By

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An Honors Project Submitted in Partial Fulfillment

of the Requirements for Honors

in

Nursing

School of Nursing

Rhode Island College

2018

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Table of Contents

Abstract.....	4
Intro.....	5
Literature Review.....	6
Theoretical Framework.....	20
Methods.....	23
Results.....	25
Limitations.....	47
Discussion.....	48
Implications for Nursing Education and Future Research.....	51
Conclusion.....	55
References.....	56
Appendix A.....	61
Appendix B.....	65
Appendix C.....	66
Appendix D.....	69
Appendix E.....	74

Abstract

Purpose. The purpose of this pilot study was to conduct a preliminary assessment of the level of health promotion among undergraduate students at Rhode Island College. Results are analyzed and possible solutions discussed. Avenues for future research/reassessment are proposed.

Background. Nurses face many stressors and the effects of continued stress on physical health and risk for compassion fatigue and burnout have been documented. The American Nurses Association called for 2017 to be the Year of the Healthy Nurse. Research has shown the health of nurses to be poor. Literature on the level of health promotion among nursing students in the United States of America is lacking.

Method. This study used a convenience sample of nursing students. Cross-sectional data was obtained via a survey on SurveyMonkey. Participants were presented with demographic items and asked about their sleep and exercise habits. Health promotion was assessed using the Health Promoting Lifestyle Profile II and two open response items.

Findings. Findings revealed a deficit in appropriate levels of health promotion among participants. A tendency to prioritize care for others over care for self was detected. Participants identified lack of time, stress, and guilt as barriers to health promotion in nursing school.

Conclusion. Given the implications of the stressors nurses face on their health, it behooves nursing schools to incorporate the cultivation of personal health promotion in nursing curricula.

Keywords: wellness, stress, health, health promotion, nurses, nursing students, Pender

**Assessment of the Level of Health Promotion Among Undergraduate Nursing Students at
Rhode Island College: A Quantitative and Qualitative Analysis**

The American Nurses Association (ANA) called for 2017 to be the “Year of the Healthy Nurse” (American Nurses Association, 2017). As members of the most trusted profession, nurses have the ability to influence their patients to make healthy lifestyles choices (National Nurses United, 2017). The impetus behind the ANA’s campaign is the belief that if all 3.6 million registered nurses in the United States make a commitment to cultivate their personal health and that of their families and communities, strides can be made towards achieving a healthier nation and a healthier world. It behooves nursing researchers to investigate the health promotion habits of nurses and nursing students. This research project is a pilot study assessing the level of health promotion among undergraduate nursing students enrolled at Rhode Island College (RIC) in Providence, RI. The purpose of this pilot study is to conduct a preliminary assessment of the level of health promotion among undergraduate students at Rhode Island College.

Literature Review

A literature search was conducted using the CINAHL, Google Scholar, PubMed, PsycARTICLES, and SAGE Journals Online databases. Search terms included: health of nurses, health of nursing students, health promotion among nurses, health promotion among nursing students, what is wellness, concept of wellness, wellness model, health and wellness, wellness definitions, stress and health, stress and health effects, stress and wellness, stress and occupational health, stress and work performance. Articles of research studies from the previous ten years (2008-2018), limited to those conducted and published in the United States of America, Canada, and England, Ireland, and Scotland were included. Exceptions to the search criteria were made for some articles based on their pertinence, use in other sources, and transferability. Subsequently, twenty-five articles were identified and incorporated.

Wellness: Advancing towards a holistic view of health

In 1946, the World Health Organization (WHO) defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 2018). The delineation of health being a multifocal state not exclusively dependent on pathological disease processes started the positive health movement (Rachele, et al., 2013). Concurrently, exploration into a modern understanding of wellness began (Rachele, et al., 2013).

Given its subjective nature, definitions of wellness vary across the literature. However, wellness theorists often reference the WHO’s definition of health, thus demarcating that wellness is not just the absence of disease (Roscoe, 2009). Across the literature, wellness is presented as multifaceted—involving several dimensions that interact synergistically and occur on a continuum and not as end states (Roscoe, 2009). Drawing from a range of theorists, Roscoe

outlines wellness as encompassing the dimensions of social, emotional, physical, intellectual, spiritual, psychological, occupational, and environmental wellness (2009). An individual's overall wellbeing is a dynamic state that is dependent on the synergistic interplay of these dimensions. Within this paradigm, positive and negative states can exist simultaneously in the individual. For example, a person with heart failure may be considered to have poor physical illness, but the attention they receive from friends and family members may contribute positively to social, spiritual, emotional, and intellectual wellness (Rachele, et al., 2013). Consequently, the pursuit of wellness is the quest for optimum functioning and fulfillment through appropriate lifestyle choices as individuals interact with their environments (Rachele, et al., 2013).

The concepts of health and wellness have been argued to be similar and overlapping in nature. Rachele et al. (2013) critique this overlap as “confusion” by accusing theorists of using “a range of health-related terms” to describe wellness (p. 5). While the term health may be used predominantly in practice within the context of physical wellness, upon consideration of the WHO's definition of health, it is reasonable to conclude that the concepts of health and wellness from this perspective are congruent and may even be used interchangeably. Smith, Tang and Nutbeam (2006) discuss the WHO wellness definition, stating that it is “the optimal state of health of individuals and groups” (p.344). The authors go on to say,

There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfillment of one's role expectations in the family, community, place of worship, workplace and other settings (p. 344).

Theorist Nola Pender (2011) describes the complexity of the definition of health stating:

Health in reference to the individual is defined as the actualization of inherent and acquired human potential through goal-directed behavior, competent self-care, and satisfying relationships with others, while adjustments are made as needed to maintain structural integrity and harmony with relevant environments. Health is an evolving life experience (p. 3).

Stress and Health

If one's health is dynamic and multifactorial in nature, what impedes the pursuit of optimal functioning? Why do individuals present with varying degrees of health? Fundamentally, exposure to internal and external negative stimuli and one's unique genetic makeup influence one's level of health. At a more nuanced level, psychosocial and environmental triggers also play a role. Collectively, these noxious stimuli are called stress.

That stress plays a role in affecting health is widely accepted (Slavich, 2016). Research has demonstrated that stress exposure increases risk for negative mental and physical health outcomes. Some of the conditions linked to stress exposure include rheumatoid arthritis, depression, cardiovascular disease, chronic pain, human immunodeficiency virus/AIDS, and breast cancer (Slavich, 2016). Accelerated biological aging and premature mortality have also been found to have associations with stress (Slavich, 2016). The primary cause for these deleterious affects is stress-induced activation of the immune system (Slavich, 2016).

Attempting to identify a common biological pathway linking stress to physical ailments, researchers have discovered that stress can upregulate components of the immune system—specifically the inflammatory process. Medically, upregulation refers to an “increase in cellular response to a molecular stimulus” (Merriam-Webster, 2018). The acute-phase response is the initial activation of the immune system and involves an increase in inflammation that can occur

both locally and systemically due to injury or infection (Slavich & Irwin, 2013). The insult to the body initiates an immune response cascade leading to the expression of proinflammatory immune response genes such as tumor necrosis factor- α and interleukin-1 that produce cytokines which are chemical messengers key to the inflammatory response (Slavich & Irwin, 2013). While this response is vital for ridding the body of pathogens, evidence shows that alteration or prolongation of the inflammatory response can cause more harm to the host (Slavich & Irwin, 2013). Chronic inflammation has been implicated as a contributing factor for several major diseases including asthma, arteritis, diabetes, obesity, atherosclerosis, certain cancers, and Alzheimer's disease (Slavich & Irwin, 2013). Stress has been shown to induce and prolong inflammation (Slavich & Irwin, 2013).

Stressors can include acute life events such as getting fired, the death of a loved one, or chronic agents such as dangerous living situation/environment, low socioeconomic status, or marriage problems (Slavich, 2016). Evidence shows that stressors involving interpersonal loss and social rejection are some of the most potent in activating the molecular inflammatory processes (Slavich, 2016).

While all people undergo stressful situations, not everyone is affected in the same manner. Research shows that worry intensity or extent of rumination caused by stress mediates that impact of stress on health (Verkuil, Brosschot, Meerman, & Thayer, 2012). A study examining the link between worry episodes and stress and somatic complaints among 69 Dutch primary and secondary school teachers found that worry due to stress was associated with occurrence of neck pain, stomach pains, fatigue, sleeping difficulties, pain in arms, headache, asthma, flatulence, chest pains, vertigo, pain in shoulders, stomach discomfort, and cold/flu (Verkuil, et al., 2012).

Individual levels of coping and self-imposed pressures to succeed may also explain varying degrees of response to stress between individuals. A study exploring forgiveness, stress, and health found that individuals with higher forgiveness scores exhibited decreased stress levels and positive mental health outcomes (Toussaint, Shields, & Slavich, 2016). Another study found that self-oriented perfectionism was associated with higher levels of perceived stress (Molnar, Sadava, Flett, & Colautti, 2012). In short, stress has been demonstrated to have powerful negative affects on physical functioning, but its impact is unique to each individual, facilitated or impeded by numerous variables.

Occupational Stress and Health

According to the WHO, approximately 58% of the world's population will spend one-third of their adult life at work (WHO, 2018b). This represents a significant amount of time—estimated by some as 90,000 hours on average (Sitkus, 2017). Consequently, one's occupation/work environment can exert significant influence on one's health. Occupational stressors come in many forms and their health consequences vary. Some are occupation-specific such as exposure to coal dust increasing risk for lung cancer and the physical demands required of construction workers and exposure to loud equipment increasing risk for osteoarthritis and hearing impairment respectively. Each occupation carries unique stressors with inherent risks and rewards.

While a comprehensive review of occupational stress on health is beyond the scope of this project, a principle elucidated from the literature regarding stress and health that can be generalized across work environments is the stress of socially prescribed perfection (SPP). Perfectionism in relation to the individual can be defined as “a tendency to set and strive toward excessively high standards, and to make overly critical self-evaluations” (Molnar et al., 2012, p.

846). Socially Prescribed Perfectionism is “the propensity to believe that perfectionistic demands are imposed on the self by others. Individuals with high levels of SPP believe that others place unrealistically high expectations on them, feel pressure to meet those standards, and perceive that others evaluate them stringently” (Molnar et al., 2012, p. 847). SPP may be tied to individual tendencies and personality differences, but may be exacerbated by external forces such as an overbearing supervisor. Research shows a direct link between high levels of perfectionism and poorer health among college students and adults from the general population (Molnar et al., 2012). Molnar et al. found that SPP was associated with poor physical health and was mediated by higher levels of perceived stress and low levels of perceived social support (2012).

Ongoing negative occupational stress can result in job burnout. Job burnout poses inherent physical, psychological, and occupational consequences. A systematic review by Salvagioni et al. found that job burnout was a significant predictor of hypercholesterolemia, type 2 diabetes, coronary heart disease, hospitalization due to cardiovascular disorder, musculoskeletal pain, changes in pain experiences, prolonged fatigue, headaches, gastrointestinal issues, respiratory problems, severe injuries and mortality below the age of 45 years, insomnia, depression, use of psychotropic and antidepressant medications, and hospitalization for mental disorders and psychological ill-health symptoms (2017).

The effects of occupational stress will ultimately impact work performance. Research shows that the professional outcomes of job burnout can include job dissatisfaction, absenteeism, new disability pension, job demands, job resources, and presenteeism (going to work while ill) (Salvagioni et al., 2017). A meta-analysis of 111 independent samples found that psychological health in particular has a moderate-to-strong correlation to work performance (Ford, Cerasoli,

Higgins, & Decesare, 2011). In short, one's occupation and work environment play influential roles in mediating stress levels, thus impacting one's health and work productivity.

Occupational Stress and Health of Nurses

Over 3.6 million individuals are licensed as registered nurses in the United States of America, representing a sizeable portion of the overall American labor force (ANA, 2017). As with any occupation, nursing poses stressors that can affect the health of nurses. These stressors can be physical, psychological, and emotional in nature.

Research has demonstrated the effects of physical stressors on nurses related to their work. The Nurses' Health Studies (NHS), a long-term longitudinal study through Harvard University has yielded fruitful data. Some of the key findings include the effects of rotating night shift work (3 or more night shifts per month in addition to day and evening shifts) on nurse health. In one study with 189,158 female nurses from the NHS cohort followed prospectively over 24 years, rotating night shift work was associated with significantly higher risk for coronary heart disease (Vetter et al., 2016). Rotating night shifts and history of type 2 diabetes have also been implicated in increased risk for hip fracture (Nurses' Health Study, 2016).

Barker and Nussbaum (2011) found that longer shifts were associated with higher levels physical and overall fatigue. Poor sleep quality and inadequate recovery time between shifts can increase nurses' perceived levels of stress. A study of 185 physicians and 119 nurses found that sleep quality and quantity were predictors of work stress scores and that higher work stress and decreased quality of sleep were associated with poorer cognitive function (Rutledge et al., 2009). In the study, almost one-fourth of the nurses involved (22.5%) reported having five or less hours of sleep the previous night (Rutledge et al., 2009).

Avoiding fatigue is paramount to patient safety and protecting the wellbeing of the nurse. Vural & Sutsunbuloglu (2016) outline some of the physical and cognitive stressors faced by nurses in the operating room. However, these obstacles are also encountered by nurses in other practice-areas. They referenced physical ergonomic risk factors such as those involved with lifting and moving patients and improper positioning/poor body mechanics, environmental risk factors such as slippery floors, uneven surfaces, and poor lighting, malfunctioning equipment and radiation exposure, as well as cognitive ergonomic risk factors such as the pressure for skilled performance, coping with procedural complications, interpersonal conflict, time constraints, technology, delays, exposure to violence, and high-pressure situations (Vural & Sutsunbuloglu 2016). Lower back pain was also noted to be the most common musculoskeletal complaint among operating room nurses (Vural & Sutsunbuloglu 2016).

The area of nursing in which one practices can also influence perceived stress levels. A study in Ireland found that nurses working in different departments reported varying degrees of stress levels, the emergency department, pediatric, and medical floors being the highest stress levels as compared to the outpatient unit as the lowest (McCarthy & Greiner, 2010). A differential factor in stress level may be the exposure to traumatic events. Nurses working in emergency departments have a high frequency of exposure to unexpected death, trauma, and violence (Morison & Joy, 2016). Repeated exposure to these stressors can lead to secondary traumatic stress. Symptoms of secondary traumatic stress can include: feeling emotionally numb; having trouble sleeping, disturbing dreams about work, and a feeling that something bad is going to happen; feeling agitated or easily annoyed; experiencing gaps in memory relating to patient care sessions; feeling discouraged about the future and negative feelings towards work (Morison & Joy, 2016).

Nurses often encounter moral distress resulting from an “inability to act in accordance with their ethical judgment [due to] internal and external constraints” (Watson, 2012, p. 40). Sources of moral distress in clinical practice can be from variables such as scarcity of resources, “short staffing,” end of life care, advanced directives, social injustice, nurse-physician conflicts, and non-supportive ethical climate (Watson, 2012). Increased moral distress can manifest as physical symptoms such as headaches, pain, insomnia, hypertension, nausea and other gastrointestinal disturbances, and psychological symptoms such as anxiety, guilt, frustration, confusion, anguish, agitation, and social isolation (Watson, 2012). A sense of autonomy and social support from coworkers and management is vital for nurse health. A study by Havermans et al. (2017) found that a lower psychosocial safety climate score which was comprised of indicators such as management support for stress prevention, health and safety over production goals prioritization by management, interest in employee contributions, and workplace psychosocial wellbeing were associated with higher levels of stress among the nurses. The negative impact of lack of social support and coping on the health of nurses cannot be underestimated (Havermans, 2017).

Nursing requires emotional and physical energy that if not replenished leave the nurse feeling spent and “worn out.” This phenomenon is known in the literature as compassion fatigue. Compassion fatigue is “a state of exhaustion which limits the ability to engage in caring relationships” (Nolte, Downing, Temane, & Hastings-Tolsma, 2017, p. 1). Compassion fatigue manifests as physical symptoms such as exhaustion and emotional symptoms such as feelings of isolation, frustration, and despair (Nolte et al., 2017). Staff shortages, difficult workload, perceived unreasonable expectations from patients, becoming overly emotionally involved, and feeling unsupported have been identified as some of the triggers of compassion fatigue (Nolte et

al., 2017). If not appropriately managed, the stress of compassion fatigue can affect nurses in their personal lives, escalate to burnout, and cause them to leave the profession (Nolte et al., 2017). Supportive work environments are integral to nurse health. A sense of support and team cohesion within the workplace contributes to compassion satisfaction and positive functioning (Wu, Singh-Carlson, Odell, Reynolds, & Su, 2015).

General Health and Health Promotion Among Nurses

Given their occupational stressors and potential health impacts, what is the state of the health of nurses in the United States of America and to what extent are nurses engaging in health promoting behaviors to mitigate these risk factors? The ANA defines a healthy nurse as “one who actively focuses on creating and maintaining a balance and synergy of physical, intellectual, emotional, social, spiritual, personal, and professional wellbeing” (ANA, 2017). A healthy nurse is one who strives for success in every arena of his/her life. Regretfully, research has revealed a sobering state of affairs regarding the health of nurses.

The ANA’s landmark Health Risk Appraisal survey, completed by more than 13,500 nurses and nursing students between October 2013 and October 2016, examined nurse health across several dimensions, including general and occupational health, safety, and wellness. Results showed that even though 89% of respondents responded positively to the item “Do you feel well today?”, on “nearly every indicator, the health of America’s nurses is worse than that of the average American” (American Nurses Association Enterprise, 2017). Survey participants had an average BMI of 27.6 (overweight), only 16% consumed the recommended daily amount of fruits and vegetables, 12% admitted to “nodding off” while driving during the past month, and less than half reported performing the recommended quantity and time of body-conditioning

exercises (ANA, 2017). In addition, participants reported high levels of stress and receiving less than seven hours of sleep in a 24-hour period (ANA Enterprise, 2017).

For occupational health, the Bureau of Labor Statistics reports that the nursing profession is ranked fourth highest for the rate of injuries and illnesses that cause days away from work (ANA Enterprise, 2017). A 2011 synthesis of 187 international studies found that nurses were more vulnerable to acquiring tuberculosis and blood-borne infections, had more musculoskeletal disorders, and had more occupational allergies than the general public (Fronteira & Ferrinho). Mental health issues have also been demonstrated to be an issue for nurses. A 2012 study found that nurses had a depression rate of 17% compared to the national rate of 9% (Letvak, Ruhm, & McCoy).

Health Promotion Among Nursing Students

With what is known about stress and its negative impacts on health, the stressors nurses face, the sobering state of the health and health promotion of American nurses, and the implications of an ever growing nursing workforce, a question arises: What is the state of affairs regarding the health and health promotion habits of American nursing students? Minimal research exists regarding the health promotion habits of American undergraduate nursing students. This is troubling considering the rigorous coursework and the considerable number of hours spent studying and in clinical rotations by nursing majors. High levels of stress and time constraints have been reported among nursing students.

Chow and Grant Kalischuk (2008) conducted a study in Western Canada that examined undergraduate nursing student self-care behaviors. The authors developed a 27-item survey covering topics such as sleep, exercise, fluid intake, weight, health maintenance, alcohol intake, health goals, and complementary therapy use. The findings from the student sample of 211

showed that even though the majority of students engaged in health promoting activities, time constraints due to bus schedules and coursework interfered with sleep, exercise, and other self-care activities (Chow & Grant Kalischuk, 2008). One small study of 28 graduate nursing students in California on the value of health promotion reported that students stated that they experienced “decreased ability” to care for their personal health while enrolled in school (Van Leuven, 2006).

Although some research in Canada, South America, Europe, and Asia, has been conducted regarding the state of health promotion among nursing students, the dietary, cultural, socio-political, and geographical differences between these groups pose difficulties in transferability of findings to American nursing students (Taylor, Lillis, & Lynn, 2015). Moreover, even within the US, regional differences present similar difficulties.

The Concept of the Nurse as a Healthy Role Model

The significance of studying the health of nurses and the health of nursing students lies in the reality that these individuals are in positions in to influence the health behaviors of clients. As healthcare workers, nurses interact with patients on a daily basis. The role of the nurse is such that it encompasses more than administering medications and performing treatments, but also includes educating clients regarding their disease process and prevention, health promotion and maintenance (Taylor et al., 2015). The ANA’s definition of a healthy nurse as “one who actively focuses on creating and maintaining a balance and synergy of physical, intellectual, emotional, social, spiritual, personal, and professional wellbeing” necessitates that nurses be role models of healthy living (ANA, 2017).

Darch, Baillie, & Gillison (2017) conducted a concept analysis that analyzed nurses as role models in health promotion. They examined 118 pieces of multidisciplinary and nursing

literature on the concept of nurses as role models and qualitative data from focus groups of nurses, nursing students, and nurse educators. Findings from the literature analysis showed that to be a healthy role model, nurses needed to believe that being a healthy role model would have an impact. A sense of self-worth was also believed to be necessary. In addition, having knowledge of health promotion is integral to being a role model. Defining attributes of a role model in the context of health promotion included: traits such as being caring, non-judgmental, trustworthy, inspiring/motivating, self-caring fit, healthy, and knowledgeable; championing health; and being an exemplar (Darch et al., 2017).

Results of the qualitative data showed that a sense of self-value, empowerment, and feeling valued by their employing organization were integral to being a healthy role model (Darch et al., 2017). Citing examples such as lack of breaks, poor facilities, and shift work, many participants expressed that working as a nurse adversely affected their health. Integrating the development of personal resilience and healthy coping mechanisms as core components of nursing education was proposed. Participants believed that being a role model for health-promoting behaviors would impact the lives of others, but many could not recall examples of positive role models in their working environments. Concern was raised about requiring nurses to be role models for health promotion because it could harm nurse recruitment and create selection bias during interviews based on observable weight (Darch et al, 2017).

Both the literature and the participants presented a concept that was termed “the imperfect humanized role model” (Darch et al., 2017). This refers to the idea that nurses who share similar health conditions as their patients will be better role models and well-received because they have more empathy for their patients. “The imperfect role model” values health,

but accepts their imperfections, cares for and develops trust by partnering with patients and from sharing in their struggles (Darch et al., 2017).

The “imperfect role model” echoes the findings of a modified Delphi study in the United Kingdom that revealed that students and practicing nurses thought being able to be seen as human by their patients and able to sympathize with the difficulties of trying to lead a healthy lifestyle as more important than being a role model of health. The idea of being a healthy role model was viewed as “unrealistic and unhelpful” and not “a reasonable professional expectation” (Kelly, Wills, Jester, & Speller 2016).

Theoretical Framework

Nola Pender's Health Promotion Model serves as the theoretical framework for this study. It first appeared in nursing literature in 1982. In keeping with the ANA's definition of the healthy nurse, Pender's model uses the "reciprocal interaction world view" as its philosophical underpinning (Pender, 2011). The "reciprocal interaction world view" presents the human being as a holistic individual—parts are examined within the context of the whole person. Pender (2011) defines person as "a biophysical organism that is partially shaped by the environment but also seeks to create an environment in which inherent and acquired human potential can be fully expressed" (p. 3).

Expectant value theory and social cognitive theory form the theoretical frameworks of Pender's health promotion model (2011). According to expectant value theory, individuals work to achieve goals that they perceive as possible and engage in behaviors to reach valued outcomes (Pender, 2011). Social cognitive theory postulates that an interaction between one's thoughts, behavior, and environment occurs and that to alter behavior, individuals must change how they think (Pender, 2011). Pender (2011) defines the environment as "the social and physical context in which the life course unfolds. The environment can be manipulated by the individual to create a positive context of cues and facilitators for health-enhancing behaviors." Within this schema, Pender (2011) defines health, stating that it is:

the actualization of inherent and acquired human potential through goal-directed behavior, competent self-care, and satisfying relationships with others, while adjustments are made as needed to maintain structural integrity and harmony with relevant environments. Health is an evolving life experience (Pender, 2011, p. 3).

Drawn from the behavioral and nursing sciences, Pender's model functions under the assumption that persons interact with their environment to express their own human health potential (2011). Each person has autonomy over their own actions and a capacity for self-reflection (Pender, 2011). Through self-reflection, one can actively regulate their behavior and modify it to achieve desired outcomes (Pender, 2011). Additionally, the environment exerts influence over the individual and thus one's health (Pender, 2011). Pender (2011) states, "Self-initiated reconfiguration of the person-environment interactive patterns is essential to behavior change" (p. 5).

A myriad of factors such as prior behavior, perceived competence, perceived barriers, environmental influences, and competing demands/activities exert pressure on one's engagement in health promoting behaviors. According to Pender, participation in health behavior depends on one's prior experience and attitudes, the value of the anticipated benefit being a major factor (2011). Moreover, a positive attitude, feelings, and perceived competence in performing a particular behavior increases commitment to actually executing the behavior (Pender, 2011). Expectations, support, and role modeling by significant individuals such as family members, peers, and healthcare providers enhance commitment (Pender, 2011).

The level of commitment is crucial in Pender's theory as the greater the commitment to a specific plan of action, the stronger likelihood of engaging in health promoting behaviors and maintenance over time (2011). Environmental and situational factors may increase or decrease commitment and participation in health promoting activities (Pender, 2011). Perceived barriers, competing demands, and more attractive activities often impede health-promoting behaviors (Pender, 2011). Pender postulates that competing demands requiring immediate attention that are not in the individual's control will likely take precedent regardless of one's commitment to a

plan of action (2011). To increase health-promoting behavior, individuals can create incentives by changing their attitudes, affects, and inter-personal and situational influences (Pender, 2011).

Methods

Study Design

A mixed-methods, cross-sectional design using a convenience sample of nursing students was chosen for this study. This study included a quantitative survey and two items for qualitative analysis. Descriptive statistics were used for presentation and discussion of findings.

Recruitment and Consent

Nursing students were recruited to participate in a survey using posters and email, in-person announcements, and social media posts approved by the RIC Institutional Review Board (Appendix A). The letter of agreement demonstrating approval for Rhode Island College School of Nursing participation in the pilot is presented in Appendix B. Only basic undergraduate students who were not yet licensed as nurses were eligible to participate. RN to BSN students were excluded to minimize the possibility of confounding variables since RN to BSN students often constitute a very different population of nursing students and typically differ significantly from basic traditional students in age, responsibilities (children, mortgages), and hours worked.

A \$50 VISA gift card raffle was used to demonstrate appreciation for the participants' time and to encourage participation. Participants had the option of entering the raffle via email upon completion of the survey. Participants were provided with a link via email and Facebook to an informed consent informational document hosted on Google Drive containing a link to the survey hosted on SurveyMonkey (Appendix C). Completion of any portion of the survey was deemed evidence of the participants' implied informed consent. Responses were collected between 11/6/2017 and 12/11/2017. Participants were instructed that no negative consequences would result from choosing to not participate in the study. All survey responses were anonymous.

As part of the survey, participants were asked to provide their status in the Rhode Island College School of Nursing (RICSON) for the categories of Intended Major (not yet accepted into RICSON), sophomore, junior, senior as well as their gender, age, race/ethnicity, relationship status, number of children, number of hours worked per week during the semester, current living situation, number of hours spent exercising per week during the semester, number of hours slept per night, and religious affiliation. Participants were then asked two open response questions: (1) How do you define health? (2) Thinking of your life as a nursing student, what stressors/barriers, if any, do you face that impede your pursuit of health?

Lastly, the Health-Promoting Lifestyle Profile II (Cronbach alpha of 0.94) developed by Pender, Noble Walker, and Sechrist was provided. This survey is a 52-item questionnaire which measures the level of the Health-Promoting Lifestyle and has six subscales: health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management (alpha coefficients for the subscales range from 0.79 to 0.87) (Chouhan, 2016). A sample survey is found in Appendix D.

Results

One hundred sixty eight responses were collected between 11/6/2017 and 12/11/2017, 14.7% of the 1,145 students eligible for the survey. One hundred forty one responses were complete (completion rate 83.9%; 12.3% of the pool of eligible participants). Only complete responses have been included in this analysis. Of these participants, 49 (34.75%) identified as Intended Majors (not yet accepted into RICSON), 23 (16.31%) as sophomores, 24 (17.02%) as juniors, and 45 (31.91%) as seniors (*Figure 1*). Based on the 714 Intended Majors enrolled, the response rate from IM's was 6.8%, 14% from the 172 sophomores, 18.5% from the 13 juniors, and 26.8% from the 168 seniors.

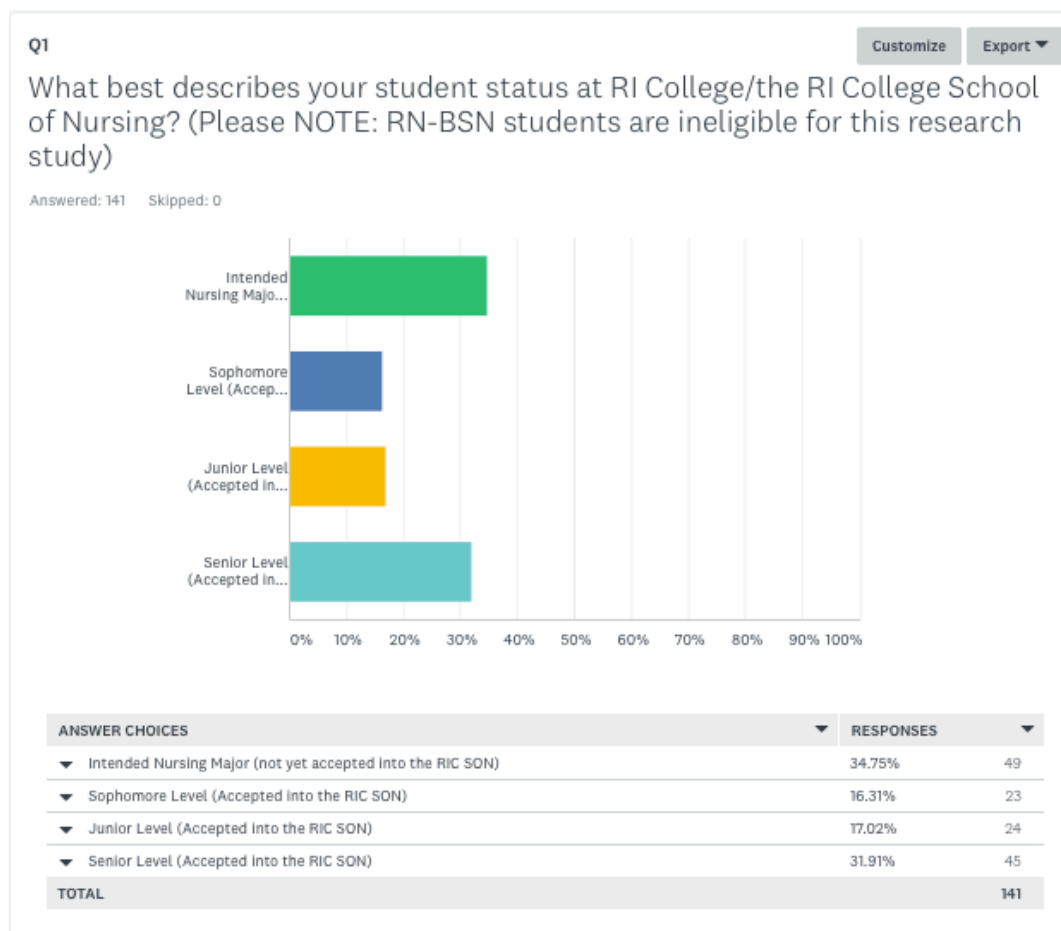


Figure 1. Status in the RI College School of Nursing

The majority of respondents, $n = 118$ (83.69%), identified as females. Twenty males participated (14.18%), and 3 (2.13%) preferred not to answer. Including Intended Majors and the students enrolled in nursing courses, 1,017 females and 128 males were eligible making the response rate by gender 11.6% for the females and 15.6% for the males. In the pool of eligible participants, males constitute 11.2% of the population and constitute 14.18% of the sample.

The largest group responding was between the ages of 18 - 23 years old with 98 of the 168 respondents (69.51%) in these two groups. Forty-four participants (31.21%) identified as 18-19 years old and 54 (38.30%) between 21-23 years old. Eighteen (12.77%) were between 24-26 years old, 9 (6.38%) between 27-29 years old, and 15 (10.64%) 30 years of age or older (Figure 2).

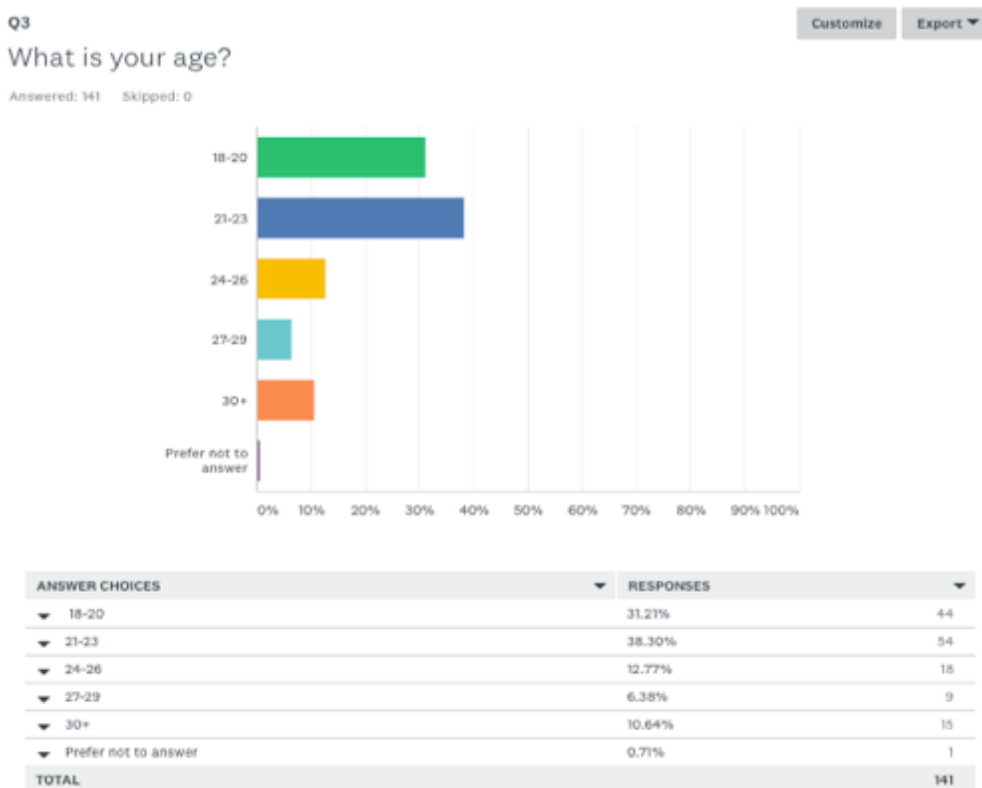


Figure 2. What is your age?

A diverse group responded to the survey. One hundred nine (77.3%) identified as white/Caucasian. Approximately 21% identified as other than Caucasian with the largest group being Hispanic/Latino. Those identifying as Hispanic/Latino constituted 12.76 % of respondents (18). Those identifying as Black/African American comprised 4.9% (7) of the total. In addition to these respondents, 3 (2.13%) students identified as Asian and 2 (1.42%) specified Multiple Ethnicity including Portuguese/Cape Verdean. Of the 168 total respondents, only 2 (1.42%) preferred not to answer this question.

A majority of participants, 68 (48.23%) stated they are in a committed relationship. The next largest group was single, 58 (41.13%). Twelve of the total participants (8.51%) were married, and 2 (1.42%) divorced (*Figure 3*).

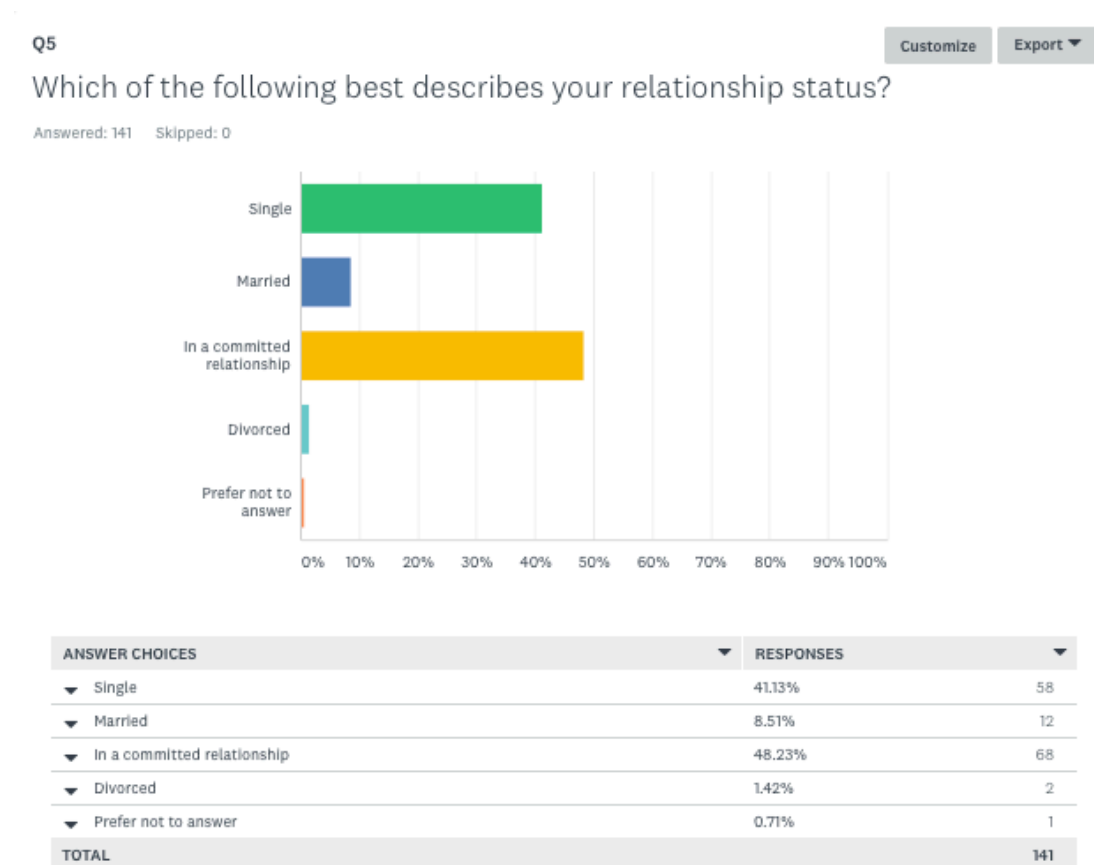


Figure 3. What is your relationship status?

Of these, the vast majority or 125 (88.65%) had no children, 6 (4.26%) had one child, 5 (3.55%) had two children, 3 (2.13%) had three children, 1 (0.71%) had four children, and 1 (0.71%) had six children.

Twenty-one participants chose not to answer the question regarding the number of hours worked per week during the semester. Of the 121 responding, 100 participants (83.33%) reported being employed. Seventeen (14.17%) stated that they do not work during the semester and 3 (2.5%) stated that they are unemployed (*Figure 4*).

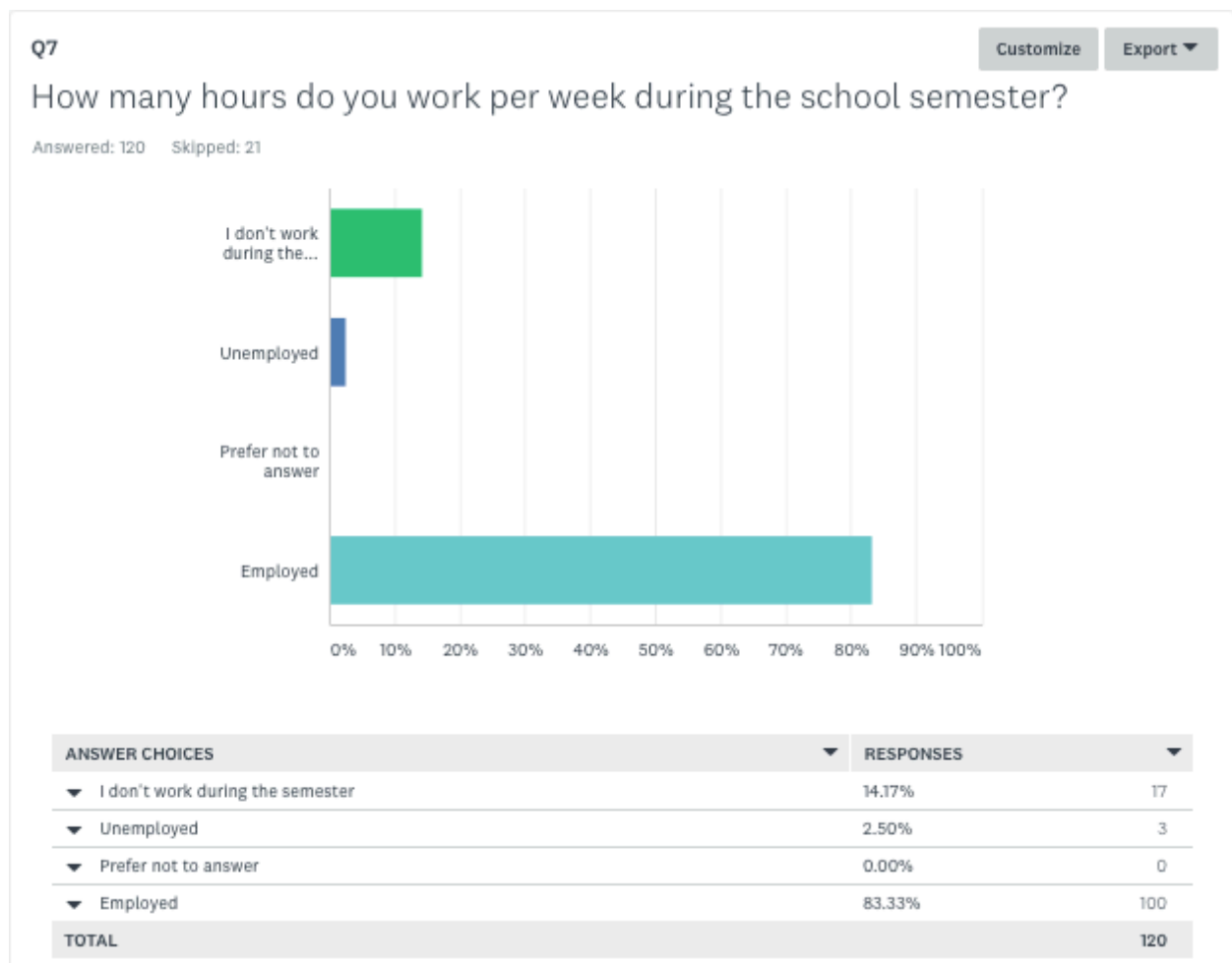


Figure 4. Employment status

Students who were employed were asked to provide the number of hours worked per week.

Intended Majors (n=43) worked an average of 25 hours per week, some stating that they work

over 40 hours per week. Sophomores worked an average of 19 hours per week (n=18). Juniors worked an average of 16.8 (n=20). Seniors worked an average of 17.47 hours (n=39).

Participants lived in a variety of settings, but the majority of the 130 who answered this question at 54.29%, lived at home with their parents (76). Only 18 (12.86%) stated that they lived on campus. Fourteen (10%) stated that they lived off-campus with roommate(s), and 32 (22.86%) lived off-campus with a significant other (*Figure 5*).

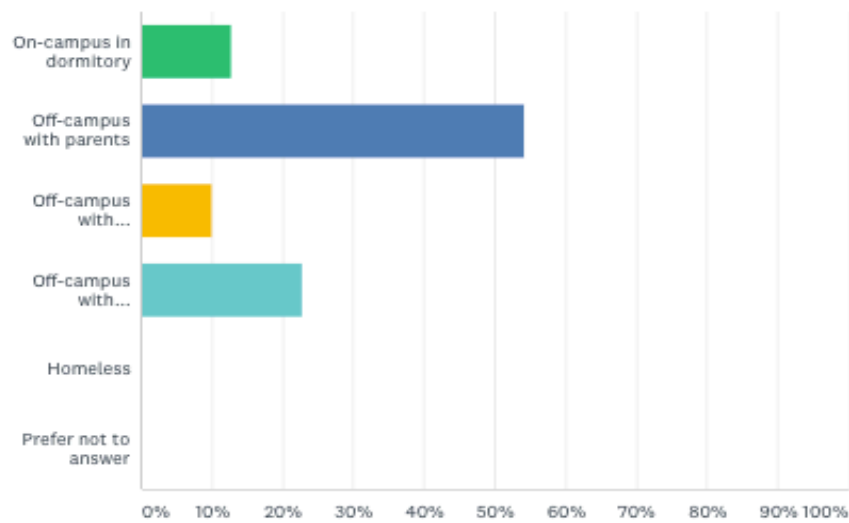
Q8

Customize

Export

What best describes your current living situation?

Answered: 140 Skipped: 1



ANSWER CHOICES	RESPONSES	
On-campus in dormitory	12.86%	18
Off-campus with parents	54.29%	76
Off-campus with roommate(s)	10.00%	14
Off-campus with significant other	22.86%	32
Homeless	0.00%	0
Prefer not to answer	0.00%	0
TOTAL		140

Figure 5. Living Situation

Participants were asked how many hours on average they spent exercising per week. Intended Majors (n=49) exercised an average of 4.5 hours each week. Of this group, 10 (20.4%) stated that they spent zero hours exercising. Sophomores (n=23) spent an average of 3.9 hours exercising each week. Five of the sophomores responding (21.7%) stated that they exercise zero hours each week. Juniors responding (n=24) spent an average of 1.6 hours per week exercising with 37.5% of this group exercising zero hours per week. Seniors (n=45) spent on average of 3.2 hours exercising, but 10 responding seniors (22.2%) stated they exercise zero hours per week. From the overall sample answering this question (n=141), males (n=20) exercised an average of 5.2 hrs. per week with 3 (15%) listing zero hours spent exercising, while females (n=118) spent only 3.31 hours on average per week exercising and 31 (26.3%) not exercising at all.

Participants who responded (n=141) reported sleeping an average of 6.7 hours per night. No significant differences were noted regarding religious affiliation. The majority identified with some form of Christianity/Catholicism.

Health Promoting Lifestyle Profile II

Participants were presented with a series of 52 items such as “Follow a planned exercise program” and “Get enough sleep.” Items were scored as Never=1, Sometimes=2, Often=3, Routinely=4. Calculating the mean of an individual’s responses to all 52 items reveals overall performance for the Health-Promoting Lifestyle (Range 1-4). The scores on the six subscales—Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relations, and Stress Management—are obtained by calculating the mean score for specific items.

Overall HPLP-II score for all participants with complete responses is presented as well as performance among the subscales. Breakdown of overall score and subscale scores for each

class (Intended Major, Sophomore, Junior, Senior) is also provided. Performance on select items within each subscale is highlighted.

Health-Promoting Lifestyle. The HPLP-II score (Table 1) for all participants (n= 141) was 2.54. Intended majors (n=49) scored 2.59, sophomores (n=23) 2.53, juniors (n=24) 2.47, and seniors (n=45) 2.52. A downward trend is noted progressing from the IM class to the juniors. The seniors display an improvement in overall HPLP-II score, but are still lower than the intended majors and sophomores. Recalling that a 3 signifies that participants engage in health promoting behaviors “often,” neither group achieves this benchmark and remains within the “sometimes” bracket. Looking at the gender differences, females (n=118) scored 2.53 and males (n=20) scored (2.56). Though males scored slightly higher, neither group achieved the benchmark of engaging in health-promoting behaviors “often.”

Table 1

Health-Promoting Lifestyle Profile II

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	2.54	2.59	2.53	2.47	2.52	2.53	2.56

Health Responsibility. *Health Responsibility* (Table 2) was calculated by finding the mean score of the following items:

- 3. Report any unusual signs of symptoms to a physician or other health professional
- 9. Read or watch TV programs about improving health
- 15. Question health professionals in order to understand their instructions
- 21. Get a second opinion when I question my health care providers advice
- 27. Discuss my health concerns with health professionals
- 33. Inspect my body at least monthly for physical changes/danger signs
- 39. Ask for information from health professionals about how to take good care of myself.

- 45. Attend education programs on personal health care.
- 51. Seek guidance or counseling when necessary

Table 2

Health Responsibility

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	2.26	2.37	2.22	2.16	2.18	2.26	2.28

The same trends for the total HPLP-II score are noted in the Health Responsibility score as well.

Neither group as a whole engages in these activities *often* or *routinely*. All scores fall in the *sometimes* category. Results are summarized in Table 3.

Table 3

Health Responsibility Summary: All Participants

	<i>Report unusual signs or symptoms to provider</i>	<i>Read or watch TV programs about health</i>	<i>Question health providers</i>	<i>Get second opinion when unsure of provider</i>	<i>Discuss health concerns with professional</i>	<i>Inspect body monthly for changes</i>	<i>Request health information from professional</i>	<i>Attend health education programs</i>	<i>Seek guidance or counseling when needed</i>
Never	9.22%	35.75%	6.43%	30.50%	5.67%	12.77%	20.57%	59.57%	15.60%
	(13)	(49)	(9)	(43)	(8)	(18)	(29)	(84)	(22)
Sometimes	39.72%	48.94%	38.57%	48.94%	45.39%	39.01%	49.65%	29.08%	44.68%
	(56)	(69)	(54)	(69)	(64)	(55)	(70)	(41)	(63)
Often	33.33%	12.77%	35.71%	12.77%	30.50%	28.37%	22.70%	9.93%	26.95%
	(47)	(18)	(50)	(18)	(43)	(40)	(32)	(14)	(38)
Routinely	17.73%	3.55%	19.29%	7.80%	18.44%	19.86%	7.09%	1.42%	12.77%
	(25)	(5)	(27)	(11)	(26)	(28)	(10)	(2)	(18)

Some items of note in this part of the survey are 9, 33, and 51. The first, item 9, *Read or watch TV programs about improving health*, had 83.69% of participants state that they never or sometimes engage in this. The second, item 33, *Inspect my body at least monthly for physical changes/danger signs*, had results that were split with 51.78% answering either never or sometimes and 48.23% *often* or *routinely*. Only 19.86% answered that they *routinely* inspect their bodies monthly. Lastly, item 51, *Seek guidance and counseling when necessary*, had 60.28% answered either *never* (15.6%) or *sometimes* (44.68%) while 39.72% answered *often* (26.95%) or *routinely*. Just 12.77% responded to *routinely* seeking advice when needed.

Physical Activity. *Physical Activity* (Table 4) was calculated by finding the mean score for the following items:

- 4. Follow a planned exercise program
- 10. Exercise vigorously for 20 or more minutes at least three times a week
- 16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week)
- 22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).
- 28. Do stretching exercises at least 3 times per week.
- 34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking).
- 40. Check my pulse rate when exercising
- 46. Reach my target heart rate when exercising

Table 4

Physical Activity

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	2.20	2.28	2.38	1.87	2.21	2.16	2.45

This data parallels the findings of the open response question pertaining to the number of hours spent exercising each week. The juniors are the lowest scoring group, and the males outscore the females. All items are summarized in Table 5 and reviewed.

Table 5

Physical Activity Performance Summary: All Participants

	<i>Follow a planned exercise program</i>	<i>Exercise Vigorously at least 3 times per week</i>	<i>Light to moderate physical activity 5 times per week</i>	<i>Leisure activities</i>	<i>Do stretching exercises at least 3 times per week</i>	<i>Exercise from daily activities</i>	<i>Check my pulse rate when exercising</i>	<i>Achieve my target heart rate while exercising</i>
Never	39.72%	27.66%	34.75%	25.53%	39.72%	5.67%	19.79%	28.78%
	(56)	(39)	(49)	(36)	(56)	(8)	(42)	(40)
Sometimes	39.72%	41.13%	34.75%	58.16%	31.91%	22.70%	31.91%	33.09%
	(56)	(58)	(49)	(82)	(45)	(32)	(45)	(46)
Often	9.93%	11.35%	16.31%	12.06%	18.44%	34.04%	22.70%	27.34%
	(14)	(16)	(23)	(17)	(26)	(48)	(32)	(38)
Routinely	10.64%	19.86%	14.18%	4.26%	9.93%	37.59%	15.60%	10.79%
	(15)	(28)	(20)	(6)	(14)	(53)	(22)	(15)

For item 4, *Follow a planned exercise program*, 79.44% answered either *never* (39.72%) or *sometimes* (39.72%). Only 10.64% answered *routinely*. Item 10, *Exercising vigorously for 20 or minutes at least three times a week*, results indicated that 68.79% stated *never* (27.66%) or *sometimes* (41.13%) and 31.21% *often* (11.35%) or *routinely* (19.86%). Regarding item 16, *Engaging in light to moderate physical activity 5 or more times per week*, 69.5% answered *never* (34.75%) or *sometimes* (34.75%) and 30.49% answered *often* (16.31%) or *routinely* (14.18%).

Most respondents reported not participating in leisure activities such as swimming, dancing, and bicycling. In item 22, *Taking part in leisure activities*, 83.69% stated *never* (25.53%) or *sometimes* (58.16%), and only 16.32% answered either *often* (12.06%) or *routinely* (4.26%). Item 28, or *Stretching at least 3 times per week*, had 71.63% stating *never* or *sometimes*, and 28.37% reported *often* or *routinely*. Of the 141 participants, 71.63% indicated for item 34 that they *often* or *routinely* *Get exercise from their daily activities* with only 28.37% selecting *never* or *sometimes*. Item 40, *Checking and achieving target heart rate during exercise* had 51.7% stating that they *never* or only *sometimes* check their heart rate during exercise. Approximately 62% reported that they *never* or *sometimes* achieve their target heart rate when they do exercise. Only 22 individuals (15.6 %) *routinely* check their heart rate during exercise with only 10.79% (15) of the participants reporting that they achieve their target heart rate.

Nutrition. The means of the following items were utilized to calculate the scores for the nutrition subscale (Table 6):

- 2. Choose a diet low in fat, saturated fat, and cholesterol
- 8. Limit use of sugars and food containing sugar (sweets)
- 14. Eat 6-11 servings of bread, cereal, rice and pasta each day.
- 20. Eat 2-4 servings of fruit each day.
- 26. Eat 3-5 servings of vegetables each day.
- 32. Eat 2-3 servings of milk, yogurt, or cheese each day
- 38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.
- 44. Read labels to identify nutrients, fats, and sodium content in packaged food.
- 50. Eat breakfast

Table 6

Nutrition

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	2.48	2.39	2.59	2.55	2.48	2.47	2.52

None of the groups achieved the rank of *often* or *routinely* pursuing proper nutrition. All groups were within the *sometimes* category. An initial increase is noted at the at the sophomore level.

Performance for all participants is summarized in Table 7.

Table 7

Nutrition Summary: All Participants

	<i>Choose diet low in fat, sat fat, and cholesterol</i>	<i>Limit use of sugars and food containing sugar</i>	<i>Eat 6-11 servings of bread, cereal, rice, pasta each day</i>	<i>Eat 2-4 servings of fruit each day</i>	<i>Eat 3-5 servings of vegetables each day</i>	<i>Eat 2-3 servings of milk, yogurt, cheese each day</i>	<i>Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day</i>	<i>Read labels to identify nutrients, fats, and sodium content in packaged food</i>	<i>Eat breakfast</i>
Never	9.29% (13)	12.77% (18)	28.37% (40)	9.22% (13)	15.60% (22)	14.89% (21)	5.67% (8)	9.22% (13)	4.26% (6)
Sometimes	55% (77)	56.03% (79)	47.52% (67)	53.19% (75)	48.94% (69)	34.04% (48)	41.13% (58)	34.04% (48)	31.91% (45)
Often	25% (35)	21.99% (31)	19.15% (27)	26.95% (38)	27.66% (39)	35.46% (50)	35.46% (50)	26.95% (38)	17.73% (25)
Routinely	10.71% (15)	9.22% (13)	4.96% (7)	10.64% (15)	7.80% (11)	15.60% (11)	17.73% (25)	29.79% (42)	46.10% (65)

Only 35.71% of participants *often* or *routinely* choose a low fat diet (item 2), while 55% *sometimes* choose a low fat diet. Fruit and vegetable intake is low (items 20 and 26). Of the 141 participants, 62.41% reported *never* or only *sometimes* consuming 2-4 servings of fruits and vegetables daily with just 10.64% *routinely* eating that amount. Even less, 7.8%, indicated they *routinely* eat 3-5 servings of vegetables each day with the majority, 64.54% eating that amount

never or *sometimes*. Almost 1 in 3 participants (31.91%) reports *sometimes* eating breakfast, with less than half (46.10%) *routinely* eat breakfast (item 50).

Spiritual Growth. Spiritual Growth scores (Table 8) were calculated using the means of participants' responses to the following items:

- 6. Feel I am growing and changing in positive ways
- 12. Believe that my life has purpose
- 18. Look forward to the future
- 24. Feel content and at peace with myself
- 30. Work toward long-term goals in my life
- 36. Find each day interesting and challenging
- 42. Am aware of what is important to me in life
- 48. Feel connected with some force greater than myself
- 52. Expose myself to new experiences and challenges

Table 8

Spiritual Growth

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	3.01	3.05	2.97	3.04	2.96	2.99	3.04

Overall, spiritual growth was the highest scoring category. As a group, participants' scores indicate for the most part that they promote spiritual growth in their lives *often*. Results are summarized in Table 9.

Table 9

Spiritual Growth Summary: All Participants

	<i>Feel I am growing and changing in positive ways</i>	<i>Believe my life has purpose</i>	<i>Look forward to the future</i>	<i>Feel content and at peace with myself</i>	<i>Work toward long-term goals in my life</i>	<i>Find each day interesting and challenging</i>	<i>Am aware of what is important to me in life</i>	<i>Feel connected with some force greater than myself</i>	<i>Expose myself to new experiences and challenges</i>
Never	2.13%	0.71%	0%	3.55%	0%	2.14%	0.71%	19.42%	2.84%
	(3)	(1)	(0)	(5)	(0)	(3)	(1)	(27)	(4)
Sometimes	31.21%	12.77%	12.77%	47.52%	6.38%	48.57%	9.93%	29.50%	28.37%
	(44)	(18)	(18)	(67)	(9)	(68)	(14)	(41)	(40)
Often	51.06%	44.68%	35.46%	32.62%	35.46%	32.86%	38.30%	25.90%	46.10%
	(35)	(63)	(50)	(46)	(50)	(46)	(54)	(36)	(65)
Routinely	15.60%	41.84%	51.77%	16.31%	58.16%	16.43%	51.06%	25.18%	22.70%
	(22)	(59)	(73)	(23)	(62)	(23)	(72)	(35)	(32)

The highest scoring category in this study, a majority of participants *routinely* look forward to the future (item 18), work toward long-term goals (item 30), and are aware of what is important to them in life (42). Sense of purpose was strong (item 12). The vast majority, 86.52%, answered that they *often* or *routinely* feel that their life has purpose and only one participant answered *never*. No participants stated that they *never* look forward to the future or that they *never* work toward long-term goals. For growing and changing and positive ways, 66.66% indicated that they *often* or *routinely* feel that they are developing positively. Slightly under half, 48.93%, of participants indicated that they are content and at peace with themselves (item 24). Almost over two thirds of participants, 68.8%

reported that they often or routinely exposed themselves to new experiences and challenges (52).

Interpersonal Relations. Scores (Table 10) for the interpersonal relations subscale were calculated using the means to the following items:

- 1. Discuss my problems and concerns with people close to me
- 7. Praise other people easily for their achievements
- 13. Maintain meaningful and fulfilling relationships with others
- 19. Spend time with close friends
- 25. Find it easy to show concern, love, and warmth to others
- 31. Touch and am touched by people I care about
- 37. Find ways to meet my needs for intimacy
- 43. Get support from a network of caring people
- 49. Settle conflicts with others through discussion and compromise

Table 10

Interpersonal Relations

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	2.99	3.02	2.81	3.01	3.05	3.02	2.81

In terms of demographics, males and sophomores scored the lowest compared with other participants, but overall this was the second highest scoring subscale. With those exceptions, scores indicated that participants as a group engaged in these positive interpersonal behaviors *often*. Results for the individual items are summarized in Table 11.

Table 11

Interpersonal Relations Summary: All Participants

	<i>Discuss my problems/concerns with people close to me</i>	<i>Praise others easily for their achievements</i>	<i>Maintain meaningful and fulfilling relationships</i>	<i>Spend time with close friends</i>	<i>Find it easy to show concern, love, and warmth</i>	<i>Touch and am touched by people I care about</i>	<i>Find ways to meet my needs for intimacy</i>	<i>Get support from a network of caring people</i>	<i>Settle conflicts with others through discussion and compromise</i>
Never	4.36%	0%	0%	7.80%	2%	0.71%	7.14%	3.55%	1.42%
	(6)	(0)	(0)	(11)	(1.42)	(1)	(10)	(5)	(2)
Sometimes	41.84%	11.35%	11.35%	39.72%	17.02%	26.24%	38.57%	22.70%	23.40%
	(59)	(16)	(16)	(56)	(24)	(37)	(54)	(32)	(33)
Often	33.33%	42.55%	46.81%	32.62%	39.01%	41.13%	42.14%	41.84%	43.97%
	(47)	(60)	(66)	(46)	(55)	(58)	(59)	(59)	(62)
Routinely	20.57%	46.10%	41.84%	19.86%	42.55%	31.91%	12.14%	31.91%	31.21%
	(29)	(65)	(59)	(28)	(60)	(45)	(17)	(45)	(44)

Regarding their ability to discuss their problems and concerns people close to them (item 1), 53.87% answered *often* or *routinely*, and 75.18% stated that they *often* or *routinely* settled conflicts with others through discussion and compromise (item 49). On touch and intimacy, 73.04% of participants reported that they *often* or *routinely* touch and are touched by individuals they care about (item 31), and 54.28% answered they *often* or *routinely* met their needs for intimacy (item 37). While a large majority, 88.65%, indicated that they *often* or *routinely* maintain meaningful and fulfilling relationships with others (item 13), a smaller majority of 52.48% stated that they *often* or *routinely* spent time with close friends (item 19). Almost three-fourths of participants, 73.75%, *often* or *routinely* get support from a network of caring friends (item 43). Focusing on others received high scores with 88.65% reporting that they *often* or

routinely easily praise others for their achievements (item 7), and 81.56% *often* or *routinely* having no difficulty in showing love, warmth and concern to others (item 25).

Stress Management. The *Stress Management* subscale scores (Table 12) were calculated utilizing the means of the answers to the following items:

- 5. Get enough sleep
- 11. Take some time for relaxation each day
- 17. Accept those things in my life which I cannot change
- 23. Concentrate on pleasant thoughts at bed time
- 29. Use specific methods to control my stress
- 35. Balance time between work and play
- 41. Practice relaxation or meditation for 15-20 minutes daily
- 47. Pace myself to prevent tiredness

Table 12

Stress Management

GROUP	All Participants	Intended Majors	Sophomores	Juniors	Seniors	Females	Males
SCORE	2.23	2.37	2.19	2.08	2.11	2.22	2.24

Overall, after *Physical Activity*, this is the second-lowest scoring subscale and follows the same trend as the health-promoting lifestyle scores with a steady decrease with juniors as the lowest scoring class with a slight improvement in the senior class. Neither group approaches *often* in implementing these stress management health behaviors. A summary of participants' performance is included in Table 13.

Table 13

Stress Management Summary: All Participants

	<i>Get enough sleep</i>	<i>Take some time for relaxation each day</i>	<i>Accept those things in my life which I cannot change</i>	<i>Concentrate on pleasant thoughts at bedtime</i>	<i>Use specific methods to control my stress</i>	<i>Balance time between work and play</i>	<i>Practice relaxation or meditation for 15-20 minutes daily</i>	<i>Pace myself to prevent tiredness</i>
Never	15.60%	17.02%	4.26%	9.93%	12.06%	16.31%	58.87%	21.28%
	(22)	(24)	(6)	(14)	(17)	(23)	(83)	(30)
Sometimes	48.94%	51.7%	38.30%	55.32%	58.16%	49.65%	29.08%	46.81%
	(69)	(73)	(54)	(78)	(82)	(70)	(41)	(66)
Often	28.37%	20.57%	39.72%	27.66%	20.57%	24.82%	6.38%	24.82%
	(40)	(29)	(56)	(39)	(29)	(35)	(9)	(35)
Routinely	7.09%	10.64%	17.73%	7.09%	9.22%	9.22%	5.67%	7.09%
	(10)	(15)	(25)	(10)	(13)	(13)	(8)	(10)

Over two-thirds of participants (64.54%) reported that they *never* or *sometimes* get enough sleep (item 5), and only 28.37% stating that they *often* sleep sufficiently. A similar distribution presents itself for item 23, *Concentrate on pleasant thoughts at bedtime* with 62.25% indicating *never* or *sometimes* and 27.66% reporting *often* and less than 10% *routinely*. Only 31.91% *often* or *routinely* pace themselves to prevent tiredness with 68.09% stating that they *sometimes* or *never* engage in this behavior (item 47).

Similar to prior results, 65.96% of respondents state that they *never* or *sometimes* balance time between work and play with 34.04% indicating *often* or *routinely* (item 35). Taking time for relaxation each day (item 11) was chosen by only 31.21% as *often* or *routinely* do while

68.72% indicated *sometimes* or *never*.

Items dealing with methods to control stress yielded the lowest scores. For utilizing specific techniques to control stress (item 29), 70.22% reported they either *never* or only *sometimes* did this with just 29.79% stating *often* or *routinely*. The greatest single indicator was related to practicing meditation or relaxation for 15-20 minutes daily (item 41). Almost 59% of responding students reported they *never* do this, 29.08% *sometimes*, and just 12.05% *often* or *routinely*. Scores associated with accepting those things that cannot be changed (item 17) were 57.45% for *often* or *routinely*. However, 38.30% reported *sometimes* and 4.26% stated they *never* accept things that are out of their control.

Definition of Health

Formatted as an open response question, participants were asked: *How do you define health?* Qualitative analysis of participants' responses was conducted and the principle theme of health being constituted one's physical, emotional, social, and spiritual wellbeing emerged. This was true for all groups: Intended Majors, sophomores, juniors, seniors, males, and females.

Some representative definitions include:

- "Overall well being in body, mind, and spirit."
- "Health is a combination of physical, mental, and emotional factors that contribute to your overall well-being and image of self."
- "The state of feeling and functioning in an optimal way- physically, mentally, emotionally, spiritually."
- "There are many dimensions to one's health, including physical, mental, and emotional health. To be healthy, one must take charge of their own wellness among all dimensions."

- “A state of well-being physically, emotionally, mentally, and spiritually.”

A secondary theme of health being the absence of disease and illness was also detected at all levels of participants. Examples of representative responses include:

- “Health is a not having illness or pain.”
- “Absence of disease.”
- “A sense of holistic well-being and the absence of disease/illness.”
- “Being free from any physical or mental illnesses.”
- “Spiritual, mental, and physical wellbeing. The absence of sickness.”

Barriers to Health Promotion Associated with Nursing School

Participants were presented with a second open response item: Thinking of your life as a nursing student, what stressors/barriers, if any, do you face that impede your pursuit of health? Through qualitative analysis of responses, the following two major themes were identified: *lack of time*, and *stress*. Additionally, a growing theme of *guilt* was detected. Often these themes overlapped within individual responses.

Lack of Time. Attributing it to factors such as the demanding course-load, amount of homework, family and work constraints, participants repeatedly cited lack of time as a barrier to their pursuit of health in nursing school. Lack of time due to studying for exams, completing projects, and working impeded health promotion activities such as “working out”, “cooking healthy meals”, “spending time with friends”, and “sleeping.” Students from all subgroups concurred. Some representative responses are included below:

- “The amount of time I spend working or doing school work doesn’t allow me time to exercise regularly, sometimes I can’t always eat healthy because of my schedule, and I definitely don’t get enough sleep due to my school and work schedule.” – Intended Major

- “It is very difficult to get enough sleep at night, eat balanced meals, and work enough hours a week to pay the bills while always trying to strive for the best academically. I also find it hard to justify fitting a social life into my schedule, so my social/emotional health is not as good as it could be.” – Intended Major
- “Constantly doing a lot of homework and studying that I do not have time to go to the gym or eat a healthy meal because I get what ever is quick and easy to eat and to get as much work done as possible.” – Sophomore
- “With the heavy workload, sometimes I don’t have time to eat. I don’t have much time to sleep either because I’m too busy with the work load.” – Sophomore
- “Having too many assignments I think is a huge barrier to me being able to be healthy. Often time I feel like I cannot keep up with everything between work and school assignments that I end up eating whatever is at hand. And I give up working out through the semester because it is just not feasible to mange with school assignments and working.” – Junior
- “Completing assignments, studying, working, caring for younger siblings/pets at home, paying bills.” – Junior
- “Hours spent studying, reading, clinical hours, impede on me working out as much as I want. I neglect cooking a healthy meal if I can obtain something quicker that’s unhealthy just so I can study more or go to class.” – Senior
- “Spending hours studying to do well on tests instead of taking enough time off to relax, spend time with family, friends, and myself.” – Senior

Stress. A second barrier to health promotion activities cited by participants was stress. High stakes exams, pressure to perform and meet demands of the program, and lack of time were some of the stress triggers identified by respondents from all subgroups. Examples of illustrative responses include:

- “Stress of classes and exams.” – Intended Major
- “The stress and anxiety of always ensuring that I am studying and doing everything possible to get high grades in my classes. I think it does impede my mental and physical health because I stress a lot and don't always sleep well.” – Intended Major
- “Stress from school assignments, quizzes, and exams.” – Sophomore
- “Stress with school, work, finances.” – Sophomore
- “Stress of studying and exams which cause lack of sleep.” – Junior
- “Stress about deadlines impedes devoting time to exercising. Choosing convenience over quality when it comes to food. Being in a classroom setting for lectures and sitting down to study means I do a lot of sitting, not very active.” – Junior

- “Stress for exams and sleep deprivation with family situation. Not able to cook good food or exercise because I have not enough time for that.” – Senior
- “Nursing school is so stressful that it has exacerbated my anxiety. There is so much to do and so little time. I do not have time for anything but school, and it has affected my mental health. It affects me physically to the point where I feel unwell.” – Senior

Guilt. A theme of guilt was detected, beginning with participants in the intended major and sophomore classes and building in strength in the junior and senior groups. Principally, feelings of guilt manifested when participants took time to engage in health promoting activities such as exercise rather than use the time for studying. Typical responses include:

- “I...find it hard to justify fitting a social life into my schedule, so my social/emotional health is not as good as it could be.” – Intended Major
- “No time to work out because I feel guilty if I do, I should be studying. Can't hang out with my friends. I can't spend time with my fiancé. I don't spend time with my family.” – Sophomore
- “I do not have time to go to the gym because in my spare time, I feel guilty if I am not studying.” – Junior
- “I feel guilty exercising when I could be studying.” – Junior
- “Lack of time, feelings of guilt towards working out, overloaded HW commitments.” – Senior
- “Stress, constantly being exhausted, always feeling like I should be studying instead of exercising or anything else.” – Senior
- “...I'd like to go to the gym more but then I'm afraid I'm not studying enough. But then I think I'm not exercising enough. And then I stress out even more. It's like a never ending cycle.” – Senior

Limitations

Limitations of this study have been identified. A convenience sample of nursing students was used. Only students who wanted to participate did so, thus there may be significant differences between those who did and did not respond. The response rate from eligible participants was only 12.3%. The study relied on self-reported data, which may or may not be accurate. No advanced statistical software and modeling were utilized for quantitative analysis. The study was cross sectional and results are only reflective of those who participated. No previous assessments of this cohort were available for comparison. Participants may or may not have had higher or lower levels of health promotion and stress prior to enrolling in nursing school.

Discussion

Definition of Health

The findings show that this sample of nursing students on the whole understand that health encompasses more domains than solely physical wellbeing, but includes areas such as spiritual, emotional, social, and mental health. Determining participants' beliefs of what health is as a construct is crucial in building the framework to assess their health promotion behaviors and habits. Taking into consideration the definitions of health proposed by the WHO, Pender, and the ANA's definition of a healthy nurse, the construct of health derived from these findings are congruent with their core tenets. This points to effective education, whether in nursing school, high school, or social sources, of what constitutes health. However, though participants' on the whole have a proper understanding of health as a construct, the results of the study reveal a severe deficit of personal health promotion behaviors.

Care for Others Versus Care for Self

Consideration of the two highest scoring subscales on HPLP-II (*Spiritual Growth* and *Interpersonal Relations*) as compared to the other subscales (*Health Responsibility*, *Physical Activity*, *Nutrition*, and *Stress Management*) indicates a disturbing reality. Though nursing students display traits of positive care and outward behavior towards others, they neglect self care. *Spiritual Growth* and *Interpersonal Relations* were the only subscales that participants on the whole achieved the benchmark of implementing the corresponding health promotion behaviors *Often*. The items in these categories, while still viewed in relation to the self, pertain to having a stable positive outlook on one's person, and ultimate destiny/calling in relation to others and the world. That nursing students would score high on these subscales should come as

no surprise as a significant degree of compassion and desire to better the lives of others is integral to the nursing profession.

In stark contrast, the subscales with health promotion items exclusively focused on the self did not meet the benchmark of being implemented *Often* but were practiced *Sometimes*. *Physical Activity* and *Stress Management* received some of the lowest scores. In regards to *Health Responsibility*, a consideration must be made. The majority of participants are in their late teens/early-twenties and likely without significant co-morbidities. That said, participants are in nursing school and are learning about the importance of being informed on how to live healthy lives, early detection of disease, and psychosocial stability.

In light of the research outlining the risks for compassion fatigue and burnout among nurses, the trend of these future nurses toward a deficit in self-care is troubling. Although displaying a healthy sense of purpose and relationships with others, what is the explanation for these deficits? Interpretation of the results using Pender's theoretical framework of health promotion elucidates some possible answers.

Perceived Barriers and Competing Demands

Pender's theory postulates that engagement in health promotion behaviors is influenced by perceived barriers, competing demands, and more attractive activities (Pender, 2011). Participants indicated three perceived barriers to their pursuit of health: *stress*, *lack of time*, and *guilt*. Stress and lack of time were attributed to the rigors of coursework, exams, work, and family obligations. Pender states that competing demands that require immediate attention will likely take precedent regardless of one's commitment to health promotion activities. Attempts by participants to care for self with activities such as going to the gym, taking time to cook healthy meals, and taking time for relaxation were complicated by feelings of guilt because it

was not time spent in studying for nursing exams. Pointedly, it can be interpreted that participants viewed academic excellence and self-care/health promotion as rival pursuits. Considering the body of literature on the detrimental impact of unmediated stress and compassion fatigue on health and wellness, this is cause for concern.

Implications for Nursing Education and Future Research

Implications for Nursing Education

The findings of this study hold ramifications for nursing education and practice. As future nurses, these participants will be in positions to influence the health promotion behaviors of their patients. Nursing educators are in a position to either foster or hinder students' levels of health promotion. By fostering health-promoting behaviors, nursing instructors will enrich the lives of students and patients through the creation of positive role models. Moreover, nurses ought to value their own health for the sake of their personal wellbeing.

Level of commitment to a plan of action according to Pender (2011) is pivotal. The greater one's commitment to performing a health promoting activity, the stronger the likelihood of execution. Environmental factors, support, expectations, and role modeling by significant individuals are mediating factors in enhancing commitment and execution (Pender, 2011). Nursing instructors are influential in the lives of their students (Pender, 2011). In addressing the state of affairs regarding nurse health, nursing educators ought to consider methods of manipulating the learning environment and coursework so that they foster the personal health promotion behaviors of students. This can be done through policies to intentionally infuse nursing curricula/courses with competencies that include topics dedicated to developing personal health promotion and self-care for the caregiver.

While some stress and time commitment is inherent in pursuing a nursing education, nursing instructors ought to be cognizant of the impacts of stress on the health of their students. For example, nursing educators could potentially increase students' time and efficiency and decrease stress by ensuring that course competencies are met in as few assignments as possible. This could be accomplished with a higher premium being placed on quality and depth rather than

length. Additionally, classes should be scheduled in a manner that promotes health. For example, if a clinical rotation is scheduled from 3-11 PM then the corresponding lecture should not take place early the following morning. A later start time could be considered. Time should also be allotted for lunch and breaks in the schedule.

Prior experience, perceived competence, and perceived barriers influence health-promoting behavior. Those who believe that they know how to exercise efficiently, have developed a routine, and incorporated it successfully into their lives while balancing competing demands, are more likely to continue to engage in exercise. *Physical Activity* was the lowest scoring subscale. An inverse relationship between time in the nursing program and reported time spent exercising per week is evident. Moreover, approximately 20% of students in each class admitted that they spend zero hours per week exercising. The American Heart Association (AHA) recommends 150 minutes per week of moderate intensity aerobic or 75 minutes high intensity aerobic exercise (2017). A recommended routine is 30 minutes of moderate intensity aerobic activity 5 days per week or 25 minutes of vigorous aerobic activity 3 days per week (AHA, 2017). For added health benefits, moderate-high intensity muscle strengthening activity at least two days per week should be included (AHA, 2017).

Considering Pender's theory, nursing schools can shape students' attitudes towards practicing physical activity by teaching them the AHA's recommendations and increase a sense of self-competence by incorporating a lab component such as a week of classes spent at the school gym, with the aid of qualified instructors, teaching students *how* to translate the theory of exercise to personal practice. Similar, less intensive, workshops could be included regarding topics such as eating healthy on-the-go, stress reduction techniques, and time management. On a systemic level, institutions of higher learning ought to view the inclusion of accessible

gymnasiums, and high quality, nutritious, low cost food as a fundamental responsibility to the students they serve. Ultimately, the locus of change occurs at the individual level. Colleges and nursing professors can facilitate this change by creating a positive health environment and by mentoring students and encouraging self-reflection (Pender, 2011).

Endeavors to promote nursing student wellbeing and health promoting behaviors have been successful. At Georgetown University, recognizing that “nursing education has traditionally placed less emphasis on student’s emotional and relationship development,” students enrolled in two nursing courses were exposed to curriculum infused with college health issues (Yearwood & Riley, 2010, p. 1362). Self-reflection through journals, photo essays, and a questionnaire were used to assess students’ emotional reactions as they related to the material. Findings showed that the students’ increased self-awareness and empathy for others through the pedagogy (Yearwood & Riley, 2010). Researchers reported that students’ “were better able to use assessment instruments effectively with patient’s, and generally felt more comfortable discussing personal wellness issues of patients in the clinical arena” (Yearwood & Riley, 2010, p. 1361). Relationships between students and faculty were also enhanced (Yearwood & Riley, 2010).

Another study conducted at Western Michigan University involved infusing content on healthy behaviors into established courses for nursing and occupational therapy students (Stark, Hoekstra, Hazel, & Barton, 2012). Speech language pathology students served as the control group (Stark et al., 2012). The intervention consisted of teaching and discussion of the importance of health professionals living a healthy lifestyle (Stark et al., 2012). Students also created a personalized health plan that they were encouraged to implement over the semester. Reflective papers/journals to assess their progress and how they might relate their experience to

clinical practice were utilized (Stark et al., 2012). All students completed the HPLP-II at the beginning and end of the semester (Stark et al., 2012). Overall, the students in the intervention group displayed significantly improved scores on the HPLP-II at the end of the semester (Stark et al., 2012). In contrast, students in the comparison group had lower scores than the intervention group and also scored lower on the nutrition and physical activity subscales at the end of the semester than they had at the beginning (Stark et al., 2012).

Implications for Future Research

One of the strengths of this pilot study is that it provides a comprehensive picture of the health promotion level of nursing students at this particular institution. Comprehensive assessments of this nature are lacking in the literature. However, it is broad in scope and the findings are not necessarily transferable to students at other institutions. While additional reassessments using tools such as the HPLP-II should be undertaken, studies should also be conducted to gain deeper insight on specific areas of nursing student health promotion such as sleep, stress, physical activity and nutrition. Nursing schools ought to allocate resources to implement interventions to increase the level of health promotion among students and conduct research to document their efficacy. Longitudinal studies following nursing students' health promotion habits into professional practice should be undertaken to provide deeper insight and assess the impact of interventions. Additionally, studies examining the level of health promotion among nursing educators ought to be considered, as faculty serve as primary role models for students.

Conclusion

In conclusion, the results of this study indicate that the level of health promotion among nursing students at Rhode Island College is not optimal. While students had an informed concept of health as a construct and scored well on spiritual and interpersonal health promotion, scores on the other domains indicate neglect of self-care. Additionally students reported high levels of stress, lack of time, and guilt as barriers to pursuing health while in nursing school. Considering the current status quo of the health of nurses, the stress nurses face, and the risk for compassion fatigue and burnout, the possibility of these students entering the workforce with no positive change in their level of health promotion is concerning. It is imperative that nursing schools foster self-care among their students. Something must be done to ameliorate the status quo of nurse health. As evidence shows, this can be done through the creation of a culture of health and through the infusion of health promotion education into nursing curricula (Yearwood & Riley, 2010; Stark et al., 2012).

Through teaching students about the personal health risks nurses face and their consequences, and by facilitating the translation of clinical concepts of health promotion to personal practice, nursing schools will instill living a healthy lifestyle as a core personal value. The impact on nursing students and the community will undoubtedly be far reaching. On an individual level, students will feel valued as faculty support their wellbeing. Given the risk for compassion fatigue and burnout, it is imperative that nurses and nursing students understand that care for self is the first step in the care for others. Emphasis of this principle in nursing pedagogy will create healthy nurses who are equipped to serve as positive role models as they encourage their patients to pursue higher levels of health.

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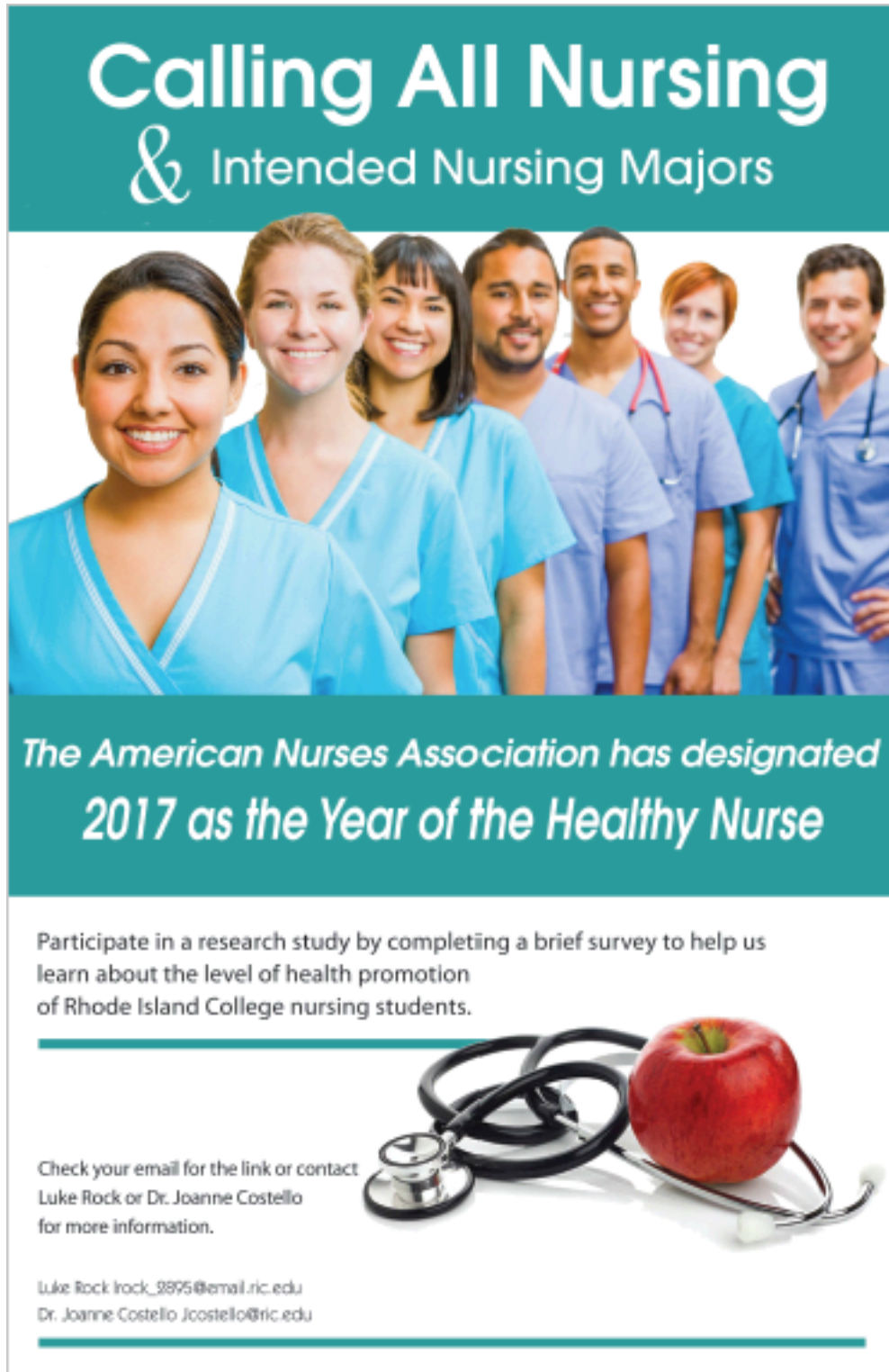
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Appendix A

Recruitment Posters



The poster features a teal header with the text "Calling All Nursing & Intended Nursing Majors" in white. Below the header is a photograph of seven diverse nursing students in blue scrubs, smiling. Underneath the photo is another teal section with the text "The American Nurses Association has designated 2017 as the Year of the Healthy Nurse" in white. The bottom section is white and contains the following text: "Participate in a research study by completing a brief survey to help us learn about the level of health promotion of Rhode Island College nursing students." Below this text is a horizontal teal line. To the right of the text is an image of a black stethoscope and a red apple. Below the image is the text: "Check your email for the link or contact Luke Rock or Dr. Joanne Costello for more information." At the bottom, there are two lines of contact information: "Luke Rock lrock_9895@email.ric.edu" and "Dr. Joanne Costello jcostello@ric.edu". A final horizontal teal line is at the very bottom of the poster.

Calling All Nursing & Intended Nursing Majors

*The American Nurses Association has designated
2017 as the Year of the Healthy Nurse*

Participate in a research study by completing a brief survey to help us learn about the level of health promotion of Rhode Island College nursing students.

Check your email for the link or contact
Luke Rock or Dr. Joanne Costello
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Check your email for the link or contact Luke Rock or Dr. Joanne Costello for more information.

Luke Rock lrock_2895@email.ric.edu
Dr. Joanne Costello jcostello@ric.edu

Recruitment Scripts

Recruitment script for verbal use:

Dear Rhode Island College Nursing Student,

This is an invitation for you to participate in my honors project. The American Nurses Association (ANA) has designated 2017 as the year of the healthy nurse. My honors project is a research study that assesses health promotion among nursing students. You must be an Intended Nursing Major or a Nursing Major in the Rhode Island College School of Nursing to participate. RN to BSN students are NOT eligible. If you choose to participate in this research study, you will complete the Health-Promoting Lifestyle Profile-II and will have the option of answering some free-response and demographic items. Your participation is completely voluntary and will not in any way impact your standing in the Rhode Island College School of Nursing. You may withdraw from the study at any time. Completion should take 10-15 minutes. You should have already received an email from the School of Nursing. The email contains a link to the consent form. A link to the survey is at the bottom of the consent document. You may also access the survey by typing the link on the bottom of the consent that has been provided to you into a web browser. If you have any questions please contact myself (Luke Rock), and Dr. Joanne Costello. rock_2895@email.ric.edu jcostello@ric.edu

Recruitment script for email use:

Dear Rhode Island College Nursing Student,

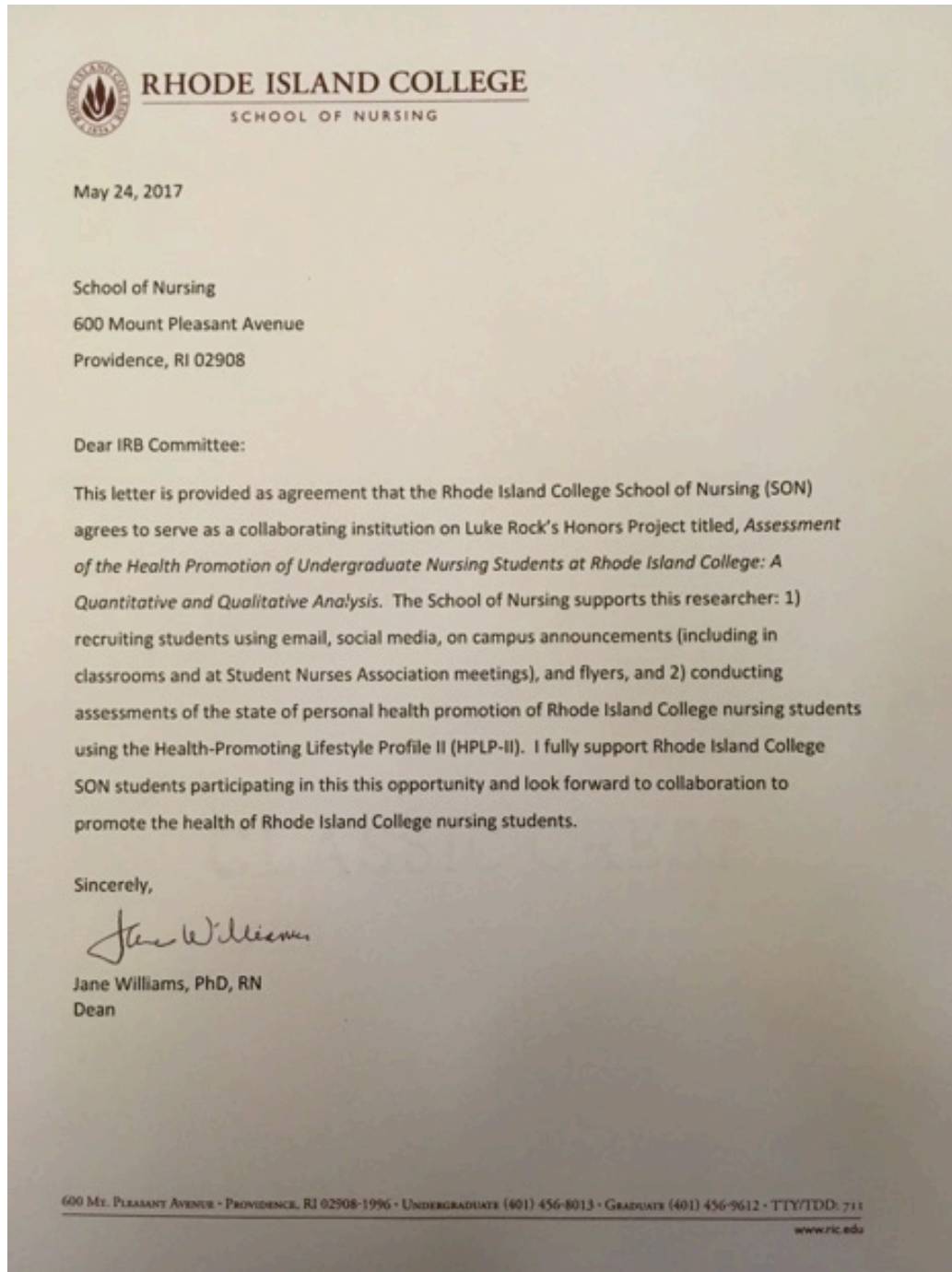
This is an invitation for you to participate in Luke Rock's honors project. Luke is a senior in the RI College School of Nursing. The American Nurses Association (ANA) has designated 2017 as the year of the healthy nurse. Luke's honors project is a research study that assesses health promotion among nursing students. You must be an Intended Nursing Major or a Nursing Major in the Rhode Island College School of Nursing to participate. RN to BSN students are NOT eligible. If you choose to participate in this research study, you will complete the Health-Promoting Lifestyle Profile-II and will have the option of answering some free-response and demographic items. Your participation is completely voluntary and will not in any way impact your standing in the Rhode Island College School of Nursing. You may withdraw from the study at any time. Completion should take 10-15 minutes. You may access the consent document by clicking this link. The link to the survey is found at the bottom of the consent document. If you have any questions please contact Luke Rock, and Dr. Joanne Costello. rock_2895@email.ric.edu jcostello@ric.edu

Recruitment script for social media use:

Be part of a Research Study!!

This is an invitation for you to participate in Luke Rock's honors project. Luke is a senior in the RI College School of Nursing. The American Nurses Association (ANA) has designated 2017 as the year of the healthy nurse. Luke's honors project is a research study that assesses health promotion among nursing students. You must be an Intended Nursing Major or a Nursing Major in the Rhode Island College School of Nursing to participate. RN to BSN students are NOT eligible. If you choose to participate in this research study, you will complete the Health-Promoting Lifestyle Profile-II and will have the option of answering some free-response and demographic items. Your participation is completely voluntary and will not in any way impact your standing in the Rhode Island College School of Nursing. You may withdraw from the study at any time. Completion should take 10-15 minutes. You may access the consent document by clicking this link. The link to the survey is found at the bottom of the consent document. If you have any questions please contact Luke Rock, and Dr. Joanne Costello. lrock_2895@email.ric.edu jcostello@ric.edu

Appendix B

Letter of Support from the Rhode Island College School of Nursing

Appendix C

Consent Form**CONSENT DOCUMENT
Rhode Island College****ASSESSMENT OF THE HEALTH PROMOTION OF UNDERGRADUATE NURSING STUDENTS
AT RHODE ISLAND COLLEGE: A QUANTITATIVE AND QUALITATIVE ANALYSIS**

You are being asked to be in a research study about the health promotion level of undergraduate Rhode Island College (RIC) nursing majors. You are being asked because you are either a declared Intended Nursing Major or a Nursing Major in the RIC School of Nursing (RICSON). Note: RN-BSN Majors are NOT eligible. Please read this form and ask any questions that you have before choosing whether to be in the study.

Luke Rock, a student researcher at Rhode Island College, is doing this study under the direction of Dr. Joanne Costello, professor of nursing at RIC.

Why this Study is Being Done (Purpose)

The American Nurses Association (ANA) has designated 2017 as the Year of the Healthy Nurse. The purpose of this study is to explore attitudes towards health promotion among undergraduate nursing students.

What You Will Have to Do (Procedures)

If you choose to be in the study, we will ask you to complete the Health Promoting Lifestyle Profile-II survey. In addition to the questionnaire, you will be asked to provide some basic demographic information such as your gender, age, and year in the nursing program. Optional free-response items are also included. The entire process will occur via Survey Monkey. You can access the survey with the link provided in the email. This survey should take between 10-15 minutes.

Incentive

As a way to thank you for your time, you will have the option to provide your email address or phone number to be included in a raffle for a \$50 VISA Gift Card.

Risks or Discomforts

The risks are “minimal”, meaning that they are about the same as what you would experience during your typical daily activities. We think it would be similar to the kinds of things you talk about with family and friends. Your participation is completely voluntary and you can skip any questions you don't want to answer. If you want to talk to someone about your feelings or about problems that you're having, you can call the RIC Counseling

Center at 401-456-8094 or visit them at their location in the modular trailer in Parking Lot M near Browne Residence Hall.

Benefits of Being in the Study

Being in this study will not benefit you directly.

Deciding Whether to Be in the Study

Being in the study is your choice to make. Nobody can force you to be in the study. You can choose not to be in the study, and nobody will hold it against you. You can change your mind and quit the study at any time, and you do not have to give a reason. If you decide to quit later, nobody will hold it against you.

How Your Information will be Protected

Because this is a research study, results will be summarized across all participants and shared in published reports and presentations. Your name or identifying information will not be used in any reports. We will take several steps to protect your privacy so that you cannot be identified. At no point in the study will you be required to provide your name. If you wish to be included in the raffle for a gift card, you will have opportunity to provide an email address or phone number, but this is optional. The information will be kept in a locked office file accessible only by the research team. The only circumstances in which information from the study would have to be shared is if it is subpoenaed by a court or if you are suspected of harming yourself or others. If this happened, I would have to report it to the appropriate authorities. Additionally, if there are problems with the study, the records may be viewed by the Rhode Island College review board responsible for protecting the rights and safety of individuals who participate in research. The information will be kept for a minimum of three years after the study is over, after which it will be destroyed.

Who to Contact

You can ask any questions you have now. If you have any questions later, you can contact Luke Rock at 508-673-6805 lrock_2895@email.ric.edu and Dr. Joanne Costello at jcostello@ric.edu.

If you think you were treated badly in this study, have complaints, or would like to talk to someone other than the researcher about your rights or safety as a research participant, please contact Cindy Padula at IRB@ric.edu, by phone at 401-456-9720.

You will be given a copy of this form to keep.

Statement of Consent

I have read and understand the information above. I am at least 18 years of age and I am choosing to be in the study "Assessment of the Level of Health Promotion Among Rhode Island College Undergraduate Nursing Majors". I am either an Intended Nursing Major or a Nursing Major in the RI College School of Nursing who is NOT a RN to BSN student. I understand that completion of any portion of the survey is evidence of my implied consent.

I can change my mind and quit at any time, and I don't have to give a reason. I have been given answers to the questions I asked, or I will contact the researcher with any questions that come up later.

Access the survey here:

<https://www.surveymonkey.com/r/nursingstudenthealthpromotion>

Name of Researcher Obtaining Consent: Luke N. Rock; Dr. Joanne Costello

Appendix D

Survey

ASSESSMENT OF THE HEALTH PROMOTION OF UNDERGRADUATE NURSING MAJORS AT RHODE ISLAND COLLEGE: A QUANTITATIVE AND QUALITATIVE ANALYSIS**Demographic Information**

What best describes your student status at RI College/the RI College School of Nursing?

(Please NOTE: RN-BSN students are ineligible for this research study.)

- **Intended Nursing Major (Not yet accepted into the RIC SON)**
- **Sophomore Level (Accepted into the RIC SON)**
- **Junior Level (Accepted into the RIC SON)**
- **Senior Level (Accepted into the RIC SON)**

What is your gender?

- **Female**
- **Male**
- **Prefer not to answer**

What is your age?

- **18**
- **19**
- **20**
- **21**
- **22**
- **23**
- **24**
- **25**
- **26**
- **27**
- **28**
- **29**
- **30**
- **31**
- **32**
- **33**
- **34**
- **35 +**
- **Prefer not to answer**

Which race/ethnicity best describes you? (Please choose only one)

- **White/Caucasion**
- **Black/African American**
- **Hispanic**
- **Pacific Islander**
- **Asian**
- **American Indian/Alaskan Native**
- **Multiple Ethnicity/Other (please specify):**
- **Prefer not to answer**

Which of the following best describes your Relationship Status?

- **Single**
- **Married**
- **In a committed relationship**
- **Divorced**
- **Prefer not to answer**

Number of Children

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**
- **6**
- **7**
- **8**
- **9**
- **10+**
- **Prefer not to answer**

How many hours do you work per week during the school semester?

- **Provide number**
- **I don't work during the semester**
- **Unemployed**
- **Prefer not to answer**
- **Employed (Provide number)**

What best describes your current living situation?

- On campus in dormitory
- Off campus with parents
- Off campus with roommates
- Off campus with significant other
- Homeless
- Prefer not to answer

How many hours on average do you spend exercising per week during the semester?

- Provide number

How many hours on average do you sleep per night?

- Provide Number

Do you have any religious affiliation? If yes please state which group you affiliate with; ie. Christian, Islam, Judaism, Buddhism, etc. If no affiliation or prefer not to answer, please advance to the next question.

- Provide affiliation

Free Response Items

1. How do you define health?
2. Thinking of your life as a nursing student, what stressors/barriers, if any, do you face that impede your pursuit of health?

LIFESTYLE PROFILE II

DIRECTIONS: This questionnaire contains statements about your *present* way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

N for never, **S** for sometimes, **O** for often, or **R** for routinely

1. Discuss my problems and concerns with people close to me. N S O R
2. Choose a diet low in fat, saturated fat, and cholesterol. N S O R
3. Report any unusual signs or symptoms to a physician or other health professional. N S O R
4. Follow a planned exercise program. N S O R
5. Get enough sleep. N S O R
6. Feel I am growing and changing in positive ways. N S O R
7. Praise other people easily for their achievements. N S O R
8. Limit use of sugars and food containing sugar (sweets). N S O R
9. Read or watch TV programs about improving health. N S O R
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber). N S O R
11. Take some time for relaxation each day. N S O R
12. Believe that my life has purpose. N S O R
13. Maintain meaningful and fulfilling relationships with others. N S O R
14. Eat 6-11 servings of bread, cereal, rice and pasta each day. N S O R
15. Question health professionals in order to understand their instructions. N S O R
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week). N S O R
17. Accept those things in my life which I can not change. N S O R
18. Look forward to the future. N S O R
19. Spend time with close friends. N S O R
20. Eat 2-4 servings of fruit each day. N S O R
21. Get a second opinion when I question my health care provider's advice. N S O R
22. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling). N S O R
23. Concentrate on pleasant thoughts at bedtime. N S O R
24. Feel content and at peace with myself. N S O R
25. Find it easy to show concern, love and warmth to others. N S O R
26. Eat 3-5 servings of vegetables each day. N S O R
27. Discuss my health concerns with health professionals. N S O R
28. Do stretching exercises at least 3 times per week. N S O R
29. Use specific methods to control my stress. N S O R
30. Work toward long-term goals in my life. N S O R
31. Touch and am touched by people I care about. N S O R
32. Eat 2-3 servings of milk, yogurt or cheese each day. N S O R
33. Inspect my body at least monthly for physical changes/danger signs. N S O R
34. Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking). N S O R
35. Balance time between work and play. N S O R

36. Find each day interesting and challenging. N S O R
37. Find ways to meet my needs for intimacy. N S O R
38. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and N S O R
nuts group each day.
39. Ask for information from health professionals about how to take good care N S O R
of myself.
40. Check my pulse rate when exercising. N S O R
41. Practice relaxation or meditation for 15-20 minutes daily. N S O R
42. Am aware of what is important to me in life. N S O R
43. Get support from a network of caring people. N S O R
44. Read labels to identify nutrients, fats, and sodium content in packaged food. N S O R
45. Attend educational programs on personal health care. N S O R
46. Reach my target heart rate when exercising. N S O R
47. Pace myself to prevent tiredness. N S O R
48. Feel connected with some force greater than myself. N S O R
49. Settle conflicts with others through discussion and compromise. N S O R
50. Eat breakfast. N S O R
51. Seek guidance or counseling when necessary. N S O R
52. Expose myself to new experiences and challenges. N S O R

Appendix E



COLLEGE OF NURSING
Community-Based Health Department

985330 Nebraska Medical Center
Omaha, NE 68198-5330
402558-6362
Fax: 402558-6379

Dear Colleague:

Thank you for your interest in the *Health-Promoting Lifestyle Profile II*. The original *Health-Promoting Lifestyle Profile* became available in 1987 and has been used extensively since that time. Based on our own experience and feedback from multiple users, it was revised to more accurately reflect current literature and practice and to achieve balance among the subscales. The *Health-Promoting Lifestyle Profile II* continues to measure health-promoting behavior, conceptualized as a multidimensional pattern of self-initiated actions and perceptions that serve to maintain or enhance the level of wellness, self-actualization and fulfillment of the individual. The 52-item summated behavior rating scale employs a 4-point response format to measure the frequency of self-reported health-promoting behaviors in the domains of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations and stress management. It is appropriate for use in research within the framework of the Health Promotion Model (Pender, 1987), as well as for a variety of other purposes.

The development and psychometric evaluation of the English and Spanish language versions of the original instrument have been reported in:

- Walker, S. N., Sechrist, K. R., & Pender, N. J. (1987). The Health-Promoting Lifestyle Profile: Development and psychometric characteristics. *Nursing Research*, *36*(2), 76-81.
- Walker, S. N., Voikan, K., Sechrist, K. R., & Pender, N. J. (1988). Health-promoting lifestyles of older adults: Comparisons with young and middle-aged adults, correlates and patterns. *Advances in Nursing Science*, *11*(1), 76-90.
- Walker, S. N., Kerr, M. J., Pender, N. J., & Sechrist, K. R. (1990). A Spanish language version of the Health-Promoting Lifestyle Profile. *Nursing Research*, *39*(5), 268-273.

Copyright of all versions of the instrument is held by Susan Noble Walker, EdD, RN, FAAN, Karen R. Sechrist, PhD, RN, FAAN and Nola J. Pender, PhD, RN, FAAN. The original *Health-Promoting Lifestyle Profile* is no longer available. You have permission to download and use the HPLPII for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in any way and the copyright/permission statement at the end is retained. The instrument may be reproduced in the appendix of a thesis, dissertation or research grant proposal. Reproduction for any other purpose, including the publication of study results, is prohibited.

A copy of the instrument (English and Spanish versions), scoring instructions, an abstract of the psychometric findings, and a list of publications reporting research using all versions of the instrument are available for download.

Sincerely,

A handwritten signature in cursive script that reads "S. Walker".

Susan Noble Walker, EdD, RN, FAAN
Professor Emeritus

HEALTH-PROMOTING LIFESTYLE PROFILE II

Scoring Instructions

Items are scored as	Never (N)	=	1
	Sometimes (S)	=	2
	Often (O)	=	3
	Routinely (R)	=	4

A score for overall health-promoting lifestyle is obtained by calculating a mean of the individual's responses to all 52 items; six subscale scores are obtained similarly by calculating a mean of the responses to subscale items. The use of means rather than sums of scale items is recommended to retain the 1 to 4 metric of item responses and to allow meaningful comparisons of scores across subscales. The items included on each scale are as follows:

Health-Promoting Lifestyle	1 to 52
Health Responsibility	3, 9, 15, 21, 27, 33, 39, 45, 51
Physical Activity	4, 10, 16, 22, 28, 34, 40, 46
Nutrition	2, 8, 14, 20, 26, 32, 38, 44, 50
Spiritual Growth	6, 12, 18, 24, 30, 36, 42, 48, 52
Interpersonal Relations	1, 7, 13, 19, 25, 31, 37, 43, 49
Stress Management	5, 11, 17, 23, 29, 35, 41, 47