

Currently Funded Faculty Research Abstracts

PI: Dr. Jan Nick

Study Title: A Global Approach to Promoting the Evidence-based Practice Knowledge of Nursing Students: A Validation Study of Newly Translated Versions of the Evidence-based Practice Knowledge Assessment in Nursing (EKAN)

Abstract

Significance and Goals: This multi-site research study uses a psychometrically sound tool that provides an objective measurement of EBP knowledge. This instrument, once translated into different languages will: a) provide validity evidence for newly translated versions in Spanish, Japanese, and Korean of the *Evidence-based Practice Knowledge Assessment in Nursing (EKAN)* instrument; b) describe baseline knowledge of evidence-based practice in junior and senior nursing students in these countries, and c) identify relationships between demographic factors and EBP knowledge of said nursing students. Using a single instrument globally will allow description of the level of global achievement and make recommendations for practice and education by supporting future curricular needs. There are several study sites already being conducted in the U.S.

Subject Population: $N = 200$ actively enrolled nursing students from each country who are enrolled in a baccalaureate nursing program will be recruited from institutions in the Dominican Republic, Japan, Korea, Colombia, and Brazil.

Research Design: A cross-sectional, descriptive, correlational design.

Instruments: The EKAN-English is a 20-item multiple-choice objective measure of EBP knowledge with an established item reliability of .98, and provided strong evidence for validity with infit statistics centering on 1.0. The EKAN instrument will be translated into other languages and then back-translated into English to compare with the original instrument. Psychometric testing will be done on the EKAN in each country. The Demographic Questionnaire, developed for use with the EKAN, is a 7-item instrument to collect social and educational data specific to the study site.

Procedure: Subjects will complete the Demographic Questionnaire and EKAN in paper format during a proctored data collection session. Data will be input to a central online database for analysis.

Analyses: Subject characteristics will be described using analyses of frequency data. Validity, reliability, and sensitivity measures of the EKAN in each language will be calculated via Rasch analyses and results will be compared with the original EKAN-English statistics. EBP knowledge will be assessed using raw scores on the test, and finally, comparison studies using correlation techniques will provide information on the relationship between sample characteristics and EBP knowledge.

Co-PI: Dr. Fayette Truax

Co-PI: Dr. Kimberly Buck

Study Title: Impact of Screen Time on School-Age Children Physical and Mental Health

Abstract

The advancement of technology has transformed the lives of today's children and their families, leading to less time spent outdoors and more time watching television and using computers and tablets for entertainment purposes. Parents of children who are engaged in daily screen time are not aware of the ramifications it could have on their child's physical and mental health. Increased use of screen time has been associated with various physical and mental health problems, such as failed vision, overweight/obesity, depression-like symptoms, anxiety, poor sleep, and poor academic performance. Failure to address these physical and mental health consequences in children will lead to a financial burden on the health care system as they progress into adulthood. The goal of this study is to determine the relationship between screen time and its effect on the physical and mental health of young school-aged children between 3-12 years old. The quantitative phase will focus on determining predictors of physical and mental health problems related to the use of screen time and social demographic variables while the qualitative phase will focus on exploring and describing the experiences of parent-child dyads as it relates to the amount of screen time and its impact on family life, activities, social interactions and the child's physical and mental health problems. By determining the effect screen time has on the physical and mental health of children, an intervention aimed at decreasing screen time will be developed in order to prevent future complications related to the child's physical and mental health. Furthermore, encouraging a collaborative approach that fosters the parent-child dyad and promoting community awareness will assist in embracing healthy lifestyles for children.

Co-PI: Dr. Lisa Roberts

Co-PI: Dr. Susanne Montgomery

Study Title: Understanding Health and Emotional Responses and Perceptions of Asian Indian Needs (Understanding HER PAIN)

Abstract

Background: Like their counter-parts in India, Asian-Indian (AI) immigrant women in the US are subject to traditional sociocultural patterns of patriarchal dominance and family structures which negatively impact their mental health. AI women are particularly vulnerable to the price exacted of model minority members as they seek to balance adjustment to the majority culture and meeting culture of origin expectations. The compounded effects of gender, race, and class result in intersectionality tensions putting AI immigrant women at risk for mental health issues. Recent studies have shown AI immigrant women to have elevated levels of anxiety and depression. Stigmatization of mental health challenges is a barrier to AI immigrant women seeking help. However, AI social norms include a ready acceptance of the interrelatedness of mind, body, and spirit, which creates a positive predisposition to alternative therapies such as mindfulness. Mindfulness-based Stress Reduction (MBSR) is an empirically based intervention backed by decades of research, which is an appropriate, relevant intervention that is a natural fit for the AI immigrant population. **Significance and Innovation:** Within the US AI immigrants are a fast growing minority group, many residing in California. Hidden mental health disparities are a concerning issue among AI immigrant women, associated with poor health, yet they are

discouraged from seeking health due to stigma associated with mental health and the expectations of maintaining model minority status making this a hard-to-reach group for intervention. MBSR has not been used and/or rigorously evaluated for addressing mental health challenges among AI immigrants. We hope to deliver and test this intervention which was identified as culturally fitting in India, in a local AI immigrant community setting. Goals: The proposed study will explore AI needs in Southern California, culturally adapt MBSR, and evaluate the effectiveness of MBSR intervention to improve mental health (depression, anxiety) among AI immigrant women experiencing mental health symptoms related to intersectionality, and compare self-reported stress levels with a biologic marker of stress, salivary cortisol. We will utilize mixed-methods; In Phase 1—we will conduct qualitative (key informants, $n = 15$, and 4 focus groups, $n = 40$ participants) as well as quantitative ($n = 300$) explorations of needs and sociocultural norms which will guide cultural adaptation of the MBSR intervention, and in Phase 2—we will conduct a randomized intervention ($n = 41$) and active control ($n = 41$) study using a pre-post, 3 and 6-months follow-up design.

Co-PI: Dr. Ellen D'Errico

Co-PI: Dr. Gayathri Nagaraj

Study Title: Intraneural facilitation: managing chemotherapy-induced peripheral neuropathy

Abstract

Chemotherapy-induced peripheral neuropathy (CIPN) is a frequent side effect in breast cancer patients receiving platinum-based compounds, vinca alkaloids and taxanes. The severity of CIPN can range from a temporary annoying sensation of numbness and tingling in fingers and toes, to disturbances in gait, balance, loss of manual dexterity and permanent nerve damage. Various factors have shown to affect the degree of CIPN including the type, combination and dosage of these potent drugs. Multiple approaches for mitigation and management of CIPN have been proposed and tested, but the effectiveness of these modalities is mixed. There is no identified best practice to manage this uncomfortable side effect which can influence cancer survival should CIPN become so intolerable that dose reductions and even discontinuation of treatment become necessary. Intraneural facilitation (INF) is a novel, non-invasive, physical therapy treatment involving precise, purposeful positioning involving physical holds and manual application of pressure with subsequent releases. These maneuvers channel circulation into neural structures by pressurizing the entire closed circuit microvascular system that opens the perineural barrier allowing circulation to approach the endoneural capillaries of the gently stretched tissue. These actions facilitate deep neural innervation, preserving and protecting against neurotoxic damage by improving microvascular circulation around the fasciculus in several key areas involving the extremities. The objective of this study is to systematically study the clinical efficacy of INF in CIPN. Aim 1: Determine if INF provided 45-minutes twice a week for 6 weeks has a mediating effect on the development/intensity of peripheral neuropathy in a group of new to chemotherapy breast cancer patients with no preexisting peripheral neuropathy (WPPN) receiving platinum-based compounds, vinca alkaloids and/or taxane chemotherapy, is superior compared to a control group of new to chemotherapy breast cancer patients WPPN receiving standard therapy consisting of 45-minute regimen of muscle stretching/strengthening exercises twice a week for 6 weeks as measured by popliteal and posterior tibia artery ultrasound imaging, Pain Quality Assessment Scale, National Comprehensive Cancer Network Distress Thermometer, Modified Total Neuropathy Score, and the

National Cancer Institute Common Terminology Criteria for Adverse Events neuropathy score. Aim 2: To compare the treatment modification and discontinuation rates in the two arms. Subjects' current medications and chemotherapy regimens will be tracked, recorded and assessed statistically for effects on results and treatment adherence. Aim 3: Determine via patient survey at end of treatment if the acceptability, burden, and satisfaction with INF is significantly better compared to the control group. This vascular physical therapy approach may enhance existing physiologic or anatomical mechanisms in the body without resorting to more invasive interventions such as spinal nerve stimulation and drugs that may have difficult side effects. Validation of this physiological response in humans will lead to its use in other groups of cancer patients suffering from neuropathy, thereby expanding use of a non-invasive, low-cost, low-tech, high-touch treatment modality. **Key Words:** Breast Cancer, Symptom Management, Chemotherapy-Induced Peripheral Neuropathy, Cancer Treatment side effects