Proceedings of the 2016 Asian American/Pacific Islander Nurses Association Conference: Global Health & Nursing: Advancements Through Research, Education, and Practice

Editor's Message

This is our second issue of selected articles presented at our 2016 Asian American/Pacific Islander Nurses Association's (AAPINA) 13th Annual Conference. The 2016 theme for the March 4-7, 2016 conference at sea was "Global Health and Nursing: Improvements Through Research, Education, and Practice." The abstracts reflect global and other topics relevant to the Asian and Pacific Islanders (API) in the United States and globally.

Overview of Abstracts
Our keynote speaker Dr. Rose Constantino presented a moving montage of scenarios that was a call to transition to global centered health care. The second keynote speaker, Dr. Mijung Park's topic was "At the intersection between the cultural and the biological" and highlighted the importance of epigenetics and race. The plenary, Dr. Jillian Inouye, focused on team science and the barriers and challenges in the area of grant writing and manuscript preparation. The conference topical areas: "Culture Influences," "Symptoms Science," "Clinical Practice," "Self-Management," "Biobehavioral Research," and "Education" reflected foci that are important for health care, education, and research for APIs and are in stategic plans for many federal agencies.

The conference abstracts reflect national and global differences of specific ethnic groups and will be continued at our next annual conference in Hawaii, March 24-26, 2017. The theme is "East Meets West in Global Health Nursing Research, Practice, and Leadership." Abstracts are due October 1, 2016. Please visit the AAPINA website (http://aapina.org/) for details. We will again publish reviewed abstracts which have not been previously published and invited manuscripts for publication.

Jillian Inouye, PhD, APRN, FAAN
Editor

Keynote Speaker

Saturday, March 5, 2016

Tranforming Global Nursing in the 21st Century

Rose E. Constantino, PhD, JD, RN, FAAN, FACFE[1]
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Purpose: Education is known as the greatest equalizer followed by technology. The purpose was to provide information and guidance for audiences to shift from anomalies that threaten worldviews and transform global challenges to opportunities for global-people-centered health care.

Background: CARE is an acronym but also a call to action for all nurses to be Collaborative, Agile, Resilient, and Ethical. To remain relevant in a rapidly changing and technology-driven world, we need to be innovative by 1) shifting strategies to meet the demands of diverse health care consumers; 2) pursuing alternative theories, models and methods of delivering health interventions; 3) adopting new technologies; and 4) taking on new roles and activities. Early research examining resilience represented a "paradigm shift from looking at risk factors that led to psychosocial problems to the identification of strengths of an individual" (Richardson, 2002, p. 309). Examples of individual qualities were: an easy temperament, self-esteem, planning skills, and a supportive environment inside and outside the family (Sarkar & Fletcher, 2014). These qualities have been referred to as protective factors, which Rutter (1985) defined as "influences that modify, ameliorate, or alter a person's response to some environmental hazard that predisposes to a maladaptive outcome" (p. 600). Numerous protecttive factors have been identified in the resilience literature, including hope (Horton & Wallander, 2001), extraversion (Campbell-Sills et al., 2006), optimistic explanatory style (Kleiman, Liu, & Riskind, 2013), self-

efficacy (Gu & Day, 2007), spirituality (Peres, Moreira-Almeida, Nasello, & Koenig, 2007), and perceived social support (Brown, 2008).

Recommendations/Implications for Nursing: Nurses worldwide have been oriented to the proposition that diseases are events to be conquered, to be cured or excised. However in the process of curing or removing it, the disease usually wins through metastasis, gaining roots, and producing an unacceptable acute debilitating outcome or death. The challenge nurses face is to set CARE into motion or action by being Collaborative, Agile, Resilient, and Ethical in strengthening the bond between global communities and health outcomes. In CARE health could be defined as being well, agile, and resilient physically, emotionally, spiritually, behaviorally, socially, and economically not only the absence of disease but even in the presence of chronic disorders. Therefore, join me and AAPINA in transforming global nursing in the 21st Century through CARE.

Oral Presentations

Saturday, March 5, 2016 (3:45 p.m.-5:15 p.m.)

Abstract 1

Acculturation, Health Literacy, and Weight Gain and Obesity Perceptions among Newly Arrived Filipinos with Hypertension in the United States

Reimund C. Serafica, PhD, MSN, RN[1]
[1]University of Nevada, Las Vegas, USA

Purpose: The purpose of this study was to explore how the newly arrived Filipino immigrants in the United States delineate their perceptions and beliefs about unhealthful weight gain, obesity, and barriers to a healthy lifestyle.

Method: A qualitative content analysis using semi-structured interviews was conducted with a convenience sample of 32 participants, 20 women and 12 men, who were individually interviewed for this study. NVivo 8 software was also utilized to identify themes and patterns among themes.

Results: We reviewed and analyzed each participant's responses. There were repetitive responses noted, indicating data saturation. The participants' responses were further collapsed into four themes: (a) defining excessive weight gain, (b) defining obesity, (c) aiming for healthy lifestyle, and (d) sensing barriers to a healthy lifestyle. One of the major findings in this study was the low literacy on excessive weight gain and obesity among the participants.

Conclusion: Newly arrived immigrants can hold very different views of weight gain and obesity, and inadequate views of unhealthy behaviors can hinder healthy lifestyle. Acculturation and healthy literacy play a significant role in unhealthful weight gain and obesity among the participants. The results provided evidence of how cultural factors and beliefs among newly arrived Filipino immigrants with hypertension in the United States affected their representation of weight gain and obesity as a health threat and how these factors influenced overall healthy behaviors.

Abstract 2

Ethnicity, Stigma, and Disclosure of Serostatus to Spouses and Partners among an International Sample of Persons Living with HIV/AIDS

Kathleen Sullivan, PhD, PMHCNS-BC[1]**, William L. Holzemer, RN, PhD, FAAN**[2]**, Carol Dawson Rose, PhD, RN, FAAN**[3]**, and International Nursing Network for HIV/AIDS Research**[3]
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Purpose: We explored the relationship between contextual, ethno-cultural, and social interaction processes and disclosure of serostatus to spouses/partners among an international sample of persons living with HIV/AIDS (PLWH).

Method: A cross-sectional survey design and self-report questionnaire was used. Participants were recruited from clinics, service organizations, and via active outreach in China, Thailand, Namibia, Puerto Rico, Canada, and the United States. This secondary analysis included data from an international study exploring aspects of self and behavior among PLWH. Social Action Theory was used to select variables that fit a model for predicting disclosure of serostatus.

Results: Asian/Pacific Islanders (A/PIs) reported significantly higher scores across all HIV-related stigma measures compared to other ethnic groups. Four factors were significant in predicting disclosure of serostatus to spouses/partners: age, gender, ethnicity, and the HIV-related stigma subscale of negative self-concept. Younger-aged PLWH were more likely to disclose compared to older participants. Women were more likely than men to disclose; Caucasian, Hispanic/Latino, and Other/mixed race participants were more likely than

African Americans to disclose. This difference was not apparent for A/PIs. Higher stigma scores for negative self-concept were predictive of lower disclosure to spouses/partners.

Conclusion: HIV-related stigma was significantly higher among A/PIs compared to other ethnic groups for this international sample of PLWH. However, A/PI ethnicity was not significant in the disclosure model. Nurses need to be aware that it may take time for older PLWH to inform a spouse/partner of his/her serostatus. While physical manifestations of HIV may be less apparent now than in earlier years, issues of negative self-concept may endure.

Abstract 3

Ethnicity Differences of Symptoms Profile in Patients with Fibromyalgia

Nada Lukkahatai, PhD, MSN, RN[1], Jennifer Kawi, PhD, MSN, APRN, FNP-BC, CNE[1], Brian Walitt, MD, MPH, FACR[2], and Leorey Saligan, PhD, RN, BC-FNP[2]
[1]University of Nevada Las Vegas, USA
[2]National Institute of Nursing Research, National Institutes of Health, USA

Purpose: Fibromyalgia syndrome (FMS) is a chronic condition characterized by chronic, persistent muscular pain, fatigue, extreme tenderness, insomnia, and cognitive dysfunction. Ethnic differences have been observed in self-reporting of symptoms experienced. The purpose of this study was to examine ethnic differences in the symptoms profile among individuals with FMS.

Method: Individuals with FMS who met the 1990 or 2010 FMS diagnostic criteria, aged 20 years or older, were recruited into the study. During their single visit at a rheumatology unit, subjects completed demographics, pain, fatigue, cognitive function, pain catastrophizing, and pain beliefs questionnaires. Analysis of variance was used to compare symptoms among different ethnicity groups using SPSS version 22.

Results: One hundred and sixty two patients were included in this analysis. The majority were Caucasians ($n = 93$, 57%), 36% were African Americans, and 7% were of other ethnicities (Hispanic, Asian). Among these groups, African Americans experienced the lowest pain threshold ($M = 1.8 \pm 1.1$, $p < .001$), highest pain severity ($M = 7.0 \pm 1.9$, $p < .001$), highest pain interference ($M = 6.6 \pm 2.2$, $p = .02$), highest pain catastrophizing score ($M = 26.4 \pm 14.9$, $p < .001$), and lowest belief in self-ability to control pain ($M = 10.1 \pm 4.1$, $p = .01$). No significant differences among groups were found in fatigue, cognitive function, or depression.

Conclusion: The study found differences in pain symptoms experienced among different ethnicity groups. To better manage these symptoms, patients' ethnicity should be considered. Future studies on ethnic differences of underlying biological mechanism of pain are warranted.

Abstract 4

Long-Term Effects of Childhood Abuse on the Quality of Life and Daytime Sleepiness among Individuals with Fibromyalgia Syndrome

Hyunhwa Lee, PhD, MSN, APRN, PMHNP-BC[1], Nada Lukkahatai, PhD, MSN, RN[1], Brian Walitt, MD, MPH, FACR[2], and Leorey Saligan, PhD, RN, BC-FNP[2]
[1]University of Nevada, Las Vegas, USA
[2]National Institute of Nursing Research, National Institutes of Health, USA

Purpose: Childhood abuse (CA) can increase vulnerability to stress and the risk for subsequent development of fibromyalgia. This study aimed to examine the associations of CA with Health-Related Quality of Life and daytime sleepiness among individuals with fibromyalgia syndrome (FMS).

Method: Version 2 of the Short Form 12 (SF-12v2) health survey and the Epworth Sleepiness Scale were used to measure Health-Related Quality of Life levels and daytime sleepiness. Because only 11% of the entire FMS sample ($N = 133$) who underwent clinical interviews for assessing CA history were males, females were included in the current analysis. Among 118 females with FMS (age 47.6 ± 11.19), 58 experienced CA (i.e., physical or emotional abuse or rape; case) and 74 did not (control). Data was analyzed using SPSS version 22.

Results: Among the eight SF-12v2 subscales, physical functioning levels were significantly lower in FMS females with a history of CA (18.6 ± 27.31 in cases, 31.5 ± 31.30 in controls, $p < .05$). When analyzing data by CA types, FMS females with a history of rape reported poor levels of physical functioning (12.50 ± 22.2 in cases, 36.69 ± 34.0 in controls, $p < .01$) and more problems with daytime sleepiness based on the Epworth Sleepiness Scale scores (12.53 ± 6.2 in cases, 8.75 ± 5.5 in controls, $p < .05$). FMS women with a history of physical abuse reported poor levels of general health (26.33 ± 16.2 in cases, 38.86 ± 31.1 in controls, $p < .05$).

Conclusion: The CA effects appear to last a lifetime. Further research is required to improve the understanding of the pathways that lead to such deleterious outcomes and ways to minimize its late-life effects.

Abstract 5

Symptom Burden and Protein Expression (Heat Shock Protein) in Fibromyalgia Syndrome

Jennifer Kawi, PhD, MSN, APRN, FNP-BC, CNE[1], Nada Lukkahatai, PhD, MSN, RN[1], Brian Walitt, MD, MPH, FACR[2], and Leorey Saligan, PhD, RN, BC-FNP[2]
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Purpose: Fibromyalgia syndrome (FMS) has unknown etiology and underlying biologic mechanisms. Heat shock protein (*HSP90AA1*), one of the genes in protein homeostasis pathways, was found significantly higher among white women with FMS compared to those without FMS. It is unknown whether this holds true in other populations. This study aimed to evaluate symptom characteristics and plasma level of HSP90AA1 in both genders and other ethnicity in FMS.

Method: This descriptive study collected data using the polysymptomatic distress survey and blood sample from participants with FMS during their visit at a local rheumatology unit. The HSP90AA1 was measured using enzyme-linked immunosorbent assay. Data was analyzed using SPSS version 22.

Results: Ages of participants ranged from 21-82 years old, of which 88.5% were female, and with varied ethnicity (57% were White, 35% were African American, and 8% were other ethnicities including Asians and Hispanics). Sixteen percent met the 1990 American College of Rheumatology criteria, 24% met the 2010 American College of Rheumatology criteria, and 60% met both. African Americans reported the highest widespread pain (13.53 ± 3.4) and had the highest symptom severity scores (8.70 ± 2.4). Females had higher levels (10.61 ± 19.9) of plasma HSP90AA1 than men (7.73 ± 9.1). African Americans had higher levels of HSP90AA1 (12.02 ± 22.7) while other ethnicities (Asian, Hispanic) had lower levels (5.70 ± 10.4).

Conclusion: FMS symptom burden is evident. Various measures have been used to evaluate these symptoms including HSP90AA1 plasma levels. HSP90AA1 levels varied based on gender and ethnicity. Further research is necessary to develop a biobehavioral standpoint in complex conditions like FMS toward better precision in management.

Sunday, March 6, 2016

Pleanary Speaker

Team Science or "Too Many Cooks Spoil the Soup?"

Jillian Inouye, PhD, FAAN[1] and Kirsten E. Connelly, MPH[1]
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Purpose: The purposes of this presentation were to 1) describe multiple inputs considered in the proposal development and submission coordination, 2) identify the pros and cons of these contributions, and 3) provide recommendations for future practice and implications for national and international grant submissions.

Background: Team science is increasing in necessity because of the complexity of health problems, technology challenges, and myriad interventions. The belief is that assembling teams of scientists from different disciplines can help resolve complex scientific problems at a faster pace. However, little information is available on the processes and procedures facilitating group writing. Like group therapy or decision making, specific skills are necessary to produce documents that reflect the science of different disciplines and institutions in order to be competitive for funding. As interdisciplinary teams continue to be increasingly prominent in conducting research, there is a need to develop strategies for integration before the writing begins. Two case studies were discussed relating to proposals using an interdisciplinary team. Strategies for proposing a Memorandum of Understanding prior to writing to understand the roles and expectation of authors were discussed. Additional tools were presented to assist with coordinating the proposal submission process. In addition, challenges and rewards were reviewed.

Recommendations/Implications to Nursing: Discussions on contributions and funding distribution should be decided prior to team work. Use of written guidelines and expectations, and signed Memorandum of Understanding utilized prior to group writing may prevent later misunderstandings. As team members nursing needs to be prepared to work with different disciplines and be armed with knowledge, tools, and group skills for developing the science.

Oral Presentations

Sunday, March 6, 2016 (9:45 a.m.-3:00 p.m.)

Abstract 6

Factors Influencing Emergency Room Utilization Among Asian Americans in the United States

Kathleen Sullivan, PhD, PMHCNS-BC[1], James Davis, PhD, MS[2], Deborah Taira Juarez, ScD[3], and Angela Sy, PhD[2]
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[2]John John A Burns School of Medicine University of Hawaii at Manoa, USA
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Purpose: The purpose of this study was to explore associations between contextual, interpersonal, and behavioral factors and emergency department (ED) utilization among Asian Americans residing in the United States.

Method: Data from the National Health Interview Survey, collected from 2006-2013 was accessed and examined for trends over two consecutive years. Complex dataset weighting was included according to recommendations. Filipino (22.8%), Chinese (21.8%), Asian Indian (18.3%), or Other Asian (37.6%) participants were included in the study. Chi-Square tests were used for categorical variables to examine differences in factors related to ethnicity. Logistic regression was used to model ethnic differences in the likelihood of ED visits, after adjustment for age, gender, and survey year.

Results: The majority of the 13,957 Asian respondents were (a) not born in the United States (75%), (b) American citizens (67%), (c) living in the United States for 15 or more years (56%), and (d) female (53%). Nearly 12% reported going to the ED during the one-year recall period, with 28% of those reporting two or more visits. Nine factors were predictive of ED visits: 1) being Filipino compared to Chinese or Other Asian, 2) having less education, 3) could not afford prescription medications, 4) having diabetes, 5) having limited function due to a chronic condition, 6) time since seeing/ talking to a health professional, 7) seeing/talking with a mental health specialist, 8) smoking history, and 9) survey year.

Conclusion: Health professionals need to consider the higher likelihood of ED visits by Filipinos as well as contextual and behavioral factors influencing ED visits among Asian Americans represented in the sample.

Abstract 7

An Evidence-Based Structured Algorithm to Reduce Errors in Chemotherapy Practices

Carley Duhaime[1], Marianne Bundalian Tejada, DNP, MSN, RN, PHN[1], Dana Rutledge, PhD, RN[2], and Patricia Alpert, DrPH, MSN, APN, FNP-BC, PNP-BC, CNE, FAANP[3]
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Purpose: The available technology to prevent medication errors, particularly chemotherapy errors, remain a major cause of iatrogenic patient morbidity in hospitals. A major risk factor for chemotherapy errors is the lack of standardization in administration. Failure to identify necessary staff skills/aptitude to prevent errors may also be problematic. The purpose of this project was to construct a standardized evidenced-based chemotherapy algorithm for safe administration of chemotherapy.

Method: A literature review was conducted to identify best practices of chemotherapy safety measures. Databases included PubMed, CINAHL, and Scopus using the search terms "chemotherapy process error," "oncology medication error," and "chemotherapy error prevention." Articles reviewed were published from 2005 to 2015. The inclusion criteria were peer-reviewed research articles in English language, animal studies, review articles, case reports, book chapters, and theses. Based on this review, a decision-tree algorithm was developed incorporating the synthesized evidence supporting strategies found to decrease chemotherapy errors.

Results: Initial search yielded 3,326 articles. Using the inclusion and exclusion criteria, we eliminated 1,381 articles. After title and abstract screenings were conducted, duplicate articles were eliminated. This review process was carried out by two investigators resulting in 22 articles included in the development of the algorithm. Several sources revealed chemotherapy error reduction is achievable with standardized procedures/protocols, information integration systems, and collaborative multidisciplinary staff and patient education.

Conclusion: This algorithm, targets specific points in the chemotherapy process, which may reduce errors and improve outcomes associated with chemotherapy administration. The utilization of an algorithm should be tested in clinical practice to determine its effectiveness.

Abstract 8

Systematic Review Paper of Peer Support Among Individuals with Type 2 Diabetes

Tricia K. Gatlin, PhD, RN, CNE[1] and Reimund Serafica, PhD, MSN, RN[1]
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Purpose: Diabetes education is effective in improving self-management. Health care professionals primarily provide education. However, often there are barriers to delivering the education program, such as cost and time. Peer-support/education may offer a viable alternative means of diabetes education. The purpose of this systematic review was to examine the effectiveness of peer-support/education intervention programs among adults with type 2 diabetes compared with that of traditional health care provider education.

Method: The Cochran Handbook for Systematic Reviews of Interventions guided this study in regard to search strategy, data evaluation, data analysis, and data synthesis. MEDLINE, PubMed, and CINAHL were searched for analyses and synthesis of primary research published from 2004 to 2014. Jadad Scoring of Quality of Reports of Randomized Clinical Trials Instrument was used to assess the quality of the studies.

Results: With all inclusion and exclusion criteria, a total of 13 studies were included in the review. Jadad scoring ranged from 7 to 12, with a mean of 8.92. Sample size ranged from 28 to 628. Mean age ranged from 51 to 66 years with 57% of the subjects being male. The types of peer-support/education interventions compared included telephone/texting contact only, face-to-face only meetings, or a mixture of both. Outcome measures showed improvements or no difference in objective clinical measures and positive psycho-behavioral results when compared with health care provider education programs.

Conclusion: This review revealed that peer-support/education could be equally successful as health care provider education in improving health care outcomes among individuals with diabetes.

Abstract 9

Lessons Learned from a Pilot in Preparation for a Pragmatic, Real-world Trial of a Physical Activity Coaching Intervention in Patients with COPD

Huong Q. Nguyen, PhD, RN[1], Leah Maddock, MPH[1], Ellen Rippberger, MPH[1], Karen J. Coleman, PhD[1], Marilyn Moy, MD, MPH[2], Smita Desai, MD[1], Vincent S. Fan, MD, MPH[3], and Michael K. Gould, MD, MS[1]
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[3]University of Washington, USA

Purpose: Physical inactivity is significantly associated with increased hospitalizations and mortality in COPD. The majority of published physical activity (PA) intervention studies are small efficacy trials that include volunteer samples and rely on skilled research staff. Little is known regarding the practical aspects of embedding a large scale behavioral trial in a real-world health care setting. The purpose of this pilot study was to iteratively test and refine workflows in preparation for a pragmatic randomized trial of a PA coaching intervention in COPD across six medical centers in an integrated health care system.

Method: This single group pre-post pilot of a PA coaching intervention (Walk On!) was conducted from November 2014 through June 2015 with staggered roll out and training across the six sites. Respiratory therapists were recruited from the existing workforce and had no previous research experience. The study bought out a percentage of time from their clinical responsibilities with approval from their managers and chiefs of service. Coaches were trained on patient recruitment, implementation of the Walk On! program, and documentation of intervention activities.

Results: A total of 71 patients with COPD who met the eligibility criteria were invited to participate with 17 agreeing (24% uptake). Each coach implemented Walk On! with 1- 4 patients at their sites and provided ongoing feedback to the research team and other coaches to refine the study protocol in real-time.

Conclusions: Pilots with substantial stakeholder engagement and dynamic refinements to the protocol as a prelude to a large scale study is critical for success.

Abstract 10

Knowledge of Diabetes of Thais with Type 2 Diabetes in Chiang Mai, Thailand

Nada Lukkahatai, PhD, MSN, RN[1], Phakjira Jaiman, BSN, RN[2], Pratum Soivong, PhD, MSN, RN[2], and Jillian Inouye, PhD, APRN, FAAN[1]
[1]University of Nevada, Las Vegas, USA
[2]Chiang Mai University, Thailand

Purpose: In 2011, nearly 700,000 Thais were diagnosed with diabetes. Knowledge about disease is a vital component of self-management. The purpose of this study was to describe the level of diabetic knowledge among Thai persons with diabetes.

Method: Thai persons aged 21 years or older with diabetes were recruited from a diabetic clinic, Health Promotion Hospital in Chiang Mai Thailand. During their single visit, participants' fasting blood glucose level, demographic data, and diabetes knowledge using a questionnaire were recorded. Descriptive data analysis was done using SPSS version 22.

Results: One hundred and twenty five Thai diabetic patients were included. The majority of participants were female ($n = 86$, 69%), had an education level of grade 4 or lower ($n = 96$, 76%), and were married ($n = 103$, 82%). Their age ranged from 39 to 75 years ($M = 57.8 \pm 8.1$). More than 80% reported being treated with oral medication for diabetes. Their fasting blood glucose on their visit date ranged from 70 to 329 mg/dL. Only 21 patients (17%) scored 80% or higher on the total diabetic knowledge questionnaire. Persons' knowledge about medications and factors that can increase blood sugar was limited. More than 20% did not know whether they should take the prescribed medication while they were sick.

Conclusion: These results suggest a need to increase diabetes knowledge and understanding among Thai patients. Health care providers should evaluate their diabetic education strategies and patients' understanding of relevant information. Further research should investigate strategies to help maintain and promote patient knowledge and understanding of diabetes.

Abstract 11

A Review of Literature on Telomeres and Telomerase with Clinical Outcomes in Children with Acute Lymphoblastic Leukemia

Marianne Bundalian Tejada, DNP, MSN, RN, PHN[1], Richard Young[1], Vanessa Mercado[1], Karanjot Kaur[1], Alan Ileda, MD[2], and Nada Lukkahatai, PhD, MSN, RN[1]
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Purpose: Telomere length (TL) and telomerase activity (TA) play a key role in chromosome stability. Several studies have investigated relationships between the telomeres and cancer development, including leukemia. This integrative review aimed to report the role of telomeres and telomerase in children with acute lymphoblastic leukemia.

Method: An integrative review was conducted using the search terms "acute lymphoblastic leukemia" OR "acute lymphocytic leukemia" OR "acute lymphoid leukemia" and "telomere" OR "telomerase" in PubMed, CINAHL, and Scopus databases. Studies in humans and other animals, non-English language, review articles, case reports, books, and theses were excluded.

Results: Ten studies were included. Only three studies were published between 2010 and 2015. The majority of studies were conducted with Asian populations (50%). Study sample sizes ranged from four to 570 subjects. Six studies were longitudinal and four studies were cross-sectional. Southern blotting is a method often used to measure TL ($n = 2$). Telomerase activity was measured through the expression of human telomerase reverse transcriptase enzyme using the reverse transcriptase polymerase chain reaction and telemeric repeat amplification protocol (TRAP). Studies reported children with acute lymphoblastic leukemia had shorter TL and higher TA than healthy controls. During treatment, shortening of TL and an increase in TA were associated with poor treatment outcome and prognosis.

Conclusion: Current evidence shows correlation between TA, TL, cancer survival rates, and disease prognosis. Future studies of the association of TL and TA with treatment outcomes and symptoms are needed to increase our understanding of the biological mechanism of cancer-related symptoms and potential target for treatment and management.

Abstract 12

An Assessment of Level and Intensity of Physical Activity Among Filipino Americans with Hypertension

Alona D. Angosta, PhD, APRN, NP-C[1], Reimund Serafica, PhD, RN[1], Amanda Aldana, BSN, RN[2], and Audwin C. Angosta[1]
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[2]Sunrise Hospital & Medical Center, Las Vegas, USA

Purpose: Lack of regular physical activity increases the risk of being overweight, thereby increasing the risk of hypertension (HTN), diabetes, cardiovascular disease, and premature death. This study examined the physical activity level and intensity of Filipino Americans with HTN.

Method: We recruited 120 Filipino American adults from Southern Nevada. One-hundred eighteen participants completed the sociodemographic questionnaire and the University of Washington Health Promotion Research Center's rapid assessment of physical activity questionnaire. Any score less than 6 is suboptimal and does not meet the recommended physical activity guideline.

Results: The mean age of the sample was 65 years old. There were 64 females (59%) and 44 males (40%); 98% were born in the Philippines; 31% had 14 years of education; 71% were married; 73% had children living with them; 40% had income less than $25,000; and 97% were taking antihypertensive medications. Mean blood pressure of the sample was 140/85mm/H), mean weight was 68.9 kg, and mean waist circumference was 89.7 cm. Mean rapid assessment of physical activity score was 5.3 indicating less than 30 min a day or less than 5 days a week of physical activity and intensity.

Conclusion: This study indicates that Filipino Americans with HTN do not meet the recommended physical activity guidelines for Americans. Lifestyle strategies to increase physical activity and prevent HTN in this high risk, understudied population are warranted. Moreover, assessing physical activity level among Filipino Americans may eliminate racial and ethnic health disparities.

Abstract 13

The Metabolic Equivalent of Tinikling: A Traditional Philippine Dance

Alona D. Angosta, PhD, APRN, NP-C[1], Dan Heil, PhD, FACSM[2], Rhigel Alforque-Tan, DNP, APRN, PMHNP, GNP, ANP[1], Wei Zhu[2], Rey Espina, MS, RN[3], Zamaica Kabiling[1], Gerald Asis Gutierrez, BSN, RN[4], and Catherine Vongxay[1]
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[2]Montana State University, USA
[3]President, Kalahi Folkloric Ensemble
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Purpose: This study sought to determine the metabolic equivalent (MET) value for *Tinikling* dance and to compare this value with 3.0 MET threshold for moderate-to-vigorous physical activity.

Method: Twenty-two "low risk" healthy Filipino American adults from Southern Nevada, all of whom self-reported having practiced *Tinikling* dance within the past 12 months, were recruited. Test subjects included 15 women ($M \pm$ SD: 32 ± 10 years, 1.57 ± 0.06 m, 61.5 ± 11.0 kg, 24.8 ± 4.5 kg/m^2) and seven men ($M \pm$ SD: 38 ± 12 years, 1.70 ± 0.12 m, 76.9 ± 6.7 kg, 27.0 ± 4.9 kg/m^2). During a single 60-min visit to an indoor lab (672 m altitude, 22-23°C, 35-40% humidity), subjects performed (a) 5 min quiet sitting, (b) 4-min warm-up, (c) 5

min of dance, (d) 3 min active recovery, and (e) 5 min of quiet sitting. During testing, subjects wore a telemetry-based portable metabolic measurement system to assess energy expenditure using standard indirect calorimetry procedures. All subjects danced to the same track of music that had been looped to allow for 5 min of continuous dancing. An average of the last two minutes of energy expenditure data were then converted to METs for each subject using total mass (body mass + 1.5 kg equipment mass). One-sample *t*-tests were used to determine if the resulting mean MET values for women, men, and all subjects, were ≥ 3.0 METs (0.05 alpha level).

Results: We found *Tinikling* MET values ≥ 3 and < 6 METs were present in five subjects, ≥ 6 METs for 17 subjects, and 9.0 METs in one subject. Mean METs ($M \pm$ SE) for women (6.9 ± 0.3), for men (7.0 ± 0.4), and for all subjects (6.9 ± 0.3), were significant (> 3.0 METs, $p < 0.001$).

Conclusion: *Tinikling* can be an effective starting point for increased aerobic fitness and can be used by health care professionals to increase the health and fitness of Filipino Americans.

Abstract 14

Nursing Education: Students' Biobehavioral Responses Across Academic Semester

Duck-Hee Kang, PhD, RN, FAAN[1], Lisa Boss, PhD, RN[1], Patrick Bowman, BSN[2], Jose-Roehl delos-Santos, BSN[2], Stanley Cron, MS[1], and Yesol Yang, MS, RN[1]
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Purpose: Nursing education is a fundamental step to global health. Nursing education is intended to prepare students for clinical challenges. Intense curriculum, however, is stress-provoking and can trigger various behavioral and biological responses, but research in this field is limited. The purpose of this study was to examine biobehavioral responses and their stability and associations across the graduating semester of senior nursing students.

Method: Sixty-two students (mean age 28.9 years) completed standardized questionnaires (stress, mood, and fatigue) and provided saliva twice at the beginning and end of the graduating semester. Stress hormones and

inflammatory biomarkers were assessed using enzyme immunoassays for salivary cortisol, alpha-amylase, and interleukin-1β. Data were analyzed using paired *t*-tests and correlations.

Results: Although data indicated relative stability of biobehavioral responses across the semester, most notable was that changes in behavior scores were significantly correlated with changes in biological responses between two time points. Mood and anxiety were positively associated with changes in alpha amylase, whereas fatigue change was negatively associated with a change in cortisol. At the end of semester, fatigue was significantly correlated with inflammatory cytokine, interleukin-1β ($r = .26$, $p < .05$). Overall, biobehavioral responses were modest, but anxiety significantly declined, whereas alpha-amylase significantly increased across the semester ($p = .02$-$.04$).

Conclusion: Students' biobehavioral responses were not extreme and remained stable across the semester. Interestingly, however, changes in behavioral scores significantly corresponded with changes in certain biological responses, suggesting sensitivity between selective biobehavioral responses. Furthermore, a significant association between fatigue and elevated inflammation requires more research to avoid sustained potential negative health consequences in students.