Oral Defense Announcement
University of Missouri – St. Louis Graduate School

An oral examination in defense of the dissertation for the degree
Doctor of Philosophy in Nursing

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Post-Master’s Certification - PMHNP, August 2019, Maryville University
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The Association Between Pelvic Floor Dysfunction and Mental Health in Natal Females with a Focus on Native American Populations

Date: June 20, 2023
Time: 1:30 p.m. to 3:30 p.m.
Place: Remote

Abstract
Purpose: Over half of natal females in the United States suffer from pelvic floor dysfunction (PFD). PFD can increase risk of mental health sequelae; however, no studies have been conducted examining the association between mental health and PFD in the Native American (NA) population. This dissertation aims to evaluate the association between PFD, with a focus on overactive bladder (OAB), and mental health in females with specific attention to NAs.

Methodology: A current state of the science review examined the literature for associations between OAB with depression and anxiety in females. Utilizing this literature review, a theoretical model was constructed examining the relationship between healthcare access and development of PFD, mental health consequences, and impact on overall quality of life. Finally, unsupervised machine learning was employed to identify risk clusters for OAB based on variables identified in the literature using the BRFSS dataset by training the algorithm in White females and testing the algorithms fit for NA females.

Results: The literature largely supports a relationship between OAB and mental health sequelae; with no research reports in NA females. Increased parity, diabetes, overweight, smoking, and poor healthcare access can increase risk of developing PFD and its consequences, including OAB. Research supported OAB increases the risk of developing depression and anxiety which are known to decrease the overall quality of life. Unsupervised machine learning identified the strongest predictive factors for the development of OAB in females appear to be BMI and time lived with diabetes; however, the fit of the model examining White females (56.8%) was stronger than in NA females (53.7%).

Discussion: Factors that increase risk of developing PFD include overweight, diabetes, smoking, and increased parity, all of which are experienced at higher rates by NA natal females than females of other races. Current risk factors for PFD and OAB do seem to fit similarly in White and NA females. As research indicates a strong relationship between OAB and depression and anxiety, clinicians should focus on screening for both in females with PFD and OAB including NA females in order to mitigate the risk of developing or early detection of these mental health consequences.

Defense of Dissertation Committee
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