

Infusing Geropsychiatric Nursing Content into Psychiatric Mental Health Nurse Practitioner

Curricula: Challenges and Solutions.

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Abstract

By the year 2050, approximately 83 million Americans will be over age 65. Studies have found today's healthcare providers unprepared to meet the complex healthcare needs of an aging society. Educational institutions must adapt their curricula to address the needs of older adults. The purpose of this project was to improve geropsychiatric knowledge and competency among Psychiatric Mental Health Nurse Practitioner students through a competency enhancement project. A Psychiatric Mental Health Nurse Practitioner program in the Midwest served as the setting for the project. The Geropsychiatric Nursing Competency Enhancements for Psychiatric Nurse Practitioners were compared with and integrated into the National Organization for Nurse Practitioner Faculty Nurse Practitioner core competencies and the population focused competencies for Psychiatric Mental Health Nurse Practitioner. The outcome was a schematic crosswalk demonstrating the alignment and synthesis of three sets of competencies into one final document. Through the alignment and integration of the Geropsychiatric Nursing Competency Enhancements with the existing competencies for the Psychiatric Mental Health Nurse Practitioner, students are provided with a curriculum that addresses the population driven health care needs of today's society. This project meets the APRN consensus models requirement for life span perspective and can be utilized by other PNHNP programs who wish to enhance their curriculum.

Keywords: older adults, psychiatric mental health nurse practitioner, geropsychiatric nursing, curriculum, training, competencies

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The United States healthcare system is facing a crisis. By the year 2029, the *baby boomers*, the largest cohort in U.S. history, will have reached age 65. By 2050, over 83 million Americans will be *over 65*, comprising 20% of the population (Colby & Ortman, 2014). Numerous studies have found that our current healthcare system and providers are not ready to manage the complex physical and mental health needs of older adults (U.S. Department of Health and Human Services, 1999; New Freedom Commission, 2003, IOM, 2008, 2012). The need for more mental health providers with geropsychiatric training is urgent. The lack of preparedness for this dilemma has been described as *bordering on a crisis* (IOM, 2008, 2012). Academic institutions must begin to adapt curriculum and train healthcare providers to address the needs of older adults.

Mental Illness Among Older Adults

Psychiatric disorders are prevalent among older adults (Reynolds, Pietrzak, El-Gabalawy, Mackenzie, & Sareen, 2015; Wang et al., 2005). One in four older adults experience depression, anxiety, or dementia (American Association Geriatric Psychiatry, 2008). Two-thirds of older adults who have a mental health diagnosis do not receive treatment, are undertreated, or are misdiagnosed (Garrido, Kane, Kaas, & Kane, 2009; Wang et al., 2005). Anxiety and mood disorders are reported in older adults at an annual rate of 11.4% and 6.8% respectively (Reynolds et al., 2015).

Substance abuse occurs in 3.8% of adults over age 55 (Reynolds et al., 2015). This phenomenon contributes to higher rates of comorbid illness among community-dwelling older adults and is due in part to decreased stigmatization in today's society for substance use and the

increased rate of alcohol and prescription drug use among baby boomers (Lin, Zhang, Leung, & Clark, 2011; USDHHS, 2009). When untreated, substance abuse increases mortality and suicide rates (Kuerbis, Sacco, Blazer, & Moore, 2014; Lin et al., 2011). By the year 2020, it is estimated that the number of older adults with substance abuse problems will reach approximately 5.7 million (Han, Gfroerer, Colliver, & Penne, 2009).

The prevalence of dementia among adults 71 years or older is roughly 13.9% (Plassman et al., 2007). In 2007, approximately 5.2 % of noninstitutionalized individuals over age 65 reported having one or more problems with cognition (Stagnitti, 2011). Dementia, depression, and anxiety disorders are seen in over half of all nursing home residents (Seitz, Purandare, & Conn, 2010). The prevalence of mental illness is greater in the long term care setting where it is impacted by the occurrence of comorbid medical conditions (Barnett et al., 2012).

Diversity

Among older ethnic minorities the prevalence of mental illness is lower, although some immigrants have higher rates of mood and anxiety disorders than their American-born counterparts (Jimenez, Alegría, Chen, Chan, & Laderman, 2010). The rate of dementia among African Americans is higher than among Caucasian older adults, exacting a greater economic impact on this population (Husaini et al., 2003). Lack of cultural consideration among providers may contribute to poor mental health treatment initiation, and inadequate follow-up for ethnic minority populations who seek mental health care (Jimenez, Cook, Bartels, & Alegría, 2013).

Socioeconomic Impact

The prevalence of comorbid physical and mental illness increases with age and the incidence of mental illness increases when physical illness becomes more pronounced (Barnett et al., 2012). Multimorbidity and chronic diseases account for the majority of Medicare spending

annually. Higher rates of health care utilization, more complex health care, greater disability, and decreased quality of life result from lack of treatment for substance abuse (Stanton & Rutherford, 2005).

Dementia ranks as one of the most costly illnesses today (Hurd, Martorell, Delavande, Mullen, & Langa, 2013). As the disease progresses through successive stages, the cost of care increases (Leicht et al., 2011). In 2010, the cost of dementia care was between \$157 billion and \$215 billion (Hurd et al., 2013). Timely treatment interventions can have a positive impact on health care spending and quality of life for those afflicted with dementia (Banerjee & Wittenberg, 2009).

Untreated mental illness has a devastating emotional impact. The risk for suicide increases with the incidence of untreated mental illness (Carlson & Ong, 2014). The suicide rate for Caucasian men over age 65 is six times higher than that of the general population. The greatest *risk* of suicide for any age group lies among adults over 85 (CDC, WISQARS, 2013). In 2013, there were 10,189 Americans over age 60 whose deaths were a result of suicide (CDC, WISQARS, 2013).

Missouri

Among Missourians, demographic trends and the incidence of mental illness reflect national averages. Missourians, however, have a more challenging predicament with regards to the mental health workforce. According to the Missouri Senior Report (2009), approximately 104 of their 114 counties (91%) are designated underserved areas for mental health care service delivery. This amount significantly overshadows U.S. estimates where mental health workforce shortages range from 55% in rural counties to 77% in other areas (SAMHSA, 2007; Thomas, Ellis, Konrad, Holzer, & Morrissey, 2009)

Policy

The IOM (2012) reported that by the year 2030, the United States needs an additional 3.5 million health care providers to address the needs of older adults. The report endorsed the use of the Geropsychiatric Nurse Competency Enhancements as a means of increasing geriatric knowledge and competency among nurses (IOM, 2012). Recommendations for the inclusion of geriatric content in professional licensure and certification exams was also emphasized. The advance practice registered nurse (APRN) Consensus Model has also mandated geriatric education for specific advanced practice nursing tracks by expanding the scope of training to include a lifespan perspective (Stanley, 2012).

Gaps in Nursing Education

Geropsychiatric education among nursing students is limited. Only one-third of Psychiatric Mental Health Nurse Practitioner (PMHNP) programs include geropsychiatric nursing content in their curricula (Kurlowicz, Puentes, Evans, Spool, & Ratcliffe, 2007). Few schools provide geropsychiatric nursing tracks within their programs (Kurlowicz et al. 2007; Stephens, Harris, & Buron, 2015). The numbers of schools that include geropsychiatric content in PMHNP curriculum has diminished from previous reports. The majority of APRN students who receive geropsychiatric content in their curricula are not PMHNP students (Kurlowicz et al., 2007; Stephens, Harris, & Buron, 2015). Towner (2006) recognized the need for enhanced geriatric training among advanced practice nursing (APRN) students when only one-half of those assessed could correctly identify common geriatric syndromes such as dementia, delirium, and polypharmacy or accurately utilize tools to evaluate functional status among older adults. Nurses report the need for mental health training that includes didactic and clinical learning components (Atkin, Holmes & Martin, 2005; Koskinen, Salminen, Stolt, M., & Leino-Kilpi, 2015). Among

the 2014 resolutions adopted by the National Student Nurses' Association was increasing the awareness of geropsychiatric nursing by including content in undergraduate nursing curricula (SNA, 2014).

Numerous barriers to integrating geropsychiatric content into nurse curriculum exist. Demanding academic workloads, lack of geriatric trained faculty, and limited student demand for geriatric expertise account for a few of the obstacles that impede geriatric training among nursing students (Bardach & Rowles, 2012). Despite the barriers, better trained geropsychiatric providers are a necessity for the coming decades.

Geropsychiatric Nursing Competency Enhancements

Leaders in the field of geropsychiatric nursing have long recognized the lack of geropsychiatric content within nursing curricula. In 2008, the Geropsychiatric Nursing Collaborative (GPNC) was formed, comprising nurse leaders at the University of Iowa, the University of Pennsylvania, and the University of Arkansas (Beck, Buckwalter, Dudzik, & Evans, 2011). The primary goal of the GPNC was *improving the mental health care of older adults by enhancing the skills and knowledge of nurses* (Beck et al., 2011). The main objectives of the collaborative were twofold; to develop and disseminate geropsychiatric nursing core competency enhancements for basic, graduate, and post-graduate nurse education; and to identify and disseminate geropsychiatric curriculum content to nursing school faculty (Beck et al., 2011). Geropsychiatric Nursing Competency Enhancements (GNPCE) for entry level (associate and bachelors prepared) nurses, and various advanced practice specialties whose graduates would care for older adults, were the outcome of the GPNC. The enhancements were intended to *supplement* rather than replace the existing core competencies for nursing professionals (Beck et al., 2011). Curriculum content and educational materials aligning with key concepts were also

identified and made available at no cost through the online Portal of Online Geriatric Education (Portal of Geriatric Online Education, 2012).

Nursing Competencies

The National Organization of Nurse Practitioner Faculties (NONPF) provides competencies that guide nursing curricula. The competencies represent the entry level skills necessary for advanced nursing practice. Upon graduation, students must demonstrate mastery of the skills that have been prescribed for their field of advanced nursing practice. These competencies have undergone numerous revisions since the first draft in 1990 (NONPF b, 2002). The initial competency structure was comprised five domains and addressed the requisite skills for entry level APRN practice (NONPF b, 2002). Subsequent revisions added a sixth and seventh domain in 1995 and 2000 respectively. The National Organization for Nurse Practitioner Faculty utilized this structure until the latest revisions in 2011.

In 2011, the competency structure underwent a drastic change when NONPF adopted the Doctorate of Nursing Practice as the entry level for advanced nursing practice (NONPF, 2012). The new competency structure had to reflect nursing skill and scientific inquiry indicative of the Masters and Doctorally prepared advanced practice nurse. The 2006 MSN and 2006 DNP competencies were merged into a new competency set consisting of nine competency *areas*; these demonstrated the integration of advanced nursing practice skill, higher order scientific inquiry, and evidence-based methodology. This set, as amended in 2012, serve as the NONPF core competencies (NONPF.CC).

Population-focused APRNs must demonstrate mastery of *specialty* competencies along with the requisite core competencies. In 2003, the first population-focused competencies for the Psychiatric Mental Health Nurse Practitioner (PMHNP) were developed and subsequently

released. They were patterned after the 2002 population-focused competencies and retained the seven domain competency framework (NONPF b, 2002). In 2013, the PMHNP competencies were revised using the previous 2003 PMHNP competencies as a reference, but adopting the new NONPF.CC framework with nine competency areas.

The 2010 GPNCE.PNP were created to align with and augment, not replace the 2003 PMHNP seven domain competency structure which is now obsolete (POGO, 2010). These enhancements were timely in addressing the need for additive geropsychiatric competency among nurses, and also fit within the APRN consensus model's lifespan perspective. They predated, however, the current PMHNP competency structure, which is now comprised of nine competency areas.

Potential Solution: Finding common competency elements

Competency development over the past 20 years has been successive in nature. Since the first APRN competencies in 1990, subsequent versions have been revised, updated, and improved upon to reflect the population driven needs of society and trends in nursing education. The current NONPF.CCs were based in part on the 2006 NONPF. CC for the MSN and DNP (NONPF, 2006; NONPF & National Panel, 2006). The 2006 MSN competencies were based on the previous 2002 MSN competencies (NONPF a, 2002). Both the 2002 and 2006 MSN competencies utilized the seven domain framework. Similarly, the 2003 PMHNP competencies, which were used to align the GPNCE.PNP, were based on the 2002 population-focused competencies (NONPF b, 2002) that also utilized the 2002 MSN competencies as a framework (NONPF a, 2002; Appendix A). The 2002 MSN competencies serve as a point of origin for all MSN competencies, past and present, and a basis for connecting the current NONPF.CC (2012), PMHNP competencies (NONPF, 2013), and the GPNCE.PNP (POGO, 2012; see Appendix B).

If the 2006 MSN competencies (NONPF, 2006) can be suitably aligned within the current NONPF.CC (NONPF, 2012), the positioning may serve as a reference for the alignment for the GPNCE.PNP (POGO, 2012).

Clinical Problem, Study Purpose

Problem Statement

For the past three decades, the healthcare needs of older adults have been under investigation. The Institute of Medicine (IOM) began the discussion in 1978, warning of the impending demographic shift and the need to ready our healthcare system and medical workforce for the onslaught of older adults. The President's New Freedom Commission echoed these sentiments, pointing out the gaps in mental health services for older adults and the need for healthcare professionals who have been prepared across the lifespan academically (2003). Recently, the IOM reiterated the imminent need for a properly educated healthcare workforce with enhanced training in geriatric care (2008). Specific considerations were underscored with regards to mental health and substance abuse treatment of older adults (IOM, 2012). The need for more mental health providers with preparation in geropsychiatric treatment is urgent. This lack of preparedness has been described as *bordering on a crisis* (IOM, 2008, 2012). Academic institutions must consider how they will prepare healthcare providers for meeting the needs of older adults.

Purpose statement

The purpose of this project was to align the GPNCE.PNP with the current NONPF.CC and PMHNP competencies, whereby meeting the APRN Consensus Models call for geriatric education in APRN curricula and the societal need competent mental health care providers.

Intended Improvement

The project outcome would allow for the continued use of the GPNCE.PNP, and address the APRN Consensus Models mandate on geriatric education for PMHNP students and the societal need for more competent mental health care providers. The tabular crosswalk, demonstrating the alignment of the three competency sets into one comprehensive competency document, can be utilized in a PMHNP training program to guide curriculum and address the mental health needs of older adults. A pilot study integrating the project outcome into the course content of the PMHNP program at the University of Missouri – Kansas City is planned for the Fall of 2016 (see Appendix C, Logic Model)

Potential Barriers and Facilitators for Project Completion and Implementation

Barriers. Lack of time for new evidence appraisal, organizational constraints, and pressure to maintain the status quo can limit forward movement or change within a system (Rogers, 2003). Among nursing faculty, limited geriatric expertise inhibits the use of geriatric content within nursing curricula (Bardach & Rowles, 2012). Lack of knowledge and familiarity with the GPNCE.PNP may prove to be significant barriers when attempting to implement the project outcome. This deficit can be offset by geriatric nursing professionals who are willing to serve as peer mentors (Personal communication, GPNC PI, April 9, 2015).

Facilitators. Organizational support, policy initiatives, and a focus on the use of best practice methodologies serve as an impetus for change (Rogers, 2003). Promotion and advocacy from federal agencies, professional organizations, and policy initiatives calling for action act as an incentive to promote change (Melnik & Fineout-Overholt, 2011). The APRN Consensus Models call for enhanced geriatric curricular content and expanded focus on lifespan healthcare may also facilitate the use of this outcome (APRN, 2008). The cost of change and accessibility of an innovation improve the likelihood of change adoption (Rogers, 2003). The associated

curricular resources which were designed to accompany the GPNCE.PNP are accessible, free, and easily integrate into the nursing curriculum (POGO, 2012; Rogers, 2003).

Sustainability. At times, change is a required part of an organization (Melnik & Fineout-Overholt, 2011). Policy mandates from federal agencies and professional organizations requiring geriatric content in nursing curriculum serve as a stringent impetus to change (Rogers, 2003). Curricular changes adopted by a university or school of nursing would also ensure ongoing use of this project outcome.

Review of the Evidence

PICOT

In this project, the PICOT question is: *Do the Geropsychiatric Nursing Competency Enhancements for Psychiatric Nurse Practitioner align with and augment current NONPF.CC and PMHNP competencies?*

Literature Review: Geropsychiatric Education

A review of the literature was conducted to assess competency based geropsychiatric nursing education. Few studies were found on this particular topic. The search was therefore expanded to investigate the effect of geropsychiatric *education* among *nursing* and *other health care students*. The following search terms were used: nursing, students, geriatric, elderly, older adults, late life, mental health, mental illness, psychiatry, education, training, teaching, curriculum, competency, and classroom instruction. The databases that were searched included Abstracts in Social Gerontology, AgeLine, CINAHL, ERIC, Health Source: Nursing/Academic Edition, MEDLINE Professional Development Collection, PsycARTICLES, PsycINFO, The Campbell Collection, and The Cochrane Collection. Inclusion criteria were English language, peer-reviewed journals, research articles, full-text journals, educational outcomes, groups of

students or nurses, instructional formats in either classroom or clinical settings, and geriatric population. Studies from the past ten years were considered with the exception of one novel, longitudinal study related to geriatric education in long term care. The search yielded 16 potential studies. After reviewing the abstracts, five were excluded based on the search limits. The Oxford Centre for Evidence Based Medicine was used to evaluate the research evidence (OCBEM,2011). The studies presented represent designs and outcomes that are common in the field of nursing education research (Ferguson & Day, 2005; Whittemore & Grey, 2002). Study designs, outcome, subjects, settings, teaching method and level of evidence are highlighted (see Appendix D).

Geropsychiatric Nursing Education

Design. Study designs included quasi-experimental (Chen, Kiersma, Yehle, and Plake, 2015; Pierre & Twibell, 2012; Rosen et al., 2013; Yuasa et al., 2013), followed by descriptive exploratory (Galvin et al., 2010; McCabe, Russo, Mellor, Davison, & George, 2008; Potter, Clarke, Hackett & Little, 2013), retrospective cohort (Mezey, Lynaugh, and Cartier, 1988, Mezey, Mitty and Bottrell, 1997), prospective cohort (Donahue, Wallace - Kazer, Smith, and Fitzpatrick, 2011), and mixed methods (Costley, 2015). Two studies were incorporated a pilot arm in the research (Costley, 2015; Donahue et al., 2011).

Subjects. Six of the 11 studies included APN and RN student subjects (Chen et al., 2015; Mezey et al, 1988; Mezey et al., 1997; Potter et al., 2013; Rosen et al., 2013; Yuasa et al., 2013). Three studies included other types of students (Costely, 2015; Rosen et al., 2013; Yuasa, et al., 2013). Four contained RN staff as study participants (Donahue et al., 2011; Galvin et al., 2010; McCabe et al., 2008; Pierre & Twibell, 2012), and another four studies included other nursing or staff members (Galvin et al., 2010; McCabe et al.; 2008, Mezey et al., 1988; Mezey et al., 1997).

Key outcomes. All of the studies demonstrated that geriatric content, in either an academic or employment settings, enhances knowledge, caregiver skill and competency, and improves subjective attitudes toward older adults. With the exception of one study (Chen et al., 2015), all had 2 or more positive outcomes. The most prevalent outcome was increased knowledge (Costely, 2015; Donahue et al., 2011, Galvin et al., 2010; McCabe et al., 2018; Mezey 1988, Mezey et al., 1997; Pierre & Twibell, 2012; Potter et al.; 2013; Rosen et al.; 2013; Yuasa, 2013), followed by increased skill (Costely, 2015; Galvin et al., 2010; McCabe et al.; 2018; Mezey 1988, Mezey et al., 1998; Pierre & Twibell, 2012; Potter et al., 2013), improved or changed attitude (Chen et al., 2015; Donahue et al., 2011; Mezey 1988, et al., 1997; Pierre & Twibell, 2012; Potter et al.; 2013; Rosen et al.; 2013), and increased competency (Costely, 2015; McCabe et al., 2008; Pierre & Twibell, 2012). While the outcomes of these studies demonstrated the positive impact of geriatric education on subjects, the literature search confirmed the lack of competency-based geropsychiatric nursing education research.

Theoretical Framework

Experiential Learning Theory

David Kolb's Experiential Learning Theory (ELT) was selected as the overarching theoretical framework to guide this project (Kolb, 1984). In his four stage model, Kolb proposes that knowledge is acquired through experience (see Appendix E). Through a series of successive stages along a continuum, *the concrete experience* begins the learning process. Steps two and three, *reflection* and *conceptualization*, allow the learner to integrate the experience cognitively and create a lasting mental representation. *Experimentation* is the final stage of the process which utilizes new learning through an interactive experience that tests newly acquired

knowledge. Kolb (1984) further delineates four distinct learning styles within his framework which may allow the educator to adapt curricular activities according to student learning style.

According to the NONPF, the ELT is a standard part of competency-based DNP training (NONPF, 2013, p. 6). Experiential learning has been validated through meta-analysis showing superior efficacy in testing outcomes compared to traditional learning methods (Freeman et al., 2014). Experiential learning is applied in mental health nursing when conducting the standardized patient examination, and through the use of simulation exercises (Doolen, Giddings, Johnson, Guizado de Nathan, & Badia, 2014; Kameg, Howard, Clochesy, Mitchell, & Suresky, 2010; Wieland, Levine, & Smith, 2014). Kolb's model has also been successfully applied in online learning platforms (Kavanaugh et al., 2009).

Methods

IRB and Organizational Approval

This project was designated *Not Human Subjects Research* by the University of Missouri Kansa City Institutional Review Board. Approval was granted by the chairs of the MSN and PMHNP programs at the University (see Appendix F).

Ethical Considerations

Because the project outcome is aimed for use in an existing online PMHNP program, ethical considerations for distance education were considered. Online educational programs require computer equipment and optimal data transmission which can be too costly for some students, excluding them from participating in this mode of education (Iwasiw & Goldenburg, 2015). Risks to privacy are also encountered by students in distance learning programs when they leave the primary institutional learning management system (LMS) and enter non-secured websites, encountering surveillance programs that track their online activity (Anderson &

Simpson, 2007; Iwasiw & Goldenburg, 2015). Students acknowledge the associated risks of online learning when they are admitted to a program and provide informed consent (Anderson & Simpson, 2007). Use of the GPNCE.PNP conveys no greater risks to those who utilize distance learning platforms.

Funding

Funding for project dissemination was provided by the Graduate Women's Assistance Fund of the University of Missouri Kansas City. No grant funding was provided for the actual project. As a non-research, non-human subjects curriculum project, limited cost was associated with this study.

Setting

A University of Missouri Kansas City School of Nursing and Health Studies (UMKC SoNHS) served as the setting for this project. The student body of the University consists of 16,160 students on three campuses, who are comprised of Caucasians (60%), Black or African Americans (13%), Asians (7%), and Hispanic or Latinos (5%; UMKC Fast Facts, 2015). During the fall semester of 2014, approximately 914 students were taking online courses. The SoNHS has the largest online learning program at the University, with 628 students from 10 specialty nursing tracks (UMKC Online, 2015). The PMHNP is an online *hybrid* educational program, offering synchronous and asynchronous online courses blended with biannual residencies on the UMKC campus. The PMHNP program is comprised of 13 courses totaling 43 credit hours (UMKC, PMHNP, 2015). There are currently 58 students enrolled in the PMHNP program (Personal communication, Chair PMHNPE.track, May 1, 2015). While the project was undertaken for the enhancement of PMHNP curricula, the actual implementation of content was not part of this project.

Project Change Theory

The Diffusion of Innovation (DOI) framework is frequently utilized as a theoretical foundation when introducing a new or novel concept into an organizational or practice setting. A concept that is not new can still be considered an innovation if it has not been previously utilized by a group (Rogers, 2003). In the field of education, DOI has been applied to the integration of online learning platforms and utilization of advanced technology (Sahin, 2006). Diffusion of Innovation has served as a theoretical framework when integrating patient simulation or virtual patient environments into nursing education (Starkweather & Kardong-Edgren, 2008; Tung & Chang, 2008). Diffusion of Innovation has also been adopted when integrating of geriatric curriculum into nursing education (Beck, Buckwalter, Dudzik, & Evans, 2011; Dorfman, & Murty, 2005).

There are four primary elements in the Diffusion of Innovation process. These include (a) an innovation, (b) a communication channel, (c) a social system, and (d) time (Rogers, 2003, p.11). The process of diffusion occurs when innovation is communicated through specific channels over time by members of a social system (Rogers, 2003, p. 5; see Appendix G). For this project, the innovation is the integration of geropsychiatric curricular content into a PMHNP. Informal discussion among faculty peers, formal discussions among department chairs, and project presentations to SoNHS faculty and the curriculum committee serve as channels of communication within a SoNHS social system. The adoption of an innovation occurs over a period of time, through a series of deliberate steps, intended to understand and evaluate the new concept. Five stages characterize the *innovation-decision process* which can be applied to the integration of GPNCE/PNP into the existing competencies for PMHNP (see Appendix H). The

culmination of the innovation of decision process is either acceptance or rejection of the innovation (Rogers, 2003, p. 170).

How an innovation is characterized determines the success of the adoption. Several factors contribute to the successful integration of an innovation (Rogers, 2003, p. 15). The relative advantages and disadvantages of the innovation are considered. A new idea must be compatible with the existing organizational values. Ease of use, having the opportunity to trial an innovation before adopting it, and observable results increase the likelihood of system-wide approval. The project outcome has the potential of capturing these traits (see Appendix I).

Design

Competency mapping. The 2006 MSN and 2006 DNP NONPF competencies were placed side by side in a tabular format with the 2012 NONPF.CC (NONPF, 2006; NONPF & National Panel, 2006; NONPF, 2012). The mapping process began with the 2006 DNP competencies. Each competency item within the 2006 DNP categories was assigned an alpha - numeric label such as *SF.1* which corresponded to *Scientific Foundation area, NP Core Competency item 1*, or *IP.3.a* which corresponded to *Independent Practice area, NP Core Competency item 3a*. Each item within a 2006 DNP competency area was then compared to each competency area within 2012 NONPF.CC. Similarity in language, verbatim language, and competency intent were considered when determining the most accurate alignment. If an item from the 2006 competencies did not correspond to any of the 2012 competencies, domain descriptions provided by the 2002 population-focused competencies were used to guide further placement that most closely matched competency intent. When a 2006 DNP competency was found to match a 2012 competency, the associated categorical label was placed within the

corresponding competency area. There were 66 individual items in the 2006 DNP competencies that were mapped to 9 competency areas.

This process was repeated for the 2006 MSN competencies. However, categorical labels differed slightly. Domain numbers and items were assigned a numeric label, such as *1.1* indicating *Domain 1, competency item 1*, or *4.42* indicating *Domain 4, competency item 42*. Competencies from 2006 MSN domains were compared to and placed within the area of the 2012 NONPF.CC area they most closely resembled. There were 75 competency items in the 2006 MSN competencies.

Competency alignment. The GPNCE.PNP was intended to be *additive* to the 2003 PMHNP competencies; when added to a PMHNP domain, they were placed next to a competency and labeled as *new*. In this activity, new GPNCE.PNP were assigned the label *I.2.a.new* indicating that they had been added to *Domain I*, and placed next to *competency item 2 a*. Using the mapping template as a guide, the GPNCE.PNP were placed within the 2012 NONPF.CC and the 2013 PMHNP competencies according to where the 2006 MSN competencies were mapped. Because the 2003 PMHNP competencies and the 2006 MSN competencies used the same domain headings, they aligned in a similar manner.

Data quality was assessed by the chairs of the MSN and PMHNP programs at UMKC. Content experts also gave feedback regarding the alignment of competencies within the appropriate areas. Several revisions were undertaken before consensus could be reached on the accuracy of competency placement.

Results

The project was completed during the Spring semester of 2016. Two outcomes resulted from the competency mapping and alignment exercise. First, a *Tri-Competency Fusion* was

developed between GPNCE.PNP, PMHNP competencies, and NONPF.CC (see Appendix J).

Second, a competency mapping template was created reflecting the placement of the 2006 MSN and 2006 DNP competencies within the current NONPF.CC (see Appendix K).

Discussion

Successful Alignment

Competency mapping. The 2006 MSN and 2006 DNP competencies and the GPNCE.PNP were mapped to the current NONPF.CC and PMHNP competencies with little difficulty. Because the current NONPF.CCs were based on previous competency versions, mapping the 2006 NONPF.CCs was simply a matter of locating the competency wording, which was often verbatim or near verbatim, within the current competency structure. This outcome helps validate the competency alignment. Thirty-eight of the 75 competencies from 6 different 2006 MSN domains aligned within the area of Independent Practice area. This suggests that the APRN must master a broad set of professional practice skills to demonstrate competency in Independent Practice.

The area of *Health Delivery Systems* acquired 13 MSN competencies from four previous domains. This signifies that today's APRN plays a vital role by assisting patients, in a professional and culturally sensitive manner, through the complex systems of health care transition. *Technology and Information Literacy* aligned with nine previous competencies, the majority of which came from the *Teaching and Coaching domain*, denoting the importance of APRN role in providing for health literacy through patient education.

The areas of *Leadership* and *Quality* each acquired 8 competencies from four previous areas. The combined emphasis underscores the importance of professionalism, accountability, and quality care as the APRN assists the patient in achieving optimal healthcare outcomes.

Other interesting findings included the fact that only one of the previous 75 competencies could be mapped to the area of Ethics. The domain *Advancing the professional NP role*, which was of some significance in the 2006 MSN competencies and more reflective of NP role advocacy, was mapped to all nine competency areas, which may suggest the current value of APN skill and competency versus mere APN role promotion.

Competency alignment. Many of the GPNCE.PNP were mapped to several areas of the 2013 PMHNP competencies and the NONPF.CC. The 30 new and three amended GPNCE.PNP were mapped to 59 areas within the PMHNP competencies and 60 areas within the NONPF.CC. Like the 2006 MSN competencies, 28 of the 33 new GPNCE.PNP aligned within the area of *Independent Practice*. Thirteen competencies aligned within area of *Leadership*, five within *Policy and* five within the area of *Quality*. No new GNPCE.PNP were found to fit within the area of Scientific Inquiry, perhaps because the current NONPF.CC attempted to refine the language of each competency area by fine tuning the wording and narrowing the competency scope. The area of *Quality* within the PMHNP competencies was so narrowly defined, speaking only to the use of seclusion and restraints, which only one GPNCE.PNP was found to fit this area.

A competency mapping exercise using the GPNCE has never been previously published. The closest comparison of the project results to published literature is the NONPF competencies, which over successive years have based new competencies on previous versions, refining the structure over time. No research however was found on the validity of this process.

Limitations

Internal validity. The competency mapping process was prone to bias. Subjective assessment was used to guide the initial competency mapping and no templates, tools, or

prototypes could be found to aide in the alignment process. Domain descriptions from the 2002 population focused competencies were used if there appeared to be any doubt about competency mapping. The content experts who advised on this project were also the founders of the GPNCE. Their valuable input provided a level of insight that would not have occurred without their assistance, although it may have contributed to bias. The use of nursing faculty with expertise in competency based curriculum and *lack* of familiarity with the GPNCE.PNP served as a means of controlling for bias.

External validity. The level of project complexity and lack of familiarity with the GPNCE and competency based education proved to be a challenge. Describing the rationale behind the mapping process and the historical antecedents was found to be tedious and confusing to the reader. The acronyms, which were provided as an aide for the reader and as a means of limiting the frequent use of lengthy names and descriptors, were found to be confusing to those unfamiliar with the NONPF or nursing competencies. A key was developed (see Appendix K) to further assist the reader in understanding the acronyms. The NONPF have traditionally used consensus panels to assess new competency sets (National Panel, 2003; 2013). Large scale vetting would need to occur in order to use this mapping project. Such a process would further enhance external validity, validate the project outcome, and provide input from experts in the field of geropsychiatric, PMHNP nursing, and nursing competency development.

Presenting the Tri-Competency Enhancement project at national conferences and professional organizations has provided a means of minimizing study limitations by providing education about the GPNCE to nursing faculty, APRN's, PMHNP's and GNP's. Embedding the GPNCE.PNP into current competencies by way of the Tri-Competency enhancement helps

ensure its ongoing utilization. Policy mandates, whether they be organizational or multinational, provide assurance of geriatric training in all levels of nursing education.

Conclusions

This project demonstrated (a) the alignment of the GPNCE.PNP into the current NONPF.CC and (b) the mapping of the seven domain NONPF competencies to the current NONPF.CC structure. The outcome of this competency mapping and alignment project can potentially serve as both a tool, for those wishing to consider the alignment of other GPNCE with competencies that were derived from seven domain structures, and a template for use in existing PMHNP programs. Both allow for the continued use of GPNCEs which provide valuable and timely curricular tools that enhance nursing education and address societal needs.

As demographic trends continue to demonstrate a population shift and an increase in the number of older adults, academic institutions must meet this challenge by adapting curriculum and preparing healthcare students to address the needs of older adults. The Tri-Competency enhancement is one way to enhance knowledge and prepare nursing students to address the mental health needs older adults. Curriculum resources that accompany the geropsychiatric nursing enhancements are free of charge, easily obtained on the Portal of Online Geriatric Education, and can be integrated into course work with little difficulty. Plans to implement the mapping content outcome into courses at the site of the project are projected for Fall 2016. Plans for dissemination include local and national conferences, manuscript publication, and free domain geriatric sites, such as The Portal of Online Geriatric Education.

References

- AAGP, 2008: American Association for Geriatric Psychiatry. *Geriatrics and mental health - The facts, 2008*. Available at www.aagponline.org/prof/facts_mh.asp.
- Anderson, B., & Simpson, M. (2007). Ethical issues in online education. *Open Learning, 22*(2), 129-138. doi: 10.1080/02680510701306673
- APRN Consensus Work Group, & National Council of State Boards of Nursing
- APRN Advisory Committee. (2008). Consensus model for APRN regulation: licensure, accreditation, certification & education. Available at: <http://www.aacn.nche.edu/education-resources/APRNReport.pdf>. Accessed November 28, 2011.
- Atkin, K., Holmes, J., & Martin, C. (2005). Provision of care for older people with co-morbid mental illness in general hospitals: general nurses' perceptions of their training needs. *International Journal of Geriatric Psychiatry, 20*(11), 1081-1083. doi: 10.1002/gps.1414
- Banerjee, S., & Wittenberg, R. (2009). Clinical and cost effectiveness of services for early diagnosis and intervention in dementia. *International Journal of Geriatric Psychiatry, 24*(7), 748-754. doi: 10.1002/gps.2191
- Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. (2012). Epidemiology of multi-morbidity and implications for health care, research, and medical education: A cross-sectional study. *The Lancet, 380*(9836), 37-43. doi: 10.1016/S0140-6736(12)60240-2
- Bardach, S. H., & Rowles, G. D. (2012). Geriatric education in the health professions: Are we making progress? *The Gerontologist, 52*(5), 607-618. doi: 10.1093/geront/gns006

- Beck, C., Buckwalter, K. C., Dudzik, P. M., & Evans, L. K. (2011). Filling the void in geriatric mental health: The Geropsychiatric Nursing Collaborative as a model for change. *Nursing Outlook*, 59(4), 236-241. doi: 10.1016/j.outlook.2011.05.016
- Carlson, W. L., & Ong, T. D. (2014). Suicide in later life: Failed treatment or rational choice? *Clinics in Geriatric Medicine*, 30(3), 553-576. doi: <http://dx.doi.org/10.1016/j.cger.2014.04.009>
- Center for Disease Control and Prevention. [Injury Prevention & Control: Data & Statistics \(WISQARS™\)](#). 2013, United States. *Suicide Injury Deaths and Rates per 100,000. All Races, Both Sexes, Ages 60 to 85+*. Retrieved from http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html
- Chen, A. M. H., Kiersma, M. E., Yehle, K. S., & Plake, K. S. (2015). Impact of the Geriatric Medication Game® on nursing students' empathy and attitudes toward older adults. *Nurse Education Today*, 35(1), 38-43. doi: <http://dx.doi.org/10.1016/j.nedt.2014.05.005>
- Colby, S. L. and Ortman, J.M. (2014). *The Baby Boom Cohort in the United States: 2012 to 2060*. Current Population Reports, P25-1141. U.S. Census Bureau, Washington, DC. 2014
- Costley, A. W. (2015). Exploring skills-based competencies through Geriatric Care Management (GCM) modules. *Gerontology & Geriatrics Education*, Jan., 1-13. doi: 10.1080/02701960.2014.990151
- Delaney, C., & Barrere, C. (2012). Advanced practice nursing students' knowledge, self-efficacy, and attitudes related to depression in older adults: Teaching holistic depression care. *Holistic Nursing Practice*, 26(4), 210-220.

- Donahue, M., Wallace - Kazer, M., Smith, L., & Fitzpatrick, J. J. (2011). Effect of a geriatric nurse education program on the knowledge, attitudes, and certification of hospital nurses. *The Journal of Continuing Education in Nursing, 42*(8), 360-364. doi: <http://dx.doi.org/10.3928/00220124-20110415-01>
- Dorfman, L. T., & Murty, S. A. (2005). A Diffusion of Innovations approach to gerontological curriculum enrichment: Institutionalizing and sustaining curricular change. *Gerontology & Geriatrics Education, 26*(2), 35-50.
- Ferguson, L., & Day, R. A. (2005). Evidence-based nursing education: myth or reality? *The Journal of nursing education, 44*(3), 107.
- Galvin, J. E., Kuntemeier, B., Al-Hammadi, N., Germino, J., Murphy-White, M., & McGillick, J. (2010). "Dementia-friendly hospitals: Care not crisis": An educational program designed to improve the care of the hospitalized patient with dementia. *Alzheimer Disease and Associated Disorders, 24*(4), 372-379. doi: 10.1097/WAD.0b013e3181e9f829
- Garrido, M. M., Kane, R. L., Kaas, M., & Kane, R. A. (2009). Perceived need for mental health care among community-dwelling older adults. *Journal of Gerontology: Psychological Sciences, 64*(6), 704-712.
- Han, B., Gfroerer, J. C., Colliver, J. D., & Penne, M.A. (2009). Substance use disorder among older adults in the United States in 2000. *Addiction, 104*, 88-96.
- Hurd, M. D., Martorell, P., Delavande, A., Mullen, K. J., & Langa, K. M. (2013). Monetary costs of dementia in the United States. *New England Journal of Medicine, 368*(14), 1326-1334. doi: doi:10.1056/NEJMsa1204629

- Husaini, B. A., Sherkat, D. E., Moonis, M., Levine, R., Holzer, C., & Cain, V. A. (2003). Racial differences in the diagnosis of dementia and in its effects on the use and costs of health Care Services. *Psychiatric Services* 54(1), 92-96. doi: 10.1176/appi.ps.54.1.92
- IOM (Institute of Medicine) 1978. *Aging and Medical Education: Report of a Study by a Committee of the Institute of Medicine*. Washington, DC: National Academy Press.
- IOM (Institute of Medicine). 2008. *Retooling for an aging America: Building the health care workforce*. Washington, DC: The National Academies Press.
- IOM (Institute of Medicine). 2012. *The mental health and substance use workforce for older adults: In whose hands?* Washington, DC: The National Academies Press.
- Iwasiw, C. L., & Goldenburg, D. (2015). *Curriculum Development in Nursing Education* (3 ed.). Burlington, MA: Jones & Bartlertt Learning, LLC.
- Jimenez, D. E., Alegría, M., Chen, C.-n., Chan, D., & Laderman, M. (2010). Prevalence of psychiatric illnesses in older ethnic minority adults. *Journal of the American Geriatrics Society*, 58(2), 256-264. doi: 10.1111/j.1532-5415.2009.02685.x
- Jimenez, D. E., Cook, B., Bartels, S. J., & Alegría, M. (2013). Disparities in mental health service use of racial and ethnic minority elderly adults. *Journal of the American Geriatrics Society*, 61(1), 18-25. doi: 10.1111/jgs.12063
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* Englewood Cliffs, NJ: Prentice-Hall.
- Koskinen, S., Salminen, L., Stolt, M., & Leino-Kilpi, H. (2015). The education received by nursing students regarding nursing older people: a scoping literature review. *Scandinavian Journal of Caring Sciences*, 29(1), 15-29. doi: 10.1111/scs.12135

- Kuerbis, A., Sacco, P., Blazer, D. G., & Moore, A. A. (2014). Substance Abuse Among Older Adults. *Clinics in Geriatric Medicine*, 30(3), 629-654.
doi:<http://dx.doi.org/10.1016/j.cger.2014.04.008>
- Kurlowicz, L. H., Puentes, W. J., Evans, L. K., Spool, M. M., & Ratcliffe, S. J. (2007). Graduate education in geropsychiatric nursing: Findings from a national survey. *Nursing Outlook*, 55(6), 303-310. doi: <http://dx.doi.org/10.1016/j.outlook.2007.04.002>
- Leicht, H., Heinrich, S., Heider, D., Bachmann, C., Bickel, H., van den Bussche, H., . . . for the AgeCoDe study, g. (2011). Net costs of dementia by disease stage. *Acta Psychiatrica Scandinavica*, 124(5), 384-395. doi: 10.1111/j.1600-0447.2011.01741.x
- Lin, W. C., Zhang, J., Leung, G. Y., & Clark, R. E. (2011). Chronic physical conditions in older adults with mental illness and/ or substance use disorders. *Journal of the American Geriatrics Society*, 59(10), 1913-1921. doi: 10.1111/j.1532-5415.2011.03588.x
- McCabe, M. P., Russo, S., Mellor, D., Davison, T. E., & George, K. (2008). Effectiveness of a training program for carers to recognize depression among older people. *International Journal of Geriatric Psychiatry*, 23(12), 1290-1296.
- Melnyk, B. M., & Fineout-Overholt, E. (2011). *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice, 2nd Ed.* Philadelphia, PA: Wolters Kluwer Health:Lippincott, Williams and Wilkins.
- Mezey, M., Lynaugh, J. E., & Cartier, M. M. (1988). The Teaching Nursing Home Program, 1982-87: A report card. *Nursing Outlook*, 36(6), 285-292.
- Mezey, M. D., Mitty, E. L., & Bottrell, M. (1997). The teaching nursing home program: Enduring educational outcomes. *Nursing Outlook*, 45(3), 133-140. doi: [http://dx.doi.org/10.1016/S0029-6554\(97\)90044-0](http://dx.doi.org/10.1016/S0029-6554(97)90044-0)

Missouri Senior Report 2009, Missouri Department of Health and Senior Services and the Office of Social and Economic Data Analysis, University of Missouri.

National Organization of Nurse Practitioner Faculties (NONPF a). (2002). *Domains and competencies of nurse practitioner practice*. Newly revised. Washington, DC: Author.

National Organization of Nurse Practitioner Faculties (NONPF). (2006). *Domains and Core Competencies of Nurse Practitioner Practice*. Washington, D.C: Author

National Organization of Nurse Practitioner Faculties (NONPF) & National Panel for NP Practice Doctorate Competencies. (2006). *Practice Doctorate Nurse Practitioner Entry Level Competencies*. Retrieved on October 19, 2010, from

<http://www.nonpf.org/associations/10789/files/DNP%20NP%20competenciesApril2006.pdf>

National Organization for Nurse Practitioner Faculty (NONPF). (2012). *Nurse Practitioner Core Competencies. April 2011, Amended 2012*. Washington, DC: Author.

Retrieved April 2015 from

<http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/competencies/npcorecompetenciesfinal2012.pdf>

National Organization for Nurse Practitioner Faculty (NONPF b). (April 2002). *Nurse Practitioner Primary Care Competencies in Specialty Areas: Adult, Family, Gerontological, Pediatrics, and Women's Health*. Washington, DC: Author. Retrieved from

<http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/competencies/primarycarecomps02.pdf>

National Organization for Nurse Practitioner Faculty (NONPF). (2013) *Population Focused Nurse Practitioner Competencies. 2013*. Washington, DC: Author. Retrieved April 2015

from

<http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/Competencies/CompilationPopFocusComps2013.pdf>

National Panel for Psychiatric Mental Health NP Competencies. (2003). *Psychiatric-Mental Health Nurse Practitioner Competencies*. Washington, DC: National Organization of Nurse Practitioner Faculties. Retrieved from

<http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/imported/PMHNPcomps03.pdf>

National Student Nurse Association (NSNA). (2014). *Resolutions, 2014*. Brooklyn, NY:

National Student Nurse Association. Retrieved February 2015 from

<http://viewer.zmags.com/publication/2f92b1ec#/2f92b1ec/1>

New Freedom Commission on Mental Health, *Achieving the Promise: Transforming Mental Health Care in America*. Final Report. DHHS Pub. No. SMA-03-3832. Rockville, MD: 2003.

OCEBM Levels of Evidence Working Group Oxford (2011). *The Oxford 2011 Levels of Evidence*. Oxford Centre for Evidence-Based Medicine. Retrieved February 11, 2015 from <http://www.cebm.net/index.aspx?o=1025>

Pierre, J. S., & Twibell, R. (2012). Developing nurses' geriatric expertise through the Geriatric Resource Nurse model. *Geriatric Nursing*, 33(2), 140-149. doi: <http://dx.doi.org/10.1016/j.gerinurse.2012.01.005>

Plassman, B. L., Langa, K. M., Fisher, G. m. G., Heeringa, S. G., Weir, D. R., Ofstedal, M. B., . . . Wallace, R. B. (2007). Prevalence of dementia in the United States: The aging, demographics, and memory study. *Neuroepidemiology*, 29, 125-132. doi: 10.1159/000109998

- Portal of Geriatric Online Education. *Geropsychiatric Competency Enhancements*. Updated April, 4, 2012. Retrieved, April, 2014 from <http://www.pogoe.org/productid/20660>
- Potter, G., Clarke, T., Hackett, S., & Little, M. (2013). Nursing students and geriatric care: The influence of specific knowledge on evolving values, attitudes, and actions. *Nurse Education in Practice*, *13*(5), 449-453. doi: <http://dx.doi.org/10.1016/j.nepr.2013.02.007>
- Puentes, W. J., Buckwalter, K., & Evans, L. K. (2006). Geropsychiatric nursing: Planning for the future. *Journal of the American Psychiatric Nurses Association*, *12*(3), 165-169. doi: 10.1177/1078390306292837
- Reynolds, K., Pietrzak, R. H., El-Gabalawy, R., Mackenzie, C. S., & Sareen, J. (2015). Prevalence of psychiatric disorders in U.S. older adults: Findings from a nationally representative survey. *World Psychiatry*, *14*(1), 74-81. doi: 10.1002/wps.20193
- Rogers, E. M. (2003). *Diffusion of Innovations*. New York: Free Press.
- Rosen, J., Stiehl, E., Mittal, V., Fox, D., Hennon, J., Jeste, D., & Reynolds, C. F. (2013). Late-life mental health education for workforce development: Brain vs. heart? *American Journal Geriatric Psychiatry*, *21*(11). doi: 10.1016/j.jagp.2013.01.031
- Sahin, I. (2006). Detailed review of Roger's Diffusion of Innovations theory and educational technology-related studies based on Roger's theory. *The Turkish Online Journal of Educational Technology – TOJET*, *5*(2).
- Seitz, D., Purandare, N., & Conn, D. (2010). Prevalence of psychiatric disorders among older adults in long-term care homes: a systematic review. *International Psychogeriatrics*, *22*(7), 1025-1039. doi: <http://dx.doi.org/10.1017/S1041610210000608>

- Stagnitti, M. N. (January 2011). *Personal characteristics of the elderly reporting one or more cognitive disorders, 2007*. Statistical brief #310. Agency of Healthcare Research and Quality. Rockville, MD.
- Stanley, J. M. (2012). Impact of New Regulatory Standards on Advanced Practice Registered Nursing: The APRN Consensus Model and LACE. *Nursing Clinics of North America*, 47(2), 241-250. doi: <http://dx.doi.org/10.1016/j.cnur.2012.02.001>
- Stanton, M. W. & Rutherford, M. K. (2005). *The high concentration of U.S. health care expenditures*. Rockville (MD): Agency for Healthcare Research and Quality; 2005. Research in Action, Issue 19. AHRQ Pub. No. 06-0060
- Starkweather, A. R., & Kardong-Edgren, S. (2008). Diffusion of Innovation: Embedding simulation into nursing curricula. *International Journal of Nursing Education Scholarship*, 5(1), 13-11. doi: 10.2202/1548-923X.1567
- Stephens, C. E., Harris, M., & Buron, B. (2015). The Current State of U.S. Geropsychiatric Graduate Nursing Education: Results of the National Geropsychiatric Graduate Nursing Education Survey. *Journal of the American Psychiatric Nurses Association*, 21(6), 385-394. doi:10.1177/1078390315617588
- Substance Abuse and Mental Health Administration (2007). *An Action Plan For Behavioral Health Workforce Development*. (HHS Publication No. SMA 11-4629.) Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from July 2015 from <http://www.mentalhealthconnection.org/pdfs/annapolis-report.pdf>
- Thomas, K. C., Ellis, A. R., Konrad, T., Holzer, C. E., & Morrissey, J. P. , (2009). County-Level Estimates of Mental Health Professional Shortage in the United States. *Psychiatr Serv*, 60(10), 1323.

- Towner, E. M. (2006). Assessment of geriatric knowledge: An online tool for appraising entering APN students. *Journal of Professional Nursing*, 22(2), 112-115. doi: <http://dx.doi.org/10.1016/j.profnurs.2006.01.004>
- Tung, F.-C., & Chang, S.-C. (2008). A new hybrid model for exploring the adoption of online nursing courses. *Nurse Education Today*, 28(3), 293-300. doi: <http://dx.doi.org/10.1016/j.nedt.2007.06.003>
- UMKC. *Fast Facts*. Retrieved July 2015 from <http://www.umkc.edu/facts/#student>
- UMKC Online. *Online Quick Facts January 2015*. Retrieved April 2015 from <http://www.umkc.edu/facultysenate/documents/2015.02.03%20Online%20Quick%20Facts1%20Jan%202015.pdf>
- UMKC – School of Nursing and Health Studies. *Psychiatric Mental Health Nurse Practitioner, Sample Plan of Study*. Retrieved April 2015 from <http://info.umkc.edu/sonhs/wp-content/uploads/2014/10/mental-health-pos.pdf>
- United States Department of Health and Human Services. Substance Abuse and Mental Health Services Administration. Office of Applied Studies. National Survey on Drug Use and Health, 2009. ICPSR29621-v5. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-24. <http://doi.org/10.3886/ICPSR29621.v5>
- U.S. Department of Health and Human Services. (1999) *Mental health: A report of the Surgeon General*, Rockville, MD. Retrieved March 2015 from <http://profiles.nlm.nih.gov/NN/B/B/H/S>
- Wang, P. S., Lane, M., Olfson, M., Pincus, H., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: Results from the national comorbidity survey replication.. *Archives of General Psychiatry* 62: 629-640

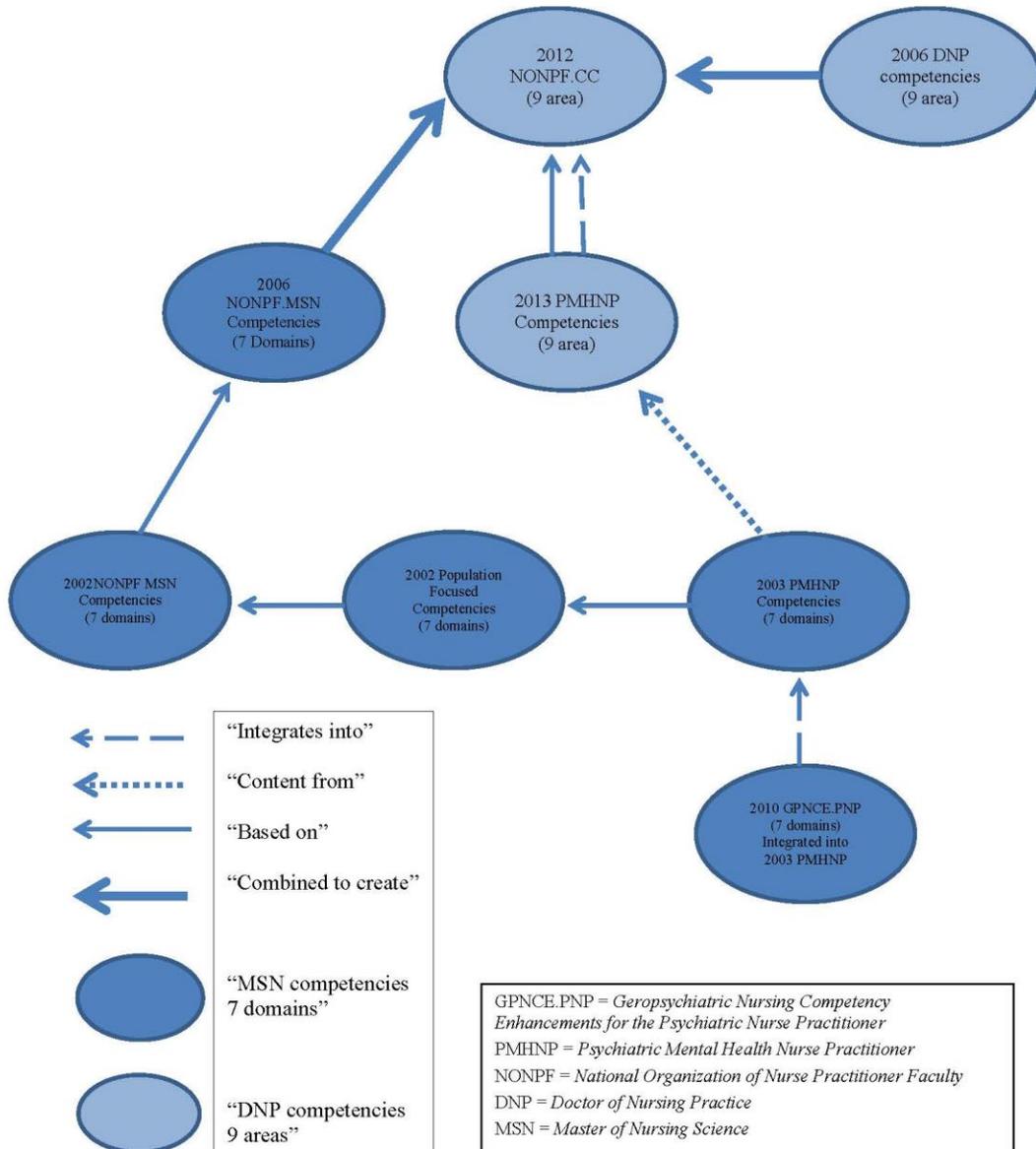
Whittemore R, Grey M. (2002). The systematic development of nursing interventions. *Journal of Nursing Scholarship*. 34(2):115–120.

Yuasa, M., Bell, C., Inaba, M., Tamura, B., Ahsan, S., Saunders, V., & Kamal, V. (2013).

'You're being paged!' Outcomes of a nursing home on-call role-playing and longitudinal curriculum. *Journal of the American Geriatrics Society*, 61(11), 1976-1982. doi: 10.1111/jgs.12515

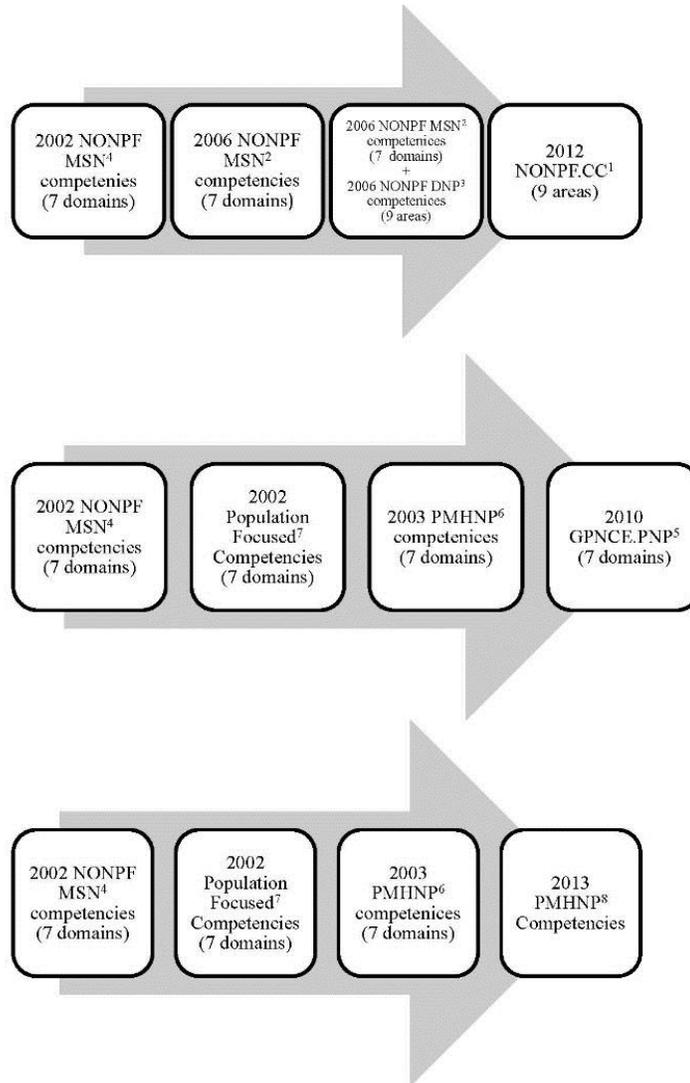
Appendix A

Relationship between Competencies



Appendix B

Relationship between NONPF.CC, GPNCE.PNP, PMHNP Competencies



1. National Organization for Nurse Practitioner Faculty (NONPF). (2012). *Nurse Practitioner Core Competencies. April 2011, Amended 2012*. Washington, DC: Author.

2. National Organization of Nurse Practitioner Faculties (NONPF). (2006). *Domains and Core Competencies of Nurse Practitioner Practice*. Washington, D.C: Author

3. NONPF & National Panel for NP Practice Doctorate Competencies. (2006). *Practice Doctorate Nurse Practitioner Entry Level Competencies*. Washington, DC: NONPF

4. National Organization of Nurse Practitioner Faculties (NONPF). (2002). *Domains and competencies of nurse practitioner practice*. Newly revised. Washington, DC: Author.

5. Portal of Geriatric Online Education. *Geropsychiatric Competency Enhancements*. Updated April, 4, 2012.

6. National Organization for Nurse Practitioner Faculty (NONPF). (April 2002). *Nurse Practitioner Primary Care Competencies in Specialty Areas: Adult, Family, Gerontological, Pediatrics, and Women's Health*. Washington, DC: Author.

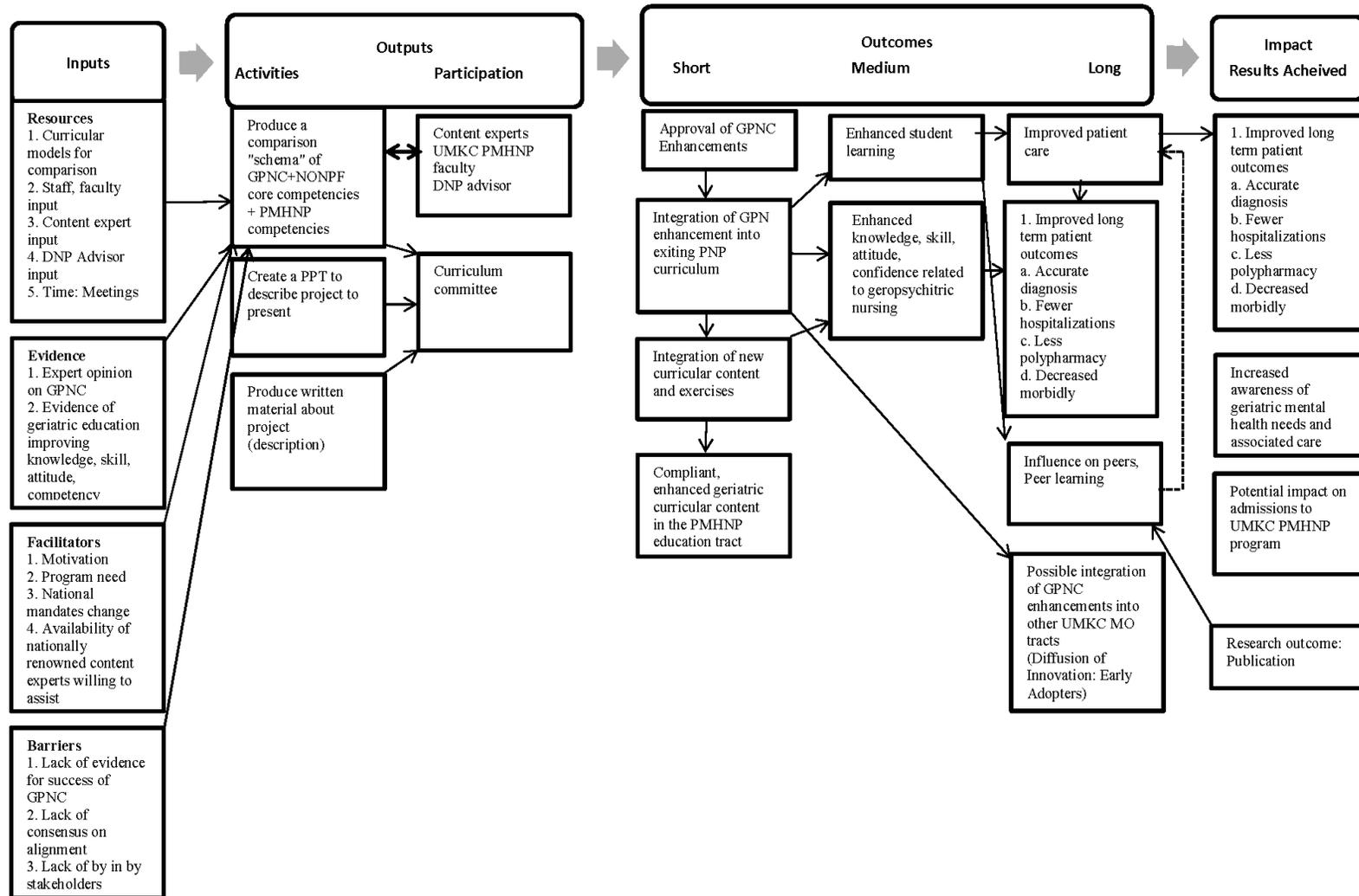
7. National Organization for Nurse Practitioner Faculty (NONPF). (2013) *Population Focused Nurse Practitioner Competencies. 2013*. Washington, DC: Author.

8. National Panel for Psychiatric Mental Health NP Competencies. (2003). *Psychiatric-Mental Health Nurse Practitioner Competencies*. Washington, DC: NONPF

8. National Organization for Nurse Practitioner Faculty (NONPF). (2013) *Population Focused Nurse Practitioner Competencies. 2013*. Washington, DC: Author. Retrieved April 2015 from

Appendix C

Logic Model Applied to Geropsychiatric Curricula Enhancement



January 2015 >>> May – August 2015 >>> August – December 2015 >>> January 2016 – May 2016 >>> Fall 2016 Trial curriculum

Assumptions: Progression of project based on acceptance of plan by DNP committee. Project facilitation will directed by DNP student. .

Appendix D

Geropsychiatric Curriculum Content: Literature Review Studies

Author	Design ¹	Subjects ²				Outcome ³				Setting ⁴					Teaching Method ⁵					LOE ⁶
		NP	RN	RN St	O	At	Kn	Sk	Cp	Cl	Lb	AC	Ltc	O	Dd	RP	Mnt	MM	Cl	
Chen, A. M. H., Kiersma, M. E., Yehle, K. S., & Plake, K. S. (2015)	QE		X			X					X					X				3
Costley, A. W. (2015)..	MM,P				X		X	X	X	X					X	X				
Donahue, M., Wallace - Kazer, M., Smith, L., & Fitzpatrick, J. J. (2011)	PC			X		X	X								X					3
Galvin, J. E., Kuntemeier, B., Al-Hammadi, N., Germino, J., Murphy-White, M., & McGillick, J. (2010).	DE			X	X		X	X							X					4
McCabe, Russo, Mellor, Davison and George, (2008)	DC			X	X		X	X	X				X	X	X					4
Mezey, Lynaugh, and Cartier (1988)	RC	X	X		X	X	X	X					X				X		X	4
Mezey, Mitty, and Bottrell (1998)	RC	X	X		X	X	X	X					X				X		X	4
Pierre and Twibell (2012)	QE			X		X	X	X	X				X		X		X		X	3
Potter, G., Clarke, T., Hackett, S., & Little, M. (2013)	DE		X			X	X	X		X			X		X				X	4
Rosen, J., Stiehl, E., Mittal, V., Fox, D., Hennon, J., Jeste, D., & Reynolds, C. F. (2013)	QE	X			X	X	X							X				X		3
Yuasa, M., Bell, C., Inaba, M., Tamura, B., Ahsan, S., Saunders, V., & Kamal, V. (2013).	QE	X			X		X	X				X		X		X	X		X	3
Total		4	4	4	7	7	10	8	3	3	2	3	4	2	7	3	3	1	5	4

1. DE=Descriptive Exploratory; MM=Mixed Method; P=Pilot; PC=Prospective Cohort; RC=Retrospective Cohort; QE=Quasi-Experimental

2 Subjects: NP=APN student; RN=RN student; RNSt=RN Staff; O=Other student or staff

3 Outcomes: At=Attitude; Kn=Knowledge; Sk=Skill; Cp=Competency

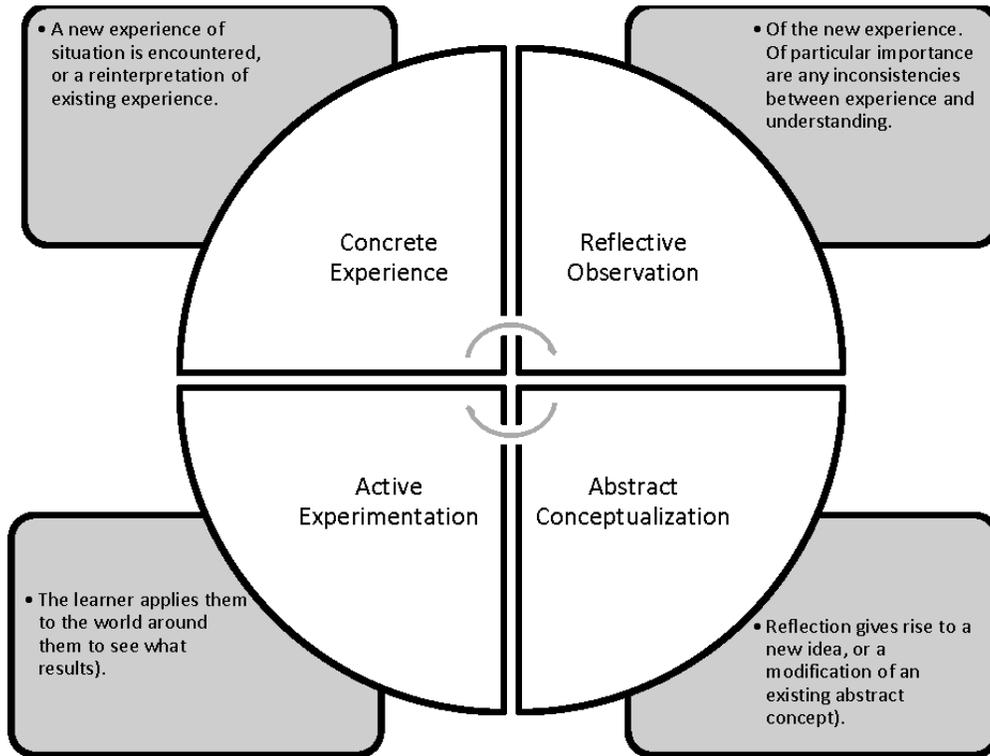
4 Setting: Cl=Classroom,Academic setting; Lb=Lab; AC=Acute Care; Ltc=Long term care; O=Other setting

5 Method: Dd=Didactic; RP=Role or simulation; Mnt=Mentor; MM=Multi Media; Cl=Clinical or Practice

6 Level of Evidence

Appendix E

Kolb Experiential Learning Cycle



Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* Englewood Cliffs, NJ: Prentice-Hall.

Appendix F

Approval Letter: Institutional Review Board



UMKC
 5319 Rockhill Road
 Kansas City Missouri
 TEL: 816 235-5927
 FAX: 816 235-5602

NOT HUMAN SUBJECTS RESEARCH DETERMINATION

Principal Investigator: Lyla Lindholm
 UMKC Health Sciences Building
 Kansas City, MO 64108

Protocol Number: 15-334
 Protocol Title: Geropsychiatric Nurse Competency Enhancements: Curriculum Enhancements for the Psychiatric Mental Health Nurse Practitioner Student
 Type of Review: Not Human Subjects Determination

Date of Determination: 08/17/2015

Dear Dr. Lindholm,

The above referenced study, and your participation as a principal investigator, was reviewed and determined to be Not Human Subjects Research (NHSR). As such, your activity falls outside the parameters of IRB review. You may conduct your study, without additional obligation to the IRB, as described in your application.

The NHSR Determination is based upon the following Federally provided definitions:

"Research" is defined by these regulations as " a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge."

The regulations define a **"Human Subject"** as "a living individual about whom an investigator (whether professional or student) conducting research obtains: data through intervention or interaction with the individual, or identifiable private information."

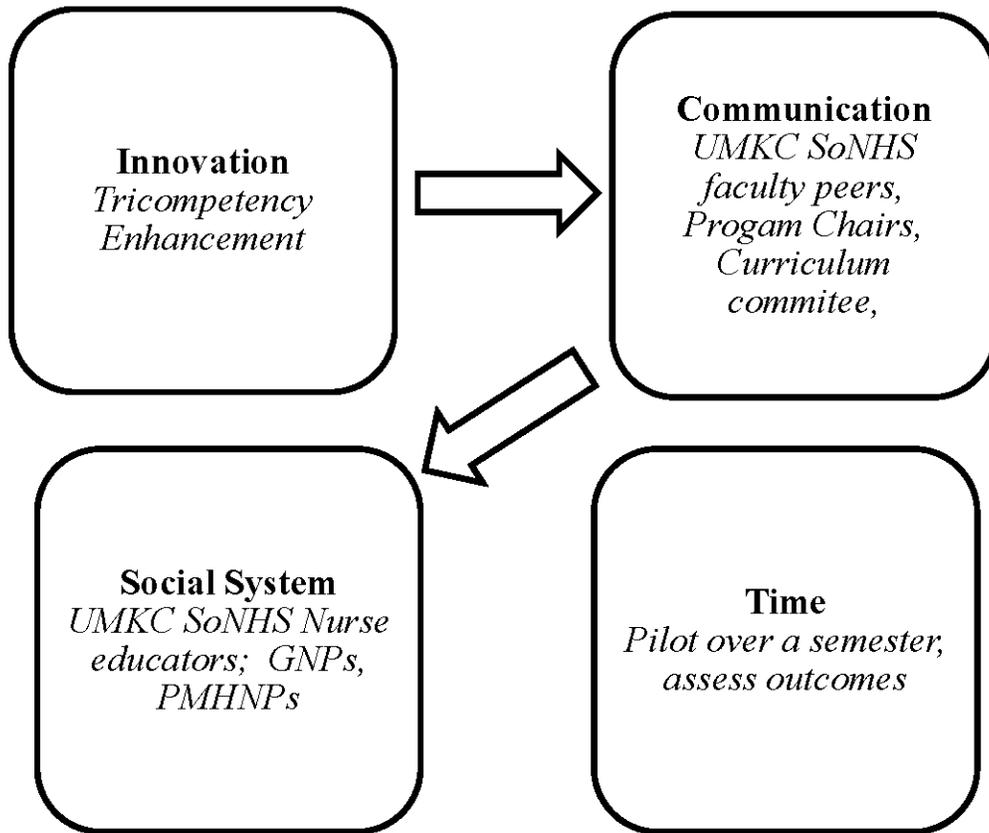
All Human Subjects Research must be submitted to the IRB. If your study changes in such a way that it becomes Human Subjects Research please contact the Research Compliance office immediately for the appropriate course of action.

Please contact the Research Compliance Office (email: umkcirb@umkc.edu; phone: (816)235-5927) if you have questions or require further information.

Thank you,
 UMKC IRB
 UMKC IRB Administrative Office

Appendix G

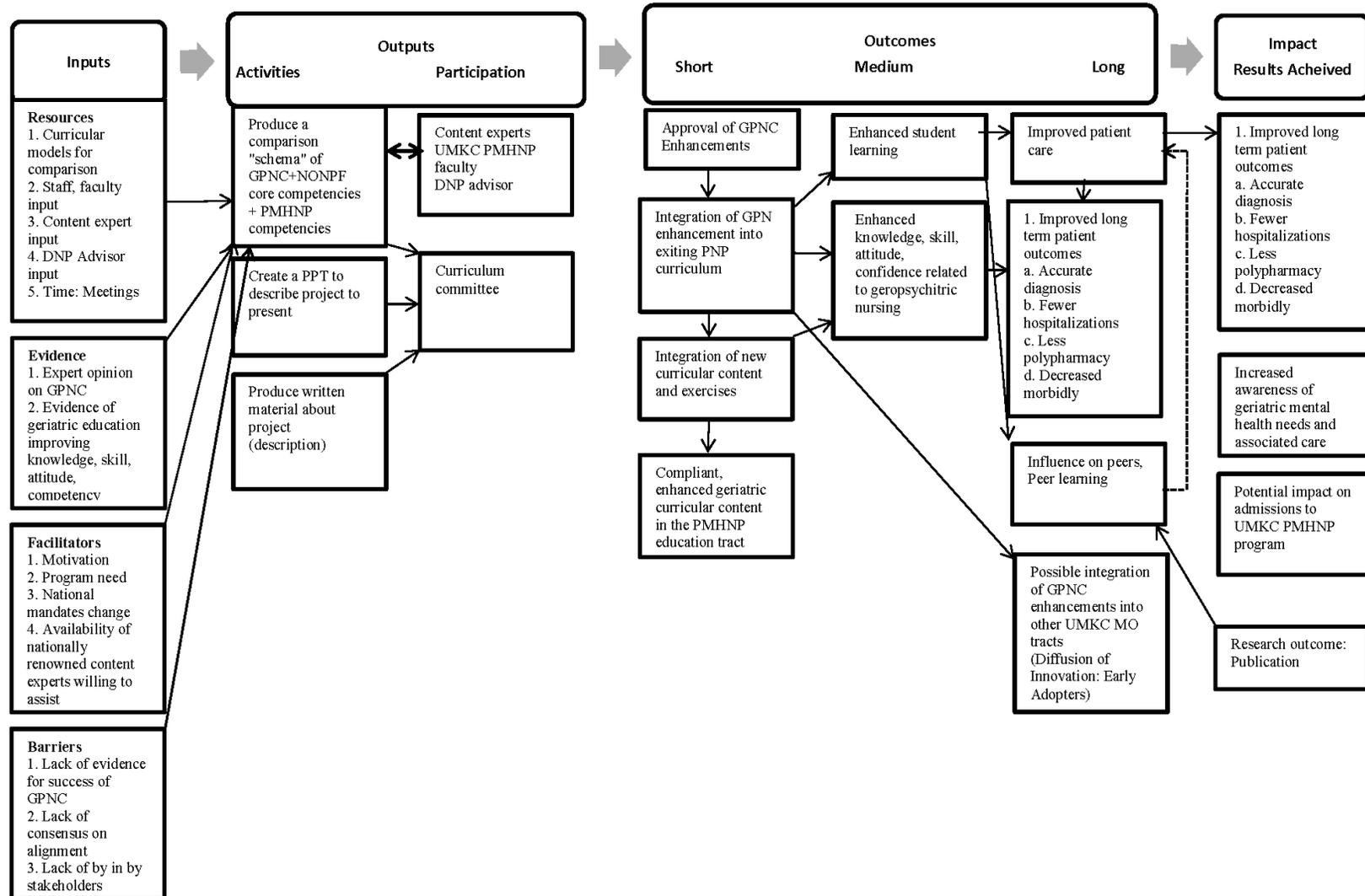
Diffusion of Innovation Model



Note. The process of diffusion occurs when an innovation, which is a new or novel idea is communicated through specific channels over time by members of a social system (Rogers, 2003).

Appendix H

Rogers Diffusion of Innovation Model: Innovation Decision Process. Geropsychiatric Competency Enhancements



January 2015 >>> May – August 2015 >>> August – December 2015 >>> January 2016 – May 2016 >>> Fall 2016 Trial curriculum

Assumptions: Progression of project based on acceptance of plan by DNP committee. Project facilitation will directed by DNP student.

Appendix I

Diffusion of Innovation – Geropsychiatric Nursing Competency Enhancements: Considerations for Diffusion of Innovation Success

Innovation Characteristic	Translation of GPNC Enhancements	Comments
<p><u>Relative Advantage:</u> Innovation are more likely to be adopted if they are perceived as better than existing ideas, and can be measured with terms that have meaning to users, such as cost, time, effort, advantage, convenience, satisfaction.</p>	<p>Free to use Accessible online Easily augment curriculum Provide for additional resources for teaching</p>	<p>Available through Portal for Online geriatric Education http://www.pogoe.org/productid/20660</p>
<p><u>Compatibility with existing values and practices:</u> Innovations that coincide with users values, needs and past experiences they are more likely to be adopted.</p>	<p>Enhance educational outcomes for nursing students Address gaps in knowledge Improve patient care</p>	<p>Main Goal GPNC: To enhance the cognitive and mental health of older Americans by improving the knowledge and skills of nurses. The primary objectives: (1) to develop and disseminate geropsychiatric nursing core competency enhancements to continuing, basic, graduate, and post-graduate nursing education programs whose graduates will care for older adults and (2) to identify and disseminate geropsychiatric curricular materials to faculty in these education programs.</p>
<p><u>Simplicity and ease of use:</u> Innovations that are easy to understand and use, are more readily adopted.</p>	<p>Clearly written competencies, objectives and outcomes Examples of activities are provided Links to resources are provided</p>	<p>Resource guides for curricular content and key concepts are provided to fit competency sets. http://www.pogoe.org/productid/20947</p>
<p><u>Trialability:</u> Innovations that are available and accessible to trial present less risk, and are more likely to be tried, used ,and adopted likelihood of use and adoption</p>	<p>Readily available Free and accessible at any time Previous user feedback is available at website Numerous activities to try</p>	<p>Users can view various competency sets before trying them with students http://www.pogoe.org/productid/20660</p>
<p><u>Observable results:</u> Innovation that provide visible outcomes more likely to be used, as they decrease uncertainty among users, and promote discussion</p>	<p>Outcomes can be seen after activities have been implemented with students Learning outcomes can be easily measured Online measures are available through the same web site</p>	<p>Sample online lesson with evaluation http://www.pogoe.org/productid/20184</p>

Rogers, E. M. (1995). Diffusion of Innovations. 4th ed. New York: Free Press; 1995.

Appendix J

Tri-Competency Alignment: GPNCE.PNP - 2012 NONPF.CC - 2013 PMHNP Competencies

		2012 NONPF Core Competences: 9 Competency Areas									GPNCE .PNP fit in multiple areas	
		<i>2013 PMHNP: Competencies added to 4 areas</i>										
		Scientific Foundation	Leadership <i>PMHNP added</i>	Quality <i>PMHNP added</i>	Practice Inquiry	Technology Information Literacy	Policy <i>PMHNP added</i>	Health Delivery System	Ethics	Independent Practice <i>PMHNP added</i>		
SF	<i>L/PMHNP</i>	<i>O/PMHNP</i>	PI	TIL	<i>P/PMHNP</i>	HDS	E	<i>IP/PMHNP</i>				
2006 NONPF MSN Core Competencies: 7 Competency Domains	DOMAIN 1: Management of Patient Health/Illness Status <i>Competencies 1-25</i>		G.I.C.10. amend <i>G.I.C.10. amend</i> <i>G.I.C.15. new</i>	<i>G.I.C.10. amend</i>				G.I.C.12. amend G.I.C.15. new	G.I.C.15. new	G.I.A.1.a & b.new G.I.C.1.new G.I.C.2.2 nd .new G.I.C.15.new <i>G.I.A.1a</i> <i>G.I.A.3.new:m</i> <i>o. p. q. r. u</i> <i>G.I.C.1.new</i> <i>G.I.C.2.1st.new</i> <i>G.I.C.5.new</i> <i>G.I.C.12.amend</i> <i>G.I.C.15.new</i>	9/15	
	DOMAIN 2: The Nurse Practitioner-Patient Relationship <i>Competencies 26-35</i>		<i>G.II.3.new</i> <i>G.II.6.new</i>			G.II.3.new	G.II.3.new <i>G.II.3.new</i>			G.II.1.new G.II.2.new <i>G.II.2.new</i> <i>G.II.6.new</i>	4/5	
	DOMAIN 3: The Teaching-Coaching Function <i>Competencies 36-41</i>		<i>G.III.1. new</i>			G.III.4.new				G.III.1.new <i>G.III.1.new</i> <i>G.III.4.new</i>	2/3	
	DOMAIN 4: Professional Role <i>Competencies 42-57</i>		G.IV.2.new G.IV.4. amend G.IV.6.new G.IV.8.new <i>G.IV.8.new</i>	G.IV.2. new G.IV.6. new <i>G.IV.6.new</i>	G.IV.6. new	G.IV.2.2 nd . new	<i>G.IV.6.new</i>				9/3	
	DOMAIN 5: Managing and Negotiating Health Care Delivery Systems <i>Competencies 58-66</i>								G.V.2. new	<i>G.V.2.new</i>	1/1	
	DOMAIN 6: Monitoring and Ensuring the Quality of Health Care Practice <i>Competencies 67-69</i>		G.VI.2.1 st . new <i>G.VI.2.1st. new</i>	<i>G.VI.2.1st. new</i>				G.VI.2.2 nd . new <i>G.VI.2.2nd. new</i>			<i>G.IV.6.new</i>	2/4
	DOMAIN 7: Culturally-Sensitive Care <i>Competencies 70-75</i>									G.VII.2.new G.VII.3.new	2/0	
GPNCE.PNP per 2012 NONPF.CC / <i>2013 PMHNP</i>	0	6/7	2/3	1	3	2/3	3	1	10/18	29/31↑ 28/31		
	0	13	5	1	3	5	3	1	28			

Appendix K

Competency Mapping of 2006 NONPF Competencies to 2012 NONPF.CC

		2012 NONFP Core Competencies - 9 Competency Areas									2006 NONPF MSN.CC per 2012 area
		Scientific Foundation	Leadership	Quality	Practice Inquiry	Technology Information Literacy	Policy	Health Delivery Systems	Ethics	Independent Practice	
		SF	L	Q	PI	TIL	P	HDS	E	IP	
2006 NONPF MSN Core Competencies: 7 Competency Domains	DOMAIN 1: Management of Patient Health/Illness Status 1-25	(2) 1.8-9			(1) 1.18	(1) 1.24		(2) 1.7-8		(20) 1.1-6, 10-17, 19-23, 25	26
	DOMAIN 2: The Nurse Practitioner-Patient Relationship 26-35		(1) 2.24			(1) 2.29				(9) 2.26-28; 30-35	11
	DOMAIN 3: The Teaching-Coaching Function 36-41					(6) 3.36-41					6
	DOMAIN 4: Professional Role 42-57	(1) 4.42	(5) 4.44, 46-48, 56	(2) 4.43, 57	(2) 4.42, 49	(1) 4.53	(2) 4.54-55	(4) 4.48-51	(1) 4.52	(2) 4.43, 45	20
	DOMAIN 5: Managing and Negotiating Health Care Delivery Systems 58-66		(2) 5.58,65	(3) 5.58-59,62			(2) 5.65,66	(4) 5.60, 63-65		(1) 5.61	12
	DOMAIN 6: Monitoring and Ensuring the Quality of Health Care Practice 67-69			(3) 6.67-69						(1) 6.68	4
	DOMAIN 7: Culturally-Sensitive Care 70-75							(3) 7.71-73		(5) 7.70-71, 73-75	8
2006 MSN/NP CC per area (shown in table)		3	8	8	3	9	4	13	1	38	
2006 DNP NP CC per area		SF1,2	L 1,2,3	QI 1,2,3	PI 1,2,4 (no#3)	TIL 1,2,3	P 1,2,3	HDS 1,2,3,4	E 1	IP 1,2,	

Appendix L

Glossary

Baby Boomer: American citizens born between the years of 1946 -1964

Doctor of Nursing Practice (DNP): A terminal doctorate degree for nursing practice. It is a practice-focused degree, rather than a research-focused degree (PhD).

Geropsychiatric Nursing: Practice includes holistic support for and care of older adults and their families as they anticipate and/or experience developmental and cognitive challenges, mental health concerns and psychiatric/substance misuse disorders across a variety of health and mental health care settings. GPN practice is based on expert knowledge of normal age-related changes and common psychiatric, cognitive and co-morbid medical disorders in later life. Promotion of mental health and treatment of psychiatric/substance misuse and cognitive disorders emphasize strengths and potentials; integrate biopsychosocial, functional, spiritual, cultural, economic and environmental factors, and address stressors that affect mental health of older adults and their families.

Geropsychiatric Nurse Collaborative. Initiated in 2008, a collaborative network of nurse leaders in the field of geriatric mental health whose purpose is to advance the knowledge base and training of nurses with regards to the mental health needs of older adults.

Geropsychiatric Nursing Competency Enhancements (GPNCE.PNP): Nursing competencies specifically related to geriatric mental health.

Master of Science in Nursing (MSN): Master of Science in Nursing (MSN) is an advanced-level postgraduate degree for registered nurses.

Nurse Practitioner Core Competencies (NP Core Competencies): Combined Master's and DNP competencies, guidelines for educational programs preparing NPs to implement the full scope of practice as a licensed independent practitioner; essential behaviors of all NPs. expanding knowledge into practice and function in a changing health care environment.

National Organization Nurse Practitioner faculty (NONPF): Provide timely and critical resources for NP educators, advancing innovative models that support NP educational programs to meet the highest quality standards.

Older adults: American citizen age 65 +

Psychiatric Mental Health Nurse Practitioner (PMHNP): Advanced practice nurse practitioners, educationally prepared at the Masters level of training, specializing of mental health across the life span.