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doi: https://doi.org/10.57709/17798450

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Assessing Professional Self-Perception of Nurses in Mongolia

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Abstract

Background: Education and professional development empower nurses by increasing their competencies and professional self-perception. Positive self-perception and professional perception impact patient outcomes, as well as job satisfaction and retention. The use of clinical pathways has been shown to improve patient outcomes and are used as a tool of education in the care of patients with various diseases and undergoing procedures. There was concern among hospital leadership in Mongolia that nurses may have poor professional self-perception and poor public perception. Poor professional perception when paired with infrequent use of clinical pathways could impact patient health outcomes. Mongolia has a very high rate of deaths from coronary artery disease, a non-communicable disease. Research is limited on the use of clinical pathways to educate and improve competencies of nurses in Mongolia.

Purpose: This Doctor of Nursing Practice Project aimed to answer the Clinical Question: Would the use of a clinical pathway translated into the Mongolian language for the care of a patient undergoing percutaneous coronary artery angioplasty improve the self-perception of hospital-based Mongolian nurses in Ulaan Bataar?

Methods: A quasi-experimental longitudinal panel study was used to assess pre-intervention, post-intervention, 3 months post-intervention and 6 months post-intervention using the Nursing Professional Values Scale – Three (NPVS-3). A convenience sample of nurses were recruited from 5 hospitals in Ulaan Bataar.

Results: Mongolian nurses scored in the top quartile indicating positive professional self-perceptions. There was a statistically significant increase in the scores following the educational intervention. There were no statistically significant correlations between demographic factors and the scores. Though not requested to do so, 71% of participants shared the information with a

combined total of 497 other nurses. When asked directly, 93% of participants indicated additional education would improve their professional self-perception.

Conclusion: Implications of this study for nursing practice can be globally far-reaching as a way to assess professional self-perception and guide additional educational opportunities for nurses in Mongolia and in other lower-middle-income countries. Even in countries with limited technical, structural, financial or human resources, education can improve nurses' professional self-perception and thus improve nursing job satisfaction, increase retention, and improve patient safety and outcomes. As Mongolia builds more cardiac catheterization labs, it is imperative for nurses to be stronger in their competencies in caring for this patient population, leading to improved nursing professional self perception.

Keywords: nurses, Mongolia, self-perception, self-concept, competency, middle-income countries, attitudes, clinical guidelines

Professional Self-Perception of Nurses in Mongolia

On a teaching trip in Mongolia by a team of nurses from the United States, a request was made by the Chief Medical Officer of a hospital to improve the way Mongolian nurses perceived themselves and how the public perceived them. Professional self-perception for nurses can range from the perception of literally having the power to saves lives to the opposite perception of just being a laborer working in a very difficult environment (Ha, 2017). Further, a nurse's positive professional perception reflects a nurse's self-perception and empowerment (Ha, 2017).

For background, Mongolia was established by Chinghiss Khan in 1206. It is a land-locked country more than twice the size of Texas situated between Russia to the north and China to the south. Politically, Mongolia was under Chinese rule and then Russian and Communist rule since 1924. When the USSR was dismantled in 1990 approximately one third of financial sources disappeared immediately (East Asia/Southeast Asia: Mongolia – The World Factbook). In 2020, Mongolia was designated as a lower middle-income country by the World Bank with a gross national income (GNI) of $1,026 to $3,995(USD) per capita. (World Bank, 2020). Mongolia can be compared with other lower middle-income countries, such as the Republic of Moldova (World Bank, 2020) which also became independent of the USSR. Nurses there have also struggled considerably with self-perception and public-perception (Ganz, 2010). There has been no research on Mongolian nurses' professional self-perception.

According to the World Health Organization (WHO), Mongolia has a population of three million people but is ranked 14 out of 183 countries in death rates from cardiovascular disease (CVD) (WHO/Mongolia, 2017). The average life expectancy of 69.6 years and is lower compared to other countries (World Bank, 2018). The total expenditure on health per capita in

2014 was $565, compared to per capita spending in wealthy countries of $4,246 in the United Kingdom and $10,224 in the United States (Health Systems Tracker, 2018). Concerns of low quality care, limited human resources, poor working environments, and inadequate training with insufficient continuing education for healthcare professions have been cited for Mongolia (Asian Development Bank 2014).

Medical facilities are seeing some improvements, and the third cardiac catheterization lab in the country is scheduled to open in 2020. These cath labs will provide nurses the opportunity to make a significant difference in patient outcomes. Mongolian nurses are positioned to make a great impact on lessening the burden of CVD, a non-communicable disease, in Mongolia. Equipping Mongolian nurses with the knowledge and skills to care for and educate this patient population is vital.

The rise of non-communicable diseases (NCDs) such as CVD to be a global health threat. Fortunately, research has found nurses to be quite effective in educating and helping decrease risk factors and in administering disease management programs. However, limited knowledge and practice environments were identified as barriers to nurses reaching their full potential in addressing the NCD crisis (DeCola et al., 2012).

With limitations in education, experience, mentorship, equipment, and opportunities for continuing professional development, the role of a Mongolian nurse was observed by this author to be difficult. These difficulties influence clinical performance, job satisfaction, and the quality of care (Varaei, Vaismoradi, Jasper, & Faghihzadeh, 2012; Tzeng, 2006). The description of how nurses perceive themselves is the compilation of an individual nurse's thoughts, principles, perceptions, expectations and experiences. Milisen describes how the nurse's professional attitude frames the specific skills that impact patient care as instrumental-technical, intellectual-

cognitive, organizational, social and communicative (2010). It is important to recognize self-concept is closely related to professional self-concept (Hoeve et al., 2014)("Vision," n.d.).

Providing education using evidence-based clinical pathways can eliminate barriers to Mongolian nurses reaching their full potential and to improve their self-perception as nurses. This is a pivotal time for working with international nurses. Organizations such as Sigma Theta Tau International Honor Society and the global Nursing Now campaign recognize the increasing role nurses play in the future of global health. Effective January 1, 2020, 2020 has been declared the Year of the Nurse. The aim of this campaign is to "improve health globally by raising the profile and status of nurses worldwide – influencing policymakers and supporting nurses themselves to lead, learn and build a global movement" (Vision, 2018). WHO Director-General Dr. Tedros Adhanom Ghebreyesus stated, "Nurses and midwives are the backbone of every health system: in 2020 we are calling on all countries to invest in nurses and midwives as part of their commitment to health for all" (WHO Campaigns/Year of the Nurse and Midwife, 2020).

Clinical Question

The Clinical Question for this project was: *Would the use of a clinical pathway translated into the Mongolian language for the care of a patient undergoing percutaneous coronary artery angioplasty improve the professional self-perception of hospital-based Mongolian nurses in Ulaan Bataar?* The aim of this DNP Project was to assess the professional self-perception and values of nurses in Mongolia, and to determine if an educational intervention utilizing a clinical pathway would improve knowledge and competencies as a method of improving the self-perception of Mongolian nurses.

Change Theory

The purpose of this writer's DNP Project was to develop and evaluate the effectiveness of an educational intervention that will provide sustainable improvements in Mongolian nurses' knowledge, competence, and empowerment, as well as patient outcomes. For this project the Model for Improvement of the Institute of Healthcare Improvement (IHI) will be used, involving the Plan-Do-Study-Act (PDSA) cycle (*Institute for Healthcare Improvement*, n.d.-a). The CBPR model can be summarized in the following statement, "The ultimate goal is to enhance a group's ability to address important health issues through the development of effective interventions that can be maintained over time, that acknowledge the community as the primary unit of identity, and that enhances and builds on the existing strengths and fosters a collaborative relationship" (Weiner & McDonald, 2013, p. 2). It is considered to be transforming and is described as "leading to further action through which people cease to see their situation as a 'dense, enveloping reality or a blind alley' and instead as 'an historical reality susceptible of transformation'" (Baum, MacDougall, & Smith, 2006, p. 856). The model itself is described more as circular than linear, and iterative, similar to the framework of Institute for Healthcare Improvement's Plan-Do-Study-Act (PDSA) (*Institute for Healthcare Improvement*, n.d.-b). The CBPR framework was selected as it recognizes the unique perspectives and strengths that key stakeholders bring to a problem (*CCPH - Community-Based Participatory Research*, n.d.). This collective approach increases responsibility and ownership, enhances how the problem is understood, and integrates the knowledge gained with action for improvements, including procedures and policy changes (Israel, Schulz, Parker, & Becker, 1998).

The model is made up of phases that progress in sequence from forming the partnerships between investigator and group, designing and conducting the intervention, collecting and

interpreting the data, and sharing it with the group. The final phase consists of translating the findings and disseminating them, which begins the next iterative cycle again of now re-assessing the strengths and dynamics of the community or group ("Detroit URC," n.d.).

Promoting collaborative and equitable partnerships, having mutual respect and recognition of the knowledge, expertise, and resource capacities of the participants, and investing in the building of the relationship should be considered as wise investments with the dividend of a strong foundation of trust on which future endeavors can be built (Minkler & Wallerstein, 2011). Perhaps the most important concept of this CBPR framework in order to lay the foundation for a strong and continuing relationship is the careful attention to the difference in approach to the intervention and the acute awareness of the differences in the groups, whether it be in resources, available education, wealth, socio-economic status or differences in access to resources of healthcare (Detroit URC, n.d.).

CBPR is based on group dynamics of cultural humility, defined as "the ability to maintain an interpersonal stance that is other-oriented (or open to the other) in relation to aspects of cultural identity that are most important to the person" (Waters & Asbill, 2013, p. 1). By enhancing and building on existing strengths of the project site, research based on this model can be used to assist the group in addressing health issues and developing sustainable interventions thus strengthening the relationship for further collaborations (Weiner & McDonald, 2013). These researchers also discovered an ethical issue that is critical to consider when working with nurses in developing countries, such as Mongolia. It has been described as "casting the community in a negative light that can be damaging to the community or could weaken the community's trust in the process" (Holkup, Tripp-Reimer, Salois, & Weinert, 2004, p. 168). They continue with the

foundational statement to always be aware that "the interpretation (or cultural misinterpretation) of the data could depict the community in a negative manner" (2004, p. 168).

There is proven success in this framework, but it must line up with the Essentials of the DNP. Consider how using the CBPR framework reflects the following DNP Essentials. As to Number One: Scientific Underpinnings for Practice, the CBPR framework allows for the integration of scientific knowledge in the setting of a strong partnership. Much consideration is given throughout the iterative model of assessing, identifying phenomena, designing and conducting the intervention, interpreting the data, and disseminating the findings to become actionable, evidence-based practice (AACN, 2006). As to the last scientific underpinning of developing and evaluating new approaches based on nursing theories and theories from other disciplines, CBPR has its foundations in education and the development of Participatory Action Research by Kurt Lewin, known as the "founder of social psychology" and as the developer of Lewin's Change Theory ("Kurt Lewin | American social psychologist," n.d.). Furthermore, CBPR can also be applied to several other DNP Essentials, including Organizational and Systems Leadership for Quality Improvement and Systems Thinking, Clinical Scholarship and Analytical Methods for Evidence-Based Practice, and Interprofessional Collaboration for Improving Patient and Population Health Outcomes. The CBPR model can be used as a tool to help enhance the practice of the many forms of participatory health research as it includes the community, or clinical setting in the development that incorporates their experiences, culture, and values in the intervention and goals (Oetzel et al., 2018).

In conclusion, the CPBR model as a framework is selected for this DNP Project as it best reflects guidelines to foster a long-term relationship that will be beneficial to the community defined here as nurses in Mongolia. CBPR is built on mutual respect and recognition of the

value of the knowledge, expertise, and capacities of these nurses. Change is determined in a democratic versus autocratic manner. It is grounded in cultural identity and humility. It is hoped that this can be the foundation of years of reiterations to address additional concerns expressed by the Mongolian nurses as they build their professionalism and practices. Interventions can be decided on and implemented as tests of change. It is action-based and oriented to lead change. Tools can be researched for improvements. Data can be collected and shared with the ultimate benefit of the gained knowledge impacting the Mongolian nurses, not the researcher. The successful outcome can be measured as Mongolian nurses learn from the process and continue to implement changes to benefit their professionalism as nurses.

Review of the Literature

A literature search was established using the PubMed, Cochrane Library, CINAHL, and Psychinfo databases. The professional organization, Sigma Theta Tau, was also searched. As for government agencies, the search included the Central Intelligence Agency. For international perspective, the following organizations were searched: The World Health Organization, The World Health Organization Western Pacific Region Nursing Databank, The World Bank, Asian Development Bank, and the United Nations. Reference lists of discovered articles were also incorporated.

The search terms used included: *nurses, Mongolia, self-perception, competency, middle-income countries, attitudes, and clinical guidelines*. The search was limited to evidence published between 2008 and 2019 with the additional filter of the English Language. The age of the participants was also limited to adults as an inclusion criteria.

Initial searches identified 165 articles. Following pre-screening of all identified titles and abstracts for relevance, 77 articles were retained for detailed evaluation. Through review of

bibliographies of retained articles, 4 additional studies were identified. A total of 60 articles were critiqued resulting in a total of 25 articles selected for quality assessment. Further chosen from these articles were 14 which were included.

These studies were appraised based on the Johns Hopkins Nursing Evidence-Based Practice Guidelines which utilize five levels of evidence. Level I is the strongest level of evidence and includes experimental studies, randomized controlled trials (RCT), systematic reviews of RCTs, with or without meta-analysis. Level II includes quasi-experimental studies and systematic reviews of a combination of RCTs and quasi-experimental, or quasi-experimental studies only, again with or without meta-analysis. Moving down, Level III includes non-experimental studies, systematic reviews of a combination of RCTs, quasi-experimental and non-experimental, or non-experimental studies only, with or without meta-analysis. It also includes qualitative studies or systematic reviews, with or without meta-analysis. The two lowest levels in the hierarchy are Level IV and Level V. Level IV is the stated opinion of respected authorities and/or nationally recognized expert committees based on scientific evidence and includes clinical practice guidelines and consensus panels. Finally, level V is based on experiential and non-research evidence. It includes literature reviews, quality improvements evaluations, case reports and the opinions of experts who are nationally recognized based on their experiential evidence (Dearholt, 2012).

Of the studies included for this project, one was Level I (Hybrid: systematic review to identify qualitative studies, theory-led, structured analysis of data, and systematic review of qualitative studies); One study was a Level II (quasi-experimental); Eleven were Level III (cross-sectional studies, convenience sample studies with semi-structured interview, qualitative studies

with semi-structured interviews, structured surveys, qualitative longitudinal studies, and Q-methodology studies); and one was Level V (an integrative literature review).

Synthesis of the Literature

A cross-sectional study of Mongolian nurses (n=168) questioned the physical assessment skills of nurses and midwives. The results indicated that although most had over ten years of experience, the majority could not perform 50% of the 28 expected procedures. This led to the conclusion that training for nurses and midwives in all areas was needed (Akao et al., 2013). Of note, this need was discussed more recently in the following statement of other low-income and middle-income countries, “Quite often we see that nurses and midwives are alone out there, having to manage enormous workloads and needing support. And so, a lot of our work is trying to get them the latest evidence-based information and bringing them new tools they can adapt to work within the context of their countries” (Collins, 2017, p. 68).

Another study was a phenomenological qualitative study with semi-structured interviews including Mongolian nurses (n=40) of implementing a clinical guideline to improve knowledge of nurses caring for Mongolian patients with diabetes and hypertension. These nurses described the guidelines as the very first practical tool introduced to them that was explicit and useful. (Chimeddamba et al., 2015).

The only other study of nurses in Mongolia found in the literature was aimed to explore the level of quality of nursing care, nursing competency and nursing practice environment. It concluded that nurses able to work in a positive working environment and nurses with more competence were better able to provide good patient care. (Gaalan.K, Kunaviktikul, W. Akkadechanunt, T., Wichaikhum, O.-A., Turale, S., 2019).

A structured survey designed by the International Council of Nurses described the potential impact of 13 million nurses world-wide on non-communicable diseases if they were permitted to practice at their fullest potential. This study represented 1600 nurses from 8 countries: Jordan, Malta, Panama, the Philippines, South Africa, the United Arab Emirates, the United Kingdom and the United States. Eighty-three percent of nurses surveyed stated gaining knowledge and access to patient educational materials are very important. Even more nurses strongly desired to use their knowledge to educate the people of their countries on NCDs (DeCola et al., 2012).

Emeghebo related knowledge as a major theme in the perception of nurses (n=13) in the United States concluding that the level of nursing knowledge relates to self-confidence and fear of failure, tying in the concepts of knowledge and self-perception of nurses (2012). In their descriptive exploratory design of qualitative data, Erkus and Dinc describe the influence education and professional experience have on nurses' professional self-worth in Turkey (n=309) (2018), another middle-income country (*Middle Income Countries*, n.d.). A convenience sample of nurses (n=85) in Iran was represented in a qualitative descriptive study. Again, the evidence supports the negative relationship between self-perception and patient safety with improved opportunities for nurses through education and further professional development as a needed intervention on several levels (Atefi et al., 2014).

Research of international nurses continued with a study of nurses (n=16) in Vietnam, a lower middle-income country (*Middle Income Countries*, n.d.). This qualitative longitudinal study was intended to discover how the attitudes and perceptions of nurses changed after an educational intervention. The nurses' reflections brought out themes including their pride as nurses as it related to personal and professional training. The authors felt further research is

required to determine the impact of educational interventions in the long-term (Gallagher et al., 2017). Of note, the authors of this study also cite the United Nation's Human Development Report as indicating workforces with improved standards of care and thus improved sense of pride can result from improvements through educational interventions such as the one described in this research (| *Human Development Reports*, n.d.).

Findings from a Q-methodology designed study (n=44) in Korea determined that nursing education programs should be developed to improve how nurses perceive themselves and their profession (Ha, 2017). In a similar study with Japanese nurses, the translation of an end of life program had an empowering effect on nurses (Takenouchi et al., 2017). This research added to prior knowledge that nurses' perceptions of their profession cover a wide range from the perception of literally having the power to save lives to being just a laborer working in a very difficult environment.

A recent qualitative study in Greece further explored this concept. The relationship between a nurse's self-concept and professional role is so strong in fact, that they cannot be separated. The purposeful sample of nurses (n=16) demonstrated that these self-perceptions are related to the quality of patient care as well as job satisfaction and retention (Karanikola et al., 2018). Implications are that supporting a nurse's education and experience will lead to empowerment and improved self-concept and is critical to enhancing the professional role.

There are few studies that discuss the exact strategies for empowering nurses professionally. Sepasi, Borhani, and Abbaszadeh (2017) raise the question of how to develop the process of nursing professionals gaining power in their qualitative study using the grounded theory approach with 15 nurses in Iran serving in different positions up to nurse members of the Board of Directors of the Iranian Nursing Organization. The themes that emerged support that

power can be achieved from knowledge and practice. Specifically, findings support that access to knowledge and the recognition of the specific nursing skills required for the profession lead to more confident nurses who are better able to provide a higher quality of care.

Considering this question of how to develop nurses in low- to middle-income countries, it is important to evaluate the contributions made by nurses volunteering for short-term trips to various countries. Dawson, Elliott, and Jackson (2017) conducted an integrative review of the literature and concluded that more research is needed to identify services provided specifically by nurses and the benefits to the nurses based in these countries where volunteer work is done (2017).

One study with nurses in Nepal most closely resembles the design that was used for this DNP Project. Shrestha and colleagues utilized a quasi-experimental design with time-series pre-test and post- test to determine the effects of an educational intervention related to neonatal care on nurse's knowledge and competency (Shrestha, Petrini & Turale, 2013).

Summary and Applicability in Practice

The collective evidence suggests the views of nurses' self-concept and professional self-concepts, the impact of education on these self-concepts and resulting patient outcomes, and empowerment through education play a critical role. Studies in Mongolia, Iran, Turkey, Korea, Japan, Nepal, Vietnam, Greece and the United States were appraised. In addition, DeCola et al. (2012) were able to gain substantial information through their survey of nurses in Jordan, Malta, Panama, the Philippines, South Africa, the United Arab Emirates and the United Kingdom. Synthesis of research studies included information from nurses in 16 different countries in order to have a broad base of evidence for the work planned for nurses in Mongolia. Cowin's quote is timeless and has no geographical boundaries. "For a profession that is required to be not only

technically expert but also psychologically oriented to care for people, any knowledge relating to nurses' self-concept will be crucial for the continued development and growth of the profession" (2001, p. 316).

There are no recent studies on the image of nursing from the perspective of nurses (Emeghebo, 2012). Further studies using the Nurses' Professional Value Scale-Revised, as well as other culture-specific instruments are necessary (Erkus, 2018). Additional research is necessary in order to determine the impact of educational interventions in the long term, particularly those made by international nurses traveling to low- and middle-income countries (Gallagher, 2017). Finally, there are few studies based on strategies for improving the self-concept and empowerment of nurses in their professional roles (Sepasi, Borhani, & Abbaszadeh, 2017).

This DNP project specifically addresses the nursing professional self-perception of nurses in Mongolia, for the first time, as a baseline and determines if an educational intervention improves professional self-perception. Further, the demographic information requested of the participants can be evaluated and compared to the scores to determine further implications for interventions. Based on this information, recommendations will be made to key stakeholders to improve professional self-perception and to use these perceptions as building blocks to improved patient safety and outcomes, as well as to strengthen the profession of nurses.

The rationale for this intervention is three-fold. Primarily the intervention is an opportunity to assess the professional values and perceptions of Mongolian nurses, for the first time in the literature. Further, it is an opportunity to investigate variables which may impact professional values and see if an educational intervention might improve these professional self-perceptions. Finally, this teaching was specifically requested by the Chief Nursing Officer of the

project facility in order to better prepare and equip her nursing staff on a new population of patients undergoing procedures in the cardiac catheterization lab when it opens. As this intervention is based on Community Based Participatory Research, this will help guide further planning for education for nurses in Mongolia as well as in other lower middle income countries.

Methodology

Ethical Considerations

Research approval was obtained from the Georgia State University Institutional Review Board. Study permission was obtained from the project site. All participants completed informed consent prior to participation. All written materials were translated into the Mongolian language by certified translators and all verbal instruction was interpreted by medical translators.

Participants

The Chief Nursing Officer (CNO) of the project site invited nurses from five of the adult hospitals in Ulaan Bataar to join the education sessions. A total of 104 nurses attended the training and were eligible to participate. The target sample size was 200. Potential participants were screened for eligibility to participate by confirming they were nurses. Of those attending, 67 participants signed consents. Eligibility criteria were currently employed as a nurse; caring for adult patients who could potentially be required to cross-cover for nurses caring for patients after coronary angioplasty at some point; male or female, over the age of 18. Physicians or other staff members were excluded.

Setting

The project site was a privately-owned hospital located in Ulaan Bataar, the capitol city of Mongolia. It is the only Joint Commission International accredited hospital in the country. This hospital opened in 2014 and has an inpatient bed capacity of 91 with the capacity to receive

5,000 inpatients annually. It provides the following inpatient services: general medical and surgical, labor and delivery, intensive care, and emergency care, including medical evacuation services. An outpatient clinic is attached to the hospital. The hospital had been scheduled to open a cardiac catherization lab, the third lab in the country. As part of a needs assessment, the Chief Nursing Officer (CNO) requested education for the staff and was welcoming of this education as part of a DNP Project. The intervention was held in a large classroom near the Administration offices.

The Nursing Professional Values Scale-Three Tool

The Nursing Professional Values Scale-Three (NPVS-3), developed by Darlene Weis, PhD, RN and Mary Jane Schank, PhD, RN, was used (Weis & Schank, 2017). Permission was received to use this tool from the author through 2020. It consists of a total of 28 Likert-type items rated with a score of 1-5, where 1 = not important, 2 = somewhat important, 3 = important, 4 = very important and 5 = most important. Possible NPVS-3 scores range from 28 to 140 with a higher score indicating a stronger professional value orientation. The factors of this tool are professionalism, caring, and activism. The Cronbach's alphas are stated to be 0.942, with the factor subscale scores ranging from 0.70 to 0.85. Thus the tool is considered valid and reliable (Weis & Schank, 2017). It was translated into the Mongolian language by Certified Language Translators.

Of note, this tool is the third version of the Nursing Professional Values Scale (NPVS), originally developed in 2000 (Weis & Schank, 2000). The second version was the Nursing Professional Values Scale – Revised (NPVS-R) (Weis & Schank, 2009) which has been tested in several international settings, including Korea (Moon, Kim, Kim, Kim, & Lee, 2014), Turkey (Kantek, Kaya, & Gezer, 2017), (Geçkil, Ege, Akin, & Göz, 2012) , Spain (Basurto Hoyuelos et

al., 2010), and Iran, (Poorchangizi, Farokhzadian, Abbaszadeh, Mirzaee, & Borhani, 2017). This will be the first time this updated tool will be used in any low or middle income country such as Mongolia. Of note, there is also a gap in the literature regarding the implementation of the ANA Code of Ethics in lower middle income countries. One researcher in Iran stated the importance of countries developing their own national nursing code of ethics as one that can provide culturally appropriate guidance as well as making ethical decisions more closely related to their backgrounds (Zahedi et al., 2013). Until such time, these countries can learn from the ANA Code of Ethics as a guide. Demographic questions were also included to gather data on the nurses, including their age, marital status, how long they had been a nurse, if they had a family member who was a nurse, what was their level of education, what was their current role as a nurse, was nursing their first career choice and if not, what was. Also included was an open-ended question of why they became nurses.

The post-intervention survey also added the following questions: Since they attended the class had they had the opportunity to care for a patient from the catheterization lab and if so how many (response rates to this question would be very low as there are only two hospitals currently in the country with catheterization labs); was the information learned in class helpful; was the information learned in the class shared with other nurses who were not able to attend the class; did they feel the class would help them be a better nurse; and did they think additional education will improve how they perceive themselves as nurses. For the sake of further collaboration with the CNO and to direct further teaching trips, the last open-ended question was a request for them to list other topics in priority they wished to learn about.

Intervention and Data Collection

Upon meeting the eligibility criteria and completing informed consent, the participants were asked to complete a demographic questionnaire and the Nursing Professional Values Scale – Three (NPVS-3) (Weis, 2017). Following this, the participants completed a pre-training knowledge assessment questionnaire. The informed consent and all teaching materials were translated by Certified Language Translators. All verbal instructions were translated by a medically trained Mongolian and English speaker.

None of the questionnaires contained identifying information. The teaching sessions were conducted by the Student Investigator and were done live (face to face) with verbal translations with power point presentations and interaction with the nurses. The following topics were covered: introduction to the normal heart, coronary artery disease, different procedures conducted in the cardiac catheterization lab, and pre- and post-procedure care of patients undergoing angioplasty. Participants completed post-training questionnaires, immediately after the training, three months post training, and six months post training. Of note, this aggregate information will be shared with the facility upon completion of the project. The intervention was a four hour class on the care of the patient undergoing an procedure in the cardiac catheterization lab. All teaching materials were translated by Certified Language Translators. All verbal instruction was translated by a medically trained Mongolian and English speaker. Prior to arrival in-country, 230 packets were made and numbered. Each item in the packets had the corresponding number of the whole packet. This numbering was the only way to link pre- and immediate post-questionnaires and pre- and post-education testing at the training session. These were not linked to any personal information; no numbers were assigned to individual participants. The names of the participants did not appear on any data. Risk management

considered included potential for flight delays or cancellations. To mitigate this risk, the classes were not scheduled until two days after the in-country arrival date.

Each packet included the following: two copies of the informed consent (one to keep and one to sign and return), one copy of the NPVS-3 tool with demographic questions; one copy of the training pre-test; an instructional handout of a clinical pathway with an example of a pre- and post-procedural patient documentation form; and one copy of the training post-test in a sealed envelope to be opened after the education; and a second copy of the NPVS-3 tool be sealed in a separate envelope to be opened after the sealed post-test was completed.

After the nurses were assembled as a group, the Student Investigator (SI), through the help of the translator, described the package, explained the purpose of the study, reviewed the consent form, and offered a time for questions. The SI then instructed the nurses to sign the consent if they wished to participate or leave it blank if they did not wish to participate. In this way privacy was protected as all attendees received the same packet and all would return forms. Then the SI instructed the attendees who wished to participate in the study to complete the questionnaire, which included the demographic information, the NPVS-3, and the pre-training questionnaire. Those forms were collected by the SI and placed in a briefcase with a combination lock to which only the SI had the combination. No incentives were offered.

After these initial forms were collected, the training began. After the training, all those enrolled were instructed to open the separately sealed envelopes from their packets labeled NPVS-3 and Post-Education Questionnaire. Approximately fifteen minutes was allowed for this. At the conclusion of the training and completion of forms, the attendees were instructed to take their copy of the informed consent and the instructional handout. These items were printed on different color paper for clarity of instruction. All other items were collected by the SI. The

attendees were thanked for their participation, reminded of the timing of the follow up questionnaires and dismissed. This protected the privacy of those nurses who did not choose to participate in the research but did attend the education.

To determine if the intervention improved the nurses' professional self-perception and values, the same group of nurses was requested to complete a questionnaire including the NPVS-3 three months later, and six months later for longitudinal panel data. An announcement was made during the training regarding the request for these additional surveys and a flyer was given. Nurses were asked to complete them at the hospital. They were collected by a CITI certified research assistant, scanned into a computer and then all forms were sent from Mongolia to the SI through DHL Delivery Service. There were no names or identifying data on these paper forms. This data was evaluated to determine if a better understanding of the education and of the nurses' perceptions would change over time and with the opportunity to actually apply the knowledge in patient care. Even though it was learned that the cardiac catheterization lab at Intermed Hospital was not open and no Intermed nurses would have the opportunity to use this knowledge first-hand, there were other nurses from the two hospitals in Ulaan Bataar that actually do have a cardiac catheterization lab who would have experience caring for patients in this population after having received the training who will be a part of the six month longitudinal study.

Intervention & Data Collection

Components of Analysis

Key individuals involved in the analysis process were the Student Investigator, along with Dr. Raeda Anderson, Dr. Kimberly Hires, and Dr. Kenya Kirkendoll from Georgia State

University. Qualtrics and IBM SPSS were the statistical software used for statistical analysis. Statistical consultation was provided by PhD faculty with extensive expertise in statistics.

Statistical Tests

A longitudinal panel study with descriptive independent and paired samples t-test correlations with pretest and posttest measures was conducted. Analysis of variance (ANOVA) was conducted to evaluate overall NPVS-3 scores of each participant and as aggregates between the date of intervention pre-survey (T1) and immediately post-survey (T2), and as aggregate data on the same group at three months post-intervention (T3), and finally at six months post-intervention (T4). In addition, a direct question was asked to evaluate the self-reporting of professional self-perception following the intervention at T2, T3, and T4.

A considerable amount of qualitative and quantitative data were collected during the scope of this project to answer the project's clinical question. This original question was to determine if an intervention of education, including the use of a clinical pathway translated into the Mongolian language for the care of a patient undergoing procedures in the cardiac catheterization lab, would improve the professional self-perception of hospital-based Mongolian nurses in Ulaan Bataar, Mongolia. To answer that question and determine any correlations, the following data were collected: demographic data of the participants, a baseline scoring of the NPVS-3 (T1), a pre-test of understanding of the selected education material and a post-test to determine any improvement, and as this was a convenience example, an immediate post-intervention survey (T2) to determine any improvement in the professional values scale. The NPVS-3 was collected again at 3 months post (T3) and at 6 months post (T4) from the same nurses. A paired sample t-test was conducted at T1 and T2. Data was further evaluated to determine if age, motivation for choosing the nursing profession, length of nursing career, having

a family member that was a nurse, educational background, or membership in a professional nursing organization had any impact on the nurse's professional self-perception.

Of particular interest is the qualitative analysis of the question as to why the participant became a nurse. Colloquially, Mongolian nurses were said to sometimes have a lower professional view of nursing. For some nurses in Mongolia it was thought to be because they originally wanted to become physicians but did not score high enough on the entrance exam to be accepted into the government-sponsored medical school. This was endorsed in the data as 16% (9 of 56) of respondents indicated they had become nurses because they did not score high enough on the entrance exam. One respondent stated, "I didn't pass the test for medical school, so I will be a nurse and then try again." Another described their desire to become a physician, but their unexpected change of heart after becoming a nurse, "My primary choice was to become a doctor. I didn't have a high enough score to enter, but I fell in love with this profession." Of all of the responses, two themes emerged: Positive and Negative emotions around their choice. These were labeled as emotions of desire or disappointment.

When asked specifically why they became a nurse, the vast majority wrote of strong positive feelings for becoming a nurse. Consider the following responses, "I think this is one of the best professions you could ever have." Another nurse stated, "I wanted to be a nurse because nurses take care of the patients from their heart." And finally, "To give health through my care – that's why I became a nurse."

Demographic Results

A total of 104 nurses attended the intervention and met inclusion criteria. Of those, 67 signed consents to participate in the study. Unfortunately, many nurses arrived late to the class and were not present for the description of the project and subsequently unqualified to sign the

consent. As to the demographics, the ages varied in the following ranges: ages 20-30 (57%), ages 31-40 (23%) and ages 41-54 (21%). It is interesting to note that the retirement age for women in Mongolia is 55. The vast majority of participants' were female (98%). The majority were married (60%). Only 24% had a family member who was a nurse. This specific demographic question was included based on prior literature reviews (Varaei et al., 2012). As to education, 61% had a bachelor's degree in nursing and 30% had a proficiency level nursing certificate. A small minority had additional training as midwives (3%) and of the group, 10% stated they had graduate degrees. As to the years as a practicing nurse, the majority (42%) had practiced 5 years or less, 24% had practiced 6-10 years, 14% had practiced 11-20 years, and 18% had practiced for more than 20 years. The most common current nursing position was staff nurse (82%) followed by Nurse Manager or Director (2%), Nurse Administrator (2%) Nurse Educator (6%). A slight majority were members of a professional nursing organization (51%). To the question if nursing was their first career choice, only 66% answered yes. Of all participants, 16% indicated they became nurses because they did not score high enough on the entrance exam for medical school.

There were six questions added to the NPVS-3 surveys at three-month and six-month post intervention. When asked if they had had the opportunity to care for patients undergoing cardiac catheterization patients since the class, 29% indicated yes. When asked if the information learned in class had been helpful, 85% said yes. When the participants were asked if they shared the information with other nurses who had been unable to attend the class 71% said they had. A total of the follow-up write-in answer to the question of how many nurses they shared the information with in the last six months was 492. This indicates they not only felt it was interesting or helpful information, but also that it was important enough to share with their nurse

colleagues, a very inspiring fact to this researcher. Eighty-five percent indicated the class had helped them be a better nurse, and when asked if they thought this education would improve how they saw themselves as professional nurses, the vast majority (93%) stated yes.

Table 1: Frequency of Interview Themes by Positive and Negative Emotions

		N	%
Positive Emotions: Overall		34	61%
	Nursing is an Important Profession	3	9%
	Nursing is a Desired Profession	8	24%
	Nursing is Caring for Others	12	35%
	Very Strong Passion to be a Nurse	11	32%
Negative Emotions: Overall		10	18%
	Disappointment of Not Making Score to Attend Medical School	9	90%
	Decision Based on Pressure of Family	1	10%

Table 2: Questions following Post Education Test

Do you think additional education will improve how you see yourself as a professional nurse?			
	Yes	49	93%
	No	4	7%
Do you think this class will help you be a better nurse?			
	Yes	57	85%
	No	10	15%

Table 3: Demographic Characteristics of Study Participants

n=67	Demographic Characteristics	(%)
Age Note: Retirement age for women in Mongolia is 55	20-30 years	57%
	31-40 years	23%
	41-50 years	18%
	51-54 years	3%
Gender	Male	8%
	Female	92%
Married	Yes	60%
	No	40%
Family member a nurse	Yes	24%
	No	76%

Highest Level of Education Completed	Proficiency Level Nursing Certificate	30%
	Bachelor's Degree in Nursing	61%
	Midwife Training	3%
	Master's Degree in Nursing	3%
	Other	6%
How many years as a nurse	0-5 years	42%
	6-10 years	24%
	11-15 years	9%
	16-20 years	5%
	More than 20 years	18%
Nursing was first career choice	Yes	66%
	No	34%
Present Nursing Position	Staff Nurse	82%
	Nurse Manager or Director	2%
	Administrator	2%
	Nurse Educator	6%
	Other	6%
Member of a Professional Nursing Organization	Yes	51%
	No	48%

A write-in question was asked following the educational intervention regarding what other educational topics the participants would like to have provided. These responses were categorized as follows: Nursing care of specific patient populations (post-operative, obstetrical, cardiac, etc.) (64%); comparisons of Mongolian nursing standards with those of the United States and nurses internationally (11%); nursing administration (9%); nursing ethics (7%); information on specific disease processes and medications (7%); and finally, sub-specialties of nursing (4%). One nurse wrote, “I would want to take you around the hospital for a visit and based on the problems would like to have a lecture.”

Nursing Professional Values Scale – Three (NPVS-3) Results

Prior to final calculations, the external and internal validity of the results collected in Mongolia were found to be acceptable. Cronbach's α for the total scores were as follows: For T1 = 0.948; T2 = 0.973, T3 = 0.927; and T4 = 0.971. Individual factors of Caring, Professionalism, and Activism were also calculated for each time period with Cronbach's α scores ranging from 0.832 to 0.973. Of note, at T1 and T2 there were 67 participants who signed consents, however, not all completed each document totally. Also, as this was a Likert Scale tool completed with pen and paper, some participants selected more than one number on the scale resulting in that particular answer being disqualified. Therefore, calculations were based solely on those participants with complete data sets thus a lower N. At both T3 and T4 61 surveys were delivered back to the United States, however, not all data points were completed for each and calculations were based only on complete sets. Table 4 contains NPVS-3 scoring including possible ranges, Cronbach's α, minimum, maximum, and mean scoring, along with standard deviations at each time period as total score and factor scores. Table 4 outlines all results:

Table 4: Nursing Professional Values Scale - Three (NPVS-3) Scores

T1 (N=67)	Range	Cronbach's α	Min	Max	Mean	SD
Total	28 To 140	0.948	56	140	113.31	16.730
Caring	10 To 50	0.896	20	50	40.73	6.935
Activism	10 To 50	0.900	20	50	38.96	7.061
Professionalism	8 To 40	0.842	16	40	32.21	5.055
T2 (N=67)	Range	Cronbach's α	Min	Max	Mean	SD
Total	28 To 140	0.973	64	140	115.98	18.832
Caring	10 To 50	0.938	23	50	41.79	7.144
Activism	10 To 50	0.935	24	50	40.65	6.981
Professionalism	8 To 40	0.896	17	40	33.17	5.313
T3 (N=61)	Range	Cronbach's α	Min	Max	Mean	SD
Total	28 To 140	0.927	74	140	115.32	13.974

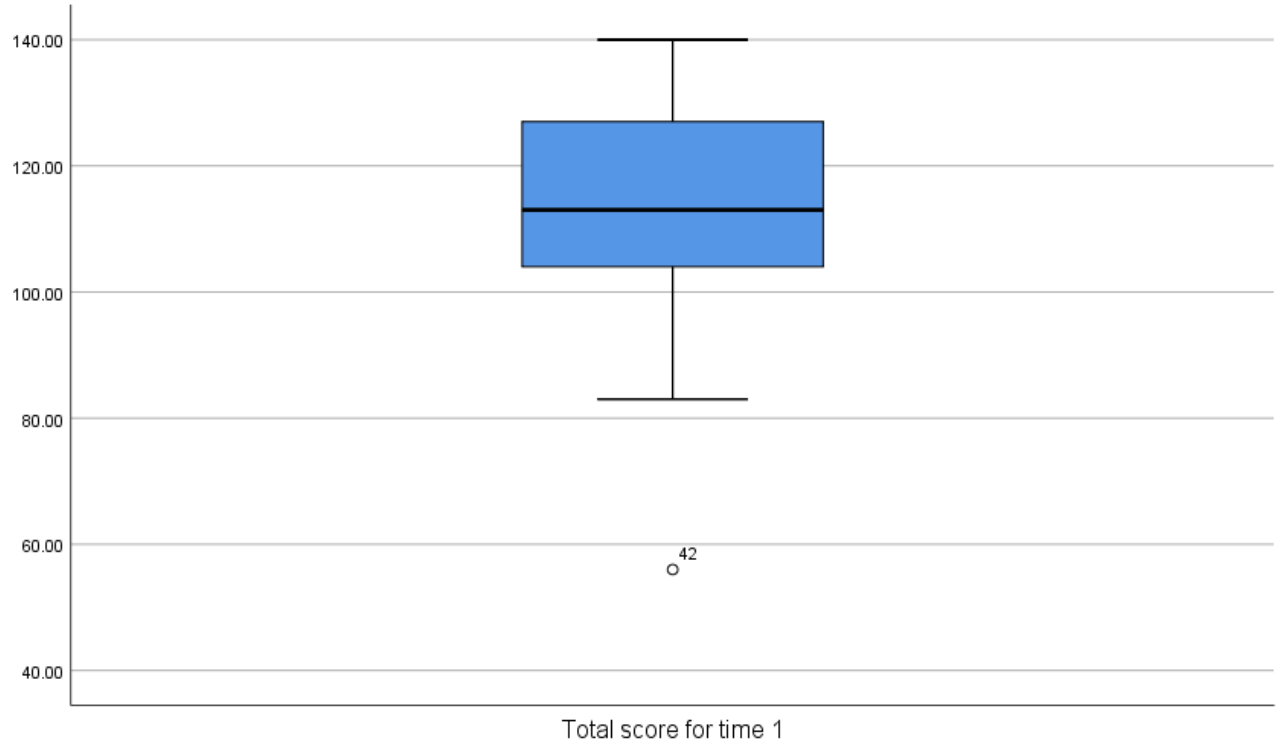
Caring	10 To 50	0.938	24	50	24.00	50.000
Activism	10 To 50	0.903	24	50	39.31	6.720
Professionalism	8 To 40	0.832	16	40	34.07	5.350
T4 (N=61)	Range	Cronbach's α	Min	Max	Mean	SD
Total	28 To 140	0.971	28	140	106.96	21.526
Caring	10 To 50	0.928	10	50	38.06	6.844
Activism	10 to 50	0.929	10	50	37.19	7.805
Professionalism	8 to 40	0.926	8	40	30.94	6.844

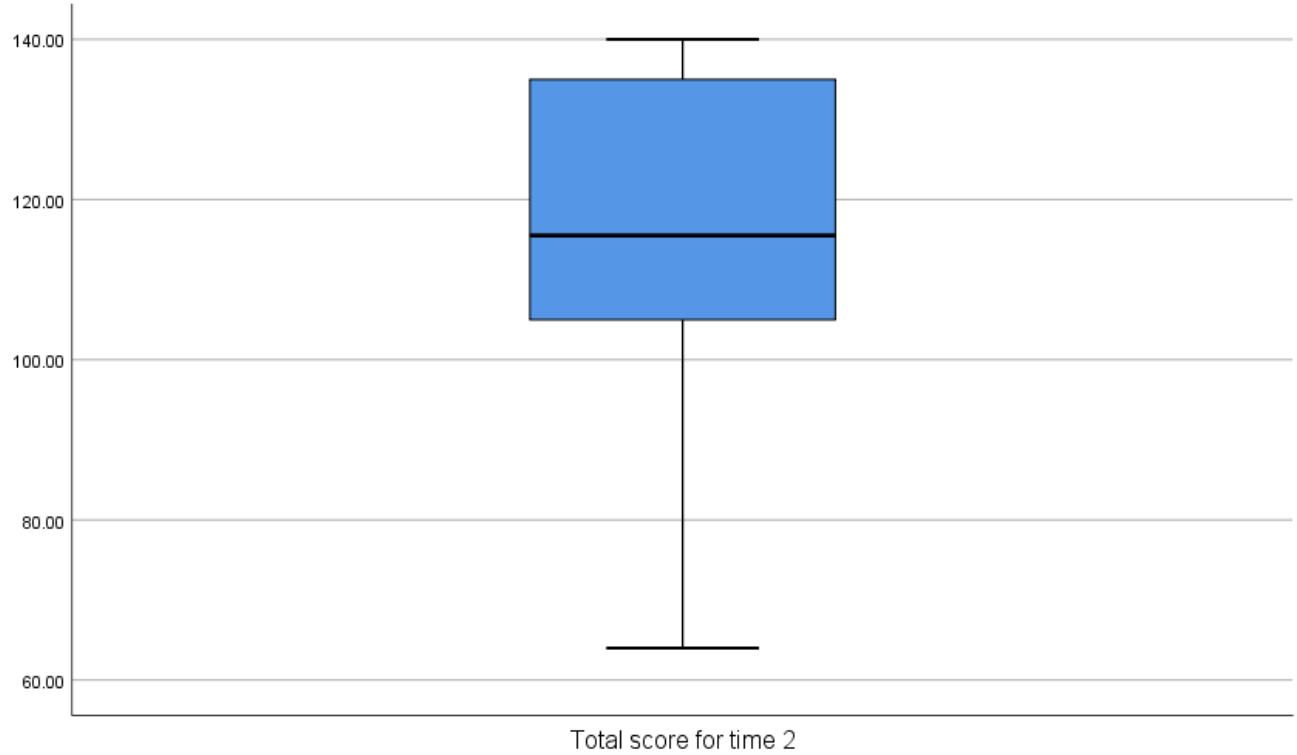
The NPVS-3 total score was used to determine a baseline assessment for the first time of the professional self-perception of nurses in Mongolia. The results could range from 28 to 140, with a higher score indicating a higher nursing professional self-perception. Quartile scores are as follows: 0-35; 36-70; 71-105; and 106-140. The mean total score at T1 fell into the top quartile at 113. This indicates that Mongolian nurses working in the capitol city hospitals actually had a higher professional self-perception than was first thought. Further scores were evaluated on each of the three factor scores that comprise the total score. For Caring and Activism, the nurses scored within the top quartile between 37.5 – 50 (42 and 41 respectively). Maximum scoring for the Professionalism factor was only 40, however the nurses scored in the top quartile of this factor as well (33).

Descriptives

			Statistic	Std. Error
Total score for time 1	Mean		113.3061	2.39760
	95% Confidence Interval for Mean	Lower Bound	108.4854	
		Upper Bound	118.1268	
	5% Trimmed Mean		114.1134	
	Median		113.0000	
	Variance		281.675	
	Std. Deviation		16.78318	
	Minimum		56.00	

	Maximum	140.00	
	Range	84.00	
	Interquartile Range	23.50	
	Skewness	-.689	.340
	Kurtosis	1.376	.668


140.00
120.00
100.00
80.00
60.00
40.00
42
Total score for time 1


140.00
120.00
100.00
80.00
60.00
Total score for time 2

To determine if the participating nurses' professional self-perception improved immediately following the intervention (T2), a paired samples t-test was conducted to evaluate the impact of the intervention on participant's scores on the Nursing Professional Values Scale – Three (NPVS-3). There was a statistically significant increase in the NPVS-3 scores from Time 1 (M = 111.65, SD = 17.58) to Time 2 (M = 117.65, SD = 17.58) t (33) = -4.02, $p < .001$ (two-tailed). The mean increase in NPVS-3 scores was 5.71 with a confidence interval ranging from -8.60 to 2.82. The eta squared statistic (.96) indicated a large effect size.

Descriptives

			Statistic	Std. Error
Total score for time 2	Mean		115.9762	2.90590
	95% Confidence Interval for Mean	Lower Bound	110.1076	
		Upper Bound	121.8448	
	5% Trimmed Mean		116.9418	
	Median		115.5000	
	Variance		354.658	
	Std. Deviation		18.83236	
	Minimum		64.00	
	Maximum		140.00	
	Range		76.00	
	Interquartile Range		30.50	
	Skewness		-.472	.365
	Kurtosis		-.138	.717

A paired samples t-test was conducted to evaluate the impact of the intervention on participant's scores on the Caring Factor of the Nursing Professional Values Scale – 3 (NPVS-3). There was a statistically significant increase in the NPVS-3 – Caring Factor scores from Time 1 (M=39.93, SD = 7.46) to Time 2 (M = 41.43, SD = 7.32 t(41) = -.216, p = 0.023 (two-tailed). The mean increase in NPVS-3 scores was 1.5 with a confidence interval ranging from -2.78 to -.22.

A paired samples t-test was conducted to evaluate the impact of the intervention on participant's scores on the Activism Factor of the Nursing Professional Values Scale – 3 (NPVS-3). There was a statistically significant increase in the NPVS-3 – Activism Factor scores from Time 1 (M=38.29, SD = 7.38) to Time 2 (M=40.98, SD = 7.09 $t(44) = -4.41$, $p < .000$ (two-tailed). The mean increase in NPVS-3 Activism scores was 2.69 with a confidence interval ranging from -3.92 to -1.46.

A paired samples t-test was conducted to evaluate the impact of the intervention on participant's scores on the Professionalism Factor of the Nursing Professional Values Scale – Three (NPVS-3). There was a statistically significant increase in the NPVS-3 Professional Factor scores from Time 1 (M = 35.52, SD = 4.85 T (41) = -3.10, $p = .003$ (two-tailed).

As there was no way to match the participants at three months and six months post intervention, independent samples t-tests were analyzed. There was no statistically significant difference among the waves p=.241 (CI=95%) or between the waves from T1 to T2 to T3 and T4. There was no significant increase in the total NPVS-3 scores from T1 to T3, $p = .575$, (two-tailed), which is >.1. And on comparison of the aggregate data between T1 and T4, there was no significant increase in the total NPVS-3 scores to indicate an increase in the nursing professional self-perception over time, p = .110 (two-tailed).

Descriptives

T1234_TOTAL

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	49	113.3061	16.78318	2.39760	108.4854	118.1268	56.00	140.00
2.00	42	115.9762	18.83236	2.90590	110.1076	121.8448	64.00	140.00
3.00	45	113.1778	13.84704	2.06419	109.0177	117.3379	87.00	140.00
4.00	46	108.6739	18.22459	2.68707	103.2619	114.0859	42.00	140.00

Total	182	112.7198	17.05835	1.26445	110.2248	115.2147	42.00	140.00

It is interesting to note the minimum aggregate scores between T1and T2 improved 8 points and then from T1 to T3 improved 19 points.

ANOVA

T1234_TOTAL

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1224.638	3	408.213	1.412	.241
Within Groups	51444.071	178	289.012		
Total	52668.709	181			

Multiple Comparisons

Dependent Variable: T1234_TOTAL

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) GROUP_T1234	(J) GROUP_T1234	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1.00	2.00	-2.67007	3.57483	.878	-11.9413	6.6011
	3.00	.12834	3.51008	1.000	-8.9749	9.2316
	4.00	4.63221	3.49014	.547	-4.4193	13.6838
2.00	1.00	2.67007	3.57483	.878	-6.6011	11.9413
	3.00	2.79841	3.64743	.869	-6.6611	12.2579
	4.00	7.30228	3.62824	.187	-2.1074	16.7120
3.00	1.00	-.12834	3.51008	1.000	-9.2316	8.9749
	2.00	-2.79841	3.64743	.869	-12.2579	6.6611
	4.00	4.50386	3.56446	.587	-4.7404	13.7482
4.00	1.00	-4.63221	3.49014	.547	-13.6838	4.4193
	2.00	-7.30228	3.62824	.187	-16.7120	2.1074
	3.00	-4.50386	3.56446	.587	-13.7482	4.7404

Data was further evaluated to determine any correlations between the professional values scale scoring and demographic information. Independent samples tests were evaluated for family history, professional nursing organization membership, level of education, nursing as first

career choice, gender, and marital status. Correlations tests were run to evaluate age and length of nursing career on NPVS-3 scores.

There was no statistically significant difference between the means of total T1 NPVS-3 scores and having a nurse as a family member (p =.222). There was no statistically significant difference between means of total T1 NPVS-3 score and membership in a nursing professional organization (p=.426). As to level of education, there was no statistically significant difference between means of total T1 NPVS-3 score and proficiency level of education and equal to or more than a bachelor's degree level of nursing education (p=.908). As 19% of participants stated they became nurses because they did not score high enough to enter medical school, it was of particular interest to determine any difference in professional self-concept of these nurses. It was surprising to note there was no statistically significant difference between means of total T1 NPVS-3 score regardless of if nursing was their first career choice or not (p=.565). Only 8% of the participants were male, and no statistically significance was found between the means of total T1 NPVS-3 score and the gender of the participants (p=.651). Finally, there was no statistically significant difference between means of total T1 NPVS-3 score and the marital status of the participants (p=.271).

It cannot be stated with good confidence that age or length of nursing career increased or did not increase participants' nursing professional self-perception. Ages of the nurses ranged from 20 to 54 and length of careers ranged from less than 5 to 20 or more. Based on these ranges, correlation tests were run to determine relationships. There was not a statistically significant relationship between the age of the participant and their total T1 NPVS-3 total score (p=.523). Similarly, there was not a statistically significant relationship between the length of the nursing career of the participant and their total T1 NPVS-3 score (p=.522).

Discussion

The clinical question for this project was: Would the use of a clinical pathway translated into the Mongolian language for the care of a patient undergoing percutaneous coronary artery angioplasty improve the professional self-perception of hospital-based Mongolian nurses in Ulaan Bataar? The aim of this DNP Project was to assess the professional self-perception of nurses in Mongolia, determine if an educational intervention on a clinical pathway would improve knowledge and self-perception of Mongolian nurses. In addition, the relationship between demographic information, such as age, length of nursing career, nursing as a first career choice, etc., and nurses' professional self-perception was also explored.

These findings answered the questions of this project. First, contrary to concerns shared, Mongolian nurses in this sample had a high professional self-perception. Following an educational intervention, the scores of the individual participants increased significantly. However, the group total scores between the time periods immediately after, three months after and six months after the intervention did not improve significantly. Further, differing demographic factors did not significantly affect how the nurses perceive themselves professionally, even if they had not wanted a career in nursing originally. Direct follow up questions at three months and six months, which were not a part of the NPVS-3 tool, indicated an average of 96% of participants believed additional education would improve their professional self-perception, and at six months 71% or participants indicated they had shared this information from the educational intervention with 492 other nurses who were unable to attend. By sharing this information, even without instructions to do so, this is an example of nurses sharing in, or participating informally in Community Based Participatory Research and it is a compelling reason to continue to work with nurses in Mongolia.

Considering the concern voiced about a low professional self-perception of Mongolian nurses, the finding of all the scores of the NPVS-3 scales indicating a top quartile scoring was unexpected. As it pertains to better patient outcomes, improved nursing satisfaction and decreased nursing turnover, this score is encouraging. Further, the concern voiced that nurses who became nurses not because they wanted to but because they did not make the grade to attend medical school was unexpected found to be false. Also, it was unexpected that the age, length of nursing career, or membership in a professional nursing organization did not indicate a higher professional self-perception.

Perhaps the most unexpected finding of this study was that nurses who had the opportunity to attend the educational session thought it important enough to share it with almost 500 other nurses. This merits further study as to how to best disseminate knowledge between nurses in an inpatient setting in Mongolia.

This project based in Mongolia concurs with prior studies indicating training for nurses in all areas is needed. Akao's study of nurses with more than ten years of experience indicated that although nurses had been in practice for that length of time, the majority needed significant additional training (2013). Of participant nurses in Mongolia, the majority had five years or less nursing experience and scored poorly on the pre-test. However, without the opportunity to work with this patient population, the majority would be considered novice nurses requiring more training.

This project also corresponds with others conducted in low and middle income countries which concluded there is a need for evidence-based nursing practice and the introduction of tools, such as clinical pathways that can be adapted to work within the context of each particular country (Collins, 2017). This educational intervention, including a clinical pathway and

recovery flowsheet in their language correlated with Collins' conclusion that providing new tools that can be molded to the context of the expected nursing care in their country provides much needed support (2017). The clinical pathway and tool used for this intervention had been officially translated into the Mongolian language and had been approved by a Mongolian cardiologist and the CNO to be appropriate for the scope of nursing care in their hospitals. To clarify, it would not be an expectation of a nurse in Mongolia to review labs or understand their implications and the need to confirm the physicians are aware of them, such as an elevated creatinine, for example, as would be expected in the US.

The Mongolian nurses were very pleased to receive these clinical guidelines and patient care flow sheets for this patient population. They were encouraged to make copies and share them. One prior study in Mongolia indicated a favorable response to the introduction of a clinical pathway for the care of outpatients with diabetes and hypertension. This study also confirmed that gaining knowledge and access to patient care and educational materials is important to the nurses (Chimeddamba et al., 2015).

The vast majority of Mongolian nurse participants indicated additional education would improve their professional self-perception and their competencies. This study correlates with prior research by the International Council of Nurses involving 1600 nurses from several countries, including other middle-income countries, that indicated 83% of nurses stated the importance of increased knowledge and access to patient education materials (DeCola et al., 2012).

The only other study of nurses in a hospital setting using this specific tool used a prior version, the Nursing Professional Values Scale -Revised (NPVS-R). It was translated into the Persian language and was used in a study conducted with a sample of 250 nurses working in a

hospital in Iran. The number of participants was four times that of this study in Mongolia. The similarities between the Iranian and Mongolian studies are they were both conducted in lower middle-income countries and with hospital nurses, not nursing students. Results of these studies indicated these nurses had a high professional self-perception, however, in this study a statistically significant relationship was observed between the NPVS-R total mean scores and nurses' age and work experience (Poorchangizi et al., 2017).

It is important to note, however, there were limitations to this study. For example, it was thought the timing of the intervention would coincide with the opening of the cardiac catheterization lab so the information and translated clinical pathways could be used immediately and the usefulness measured at three months and six months. The opening of the lab has been delayed by over a year. Nurses from the two hospitals that currently have catheterization labs were able to use this information and pathways immediately, but as there was no identifying information, it was impossible to connect any responses with these nurses. The sample size is also a limitation, and it only included nurses in the urban area. Perhaps the timing of the intervention was a limiting factor as well, as the traffic in Ulaan Bataar at that time of day was underestimated and many nurses were not able to arrive in time to sign the consent. However, one compelling point is that this is the first study to assess the baseline professional self-perception of nurses in Mongolia. Further studies are necessary to determine professional self-perception of Mongolian nurses practicing in the various provinces under different conditions.

Practice Implications

Drawing on the findings of this quality improvement project, nursing education – whether at the undergraduate level for nursing students or as continuing education for practicing nurses – is important to the professional self-perception of nurses in Mongolia. Further,

increased educational opportunities for nurses can lead to safer and better patient outcomes and ultimately decrease mortality in Mongolia from cardiovascular disease and other non-communicable diseases, such as hypertension and diabetes. As academic programs are improving for nurses in Mongolia, it is important to provide educational opportunities to currently practicing nurses in subject matter perhaps not covered in their curriculum. Nurses from the United States and other countries who have experience and who are experts in these areas can certainly stand in the gap in an active and focused way. Considering the relationships built through the Community Based Participatory Research (CBPR) and sharing the requests written in the survey of subjects they are requesting to learn more about, there is great potential for further scholarship development.

Four routes to be considered to accomplish this goal could involve the American government, the Mongolian government, private industry, as well as international nursing organizations. Considering the American government, grants can be written for more nurses from the United States to teach nursing in Mongolia either in the hospitals or in the school of nursing. Additionally, nurses can be deployed to work with the Millennium Challenge Corporation in their fight to decrease non-communicable diseases. The United States Ambassador to Mongolia can assist in coordinating additional educational opportunities between the United States nurses and the Mongolian nurses. Perhaps major organizations, such as the American Heart Association, could invest in the translation of their educational materials, both written and audiovisual, to be used in Mongolia. In addition, there is opportunity for nursing students to experience international nursing and the impact they can have on a global level through short-term trips or a semester abroad experiencing working alongside Mongolian nurses in the urban and rural hospital settings. The impact on the future of these nursing students from

the United States and the nurses and nursing students in Mongolia would be felt profoundly. Over 300,000 undergraduate students from the United States completed a semester abroad in 2017, but how many were nursing students? None studied abroad in Mongolia. On-line, long distance learning is clearly an option, however, this method does not build the personal, conversational, face-to-face relationships that are so important nor the "hands-on" learning experience in the clinical setting. Neither does it build camaraderie and shared professional self-perception.

Secondly, opportunities are available to work with the Mongolian government, particularly with the Mongolian Ministry of Health and the Mongolian Chief Nursing Officer. Discussions related to translations of additional nursing materials in the Mongolian language would be important. A formal program could be developed that could provide a full-day or full week course of continuing education training for currently practicing nurses, beginning in Ulaan Bataar, that could provide additional support in Mongolia's fight to decrease mortality from non-communicable diseases. In addition to printed materials, the cost would be limited to travel and housing expenses for the nurses arriving in Mongolia as well as Mongolian nurses invited to travel from the different provinces to train to become trainers. Expert nurses could complete at least annual "train the trainer" sessions, perhaps even including hands-on clinical training at hospitals with cardiac intervention capabilities. These trained Mongolian nurses could then be charged with sharing the knowledge in a formal, continuing education series with the rest of the nurses at their respective hospitals. These trained nurses could also become valuable sources of information on cardiovascular disease by sharing this knowledge in the outpatient settings and in their communities. This could also provide the public with an opportunity to see nurses as not only critical in their work in hospitals, but also of great value to the community as

knowledgeable educators and leaders of change in the healthcare outside the walls of the hospital. Recall that in this DNP Project, 71% of the participants shared the educational information with 497 other nurses without being requested to do so. Considering the impact of cardiovascular disease on the Mongolian population, certainly more education for nurses as they care for these patients and become agents of change as they educate their community is potentially quite staggering.

A third opportunity could be through relationships with private industries. For example, as new technology and medical equipment becomes available in Mongolia, such as the opening of the country's third cardiac catheterization lab, specific learning modules and curriculum can be prepared and shared with the nurses as these labs are being built. Perhaps the cost of this training could be provided by these companies as good will. Understanding the nursing aspects of this equipment and its implication to those for whom the equipment was purchased may inspire these international businesses to generosity. Perhaps this important educational training of the staff, including the nurses, could be considered a responsibility to be shared.

Finally, it is imperative to partner with international nursing organizations currently working to improve nurses and nursing care on the global stage. Organizations such as Sigma Theta Tau International, the International Council of Nurses, and the World Health Organization, Nursing Now, are exemplary in their collaborations. The opportunities to teach and elevate the professional self-perception of nurses in Mongolia clearly align with their current goals and themes supporting and elevating nurses to the respect and honor they so deserve.

The ultimate goal of this DNP project is to encourage and support Mongolian nurses as they continue to build this extraordinary profession, particularly in challenging situations with limited resources, whether technical, structural, educational, or financial. This researcher has

experienced the dedication and hard work of nurses in every province of Mongolia and has seen first-hand their heart and desire to give the best possible care to their patients, regardless of the challenges.

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Attachment: Pre and Post Educational Test

For the following questions, select ONLY ONE answer.

1. How often should vital signs be checked after the procedure?
   a. *Every 30 minutes x 4 then every 1 hour x 2 then every 4 hours until end of bedrest*
   b. Every 15 minutes x 4 then every 30 minutes x 2 then every hour until end of bedrest
   c. *Every hour x 4 until end of bedrest*
   d. *Every 30 minutes until end of bedrest*
2. Where exactly should pressure be held if bleeding from femoral artery site?
   a. Directly over the insertion site
   b. 2 fingerbreadths above the puncture site and on femoral pulse if palpable
   c. *2 fingerbreadths below the puncture site and on the femoral pulse if palpable*
   d. *2 inches above the puncture site*
3. How long will the patient have bedrest after femoral insertion site cath procedure?
   a. *1 - 2 hours*
   b. *2 – 4 hours*
   c. 6 hours
   d. *8 hours*
4. What is a retroperitoneal bleed?
   a. *Visible bleeding from the puncture site*
   b. Bleeding internally from the puncture site in the artery
   c. *Bleeding inside the GI tract*
   d. *Bleed in both lower extremities*

For the following questions, select ALL answers that apply.

5. How do you prepare a patient to go to the cardiac cath lab?
   a. *Make sure they have eaten recently and have had plenty of fluids to drink*
   b. Mark pedal pulses and ask if they can lie flat for more than an hour
   c. Confirm the IV is patent, have patient urinate and put on a patient gown
   d. Document pre-procedure vital signs and ask if they are allergic to anything
6. What medications could be dangerous if taken by the patient prior to going to the lab?
   a. Diabetic medications
   b. *Aspirin*
   c. Viagra or Sildenafil
   d. Diuretics
   e. Nitrates
   f. Blood thinners such as coumadin
7. What information should the patient be told BEFORE going to the cath lab?
   a. The purpose of the procedure and what to expect
   b. How long they will be required to lay down flat and keep their knee straight
   c. *All medications that will be taken after discharge*
   d. To tell the MD if there is pain symptoms before, during, or after the procedure
   e. How often vital signs will be taken after

8. Where will pulses be checked after angioplasty, depending on the insertion site?
   a. Posterior tibial
   b. Dorsalis pedis
   c. Radial artery
   d. Carotid artery

9. What should be checked with EACH vital sign?
   a. If the patient understands all discharge teaching
   b. Blood pressure, pulse, respirations, distal pulses to the insertion site
   c. Cardiac catheter insertion site for oozing or bleeding or hematoma
   d. Ask if there is any tingling or numbness in the extremity used and if it is warm
   e. Ask if the patient is experiencing any pain, chest pain, pain at the site, or new back pain

10. What should be done immediately if oozing, bleeding or hematoma is noted from femoral site?
   a. Hold pressure
   b. Ask another nurse or co-worker to Inform MD
   c. Place the patient flat in the bed
   d. Call the family

11. What should be done for the patient immediately after their arrival from the cath lab?
   a. Connect patient to telemetry, Check the vital signs including oxygen saturation and document them on a flow sheet
   b. Check insertion site for oozing or bleeding
   c. Give them solid foods and something to drink
   d. Instruct the patient to remain flat and keep their knee straight
   e. Put a sheet over affected knee only and tuck it under the bed.

12. What should be checked when bedrest period is over?
   a. Femoral insertion site if femoral artery used
   b. Radial insertion site if radial artery used
   c. Vital signs
   d. If they have a staircase they have to climb at home
   e. Orthostatic blood pressure

13. What would you be concerned about if patient is diaphoretic or nauseated or feels like they might faint?
   a. Vasovagal response
   b. Gout
   c. Hypotension
   d. Low Blood Sugar

14. How should the nurse respond to hypotension?
   a. Call the MD STAT
   b. Increase rate of IV fluids
   c. Place the patient in the Trendelenburg position
   d. Ask another nurse to have atropine ready in case the MD orders it

15. What blood pressure or pulse rate or respiratory rate would you immediately inform the doctor of?
    a. Systolic blood pressure <90
    b. Pulse rate >100
    c. Respiratory Rate >20
    d. Pulse rate = 80
16. What should you be concerned about for a hemodynamically unstable patient after angioplasty?
    a. Allergic reaction to IV contrast
    b. Bleeding from access site or retroperitoneal bleeding
    c. Dehydration
    d. Cardiac tamponade
    e. Restenosis of coronary artery
17. Why are the above findings so important to watch for?
    a. Survival of the patient depends on RAPID and ACCURATE diagnosis and management
    b. Because it can lead to complications from liver failure
    c. It can cause immediate death due to shock and rapid exsanguination
    d. Morality rate is about 7%, including later death due to complications of compartment syndrome
    e. Diagnosis is often delayed if RN and MD are not aware of the condition
18. What are the symptoms of a retroperitoneal bleed?
    a. Severe pain in lower back, abdomen/flank, and/or groin
    b. Emerging bruising over the abdomen or flank
    c. Low blood pressure and increasing heart rate
    d. Large amounts of blood on the dressing
19. What might a doctor order to treat hypotension that you should be prepared for by having them close by?
    a. IV fluid bolus
    b. Beta Blocker
    c. Atropine
    d. Aspirin
20. At what time should the patient stop eating or drinking anything prior to a cardiac catheterization?
    a. If a patient is diabetic, you should check with the MD to be sure
    b. Nothing to eat or drink after midnight before the day of the procedure
    c. Nothing to eat or drink within 2 hours of the procedure
    d. May take sips of water with medicines prior to procedure as directed by MD
21. What medications will the nurse give just prior to the patient going to the lab? Select all that apply
    a. Aspirin
    b. Insulin
    c. Clopidogrel
    d. Antacid
    e.

Attachment: English Version of Clinical Pathway

NURSING CARE: PRE- AND POST- CATH LAB PROCEDURE VITAL SIGN AND ASSESSMENT FLOW SHEET

Notify MD IMMEDIATELY if any numbness/tingling, decrease or absence of pulse, swelling/bleeding at insertion site, chest pain, severe back pain, hypotension,

PRE-PROCEDURE VITAL SIGNS

PATIENT NAME

DATE: _____

TIME	SBP	DBP	HR	RR	Baseline Groin Assessment	ANY CHEST PAIN?	FEMORAL SITE PULSES: PT	FEMORAL SITE PULSES: DP	FOOT WARM?	RADIAL SITE PULSES: RADIAL	RADIAL SITE PULSES: ULNAR	HAND WARM?	NURSE SIGNATURE

POST-PROCEDURE VITAL SIGNS

IMMEDIATELY PLACE ON TELEMETRY

TIME OF ARRIVAL FROM LAB: _____

EVERY 15 MINUTES X 4

15 MINUTES (1)

15 MINUTES (2)

15 MINUTES (3)

15 MINUTES (4)

EVERY 30 MINUTES X 2

30 MINUTES (1)

30 MINUTES (2)

EVERY HOUR UNTIL END OF

HOUR (1)

HOUR (2)

HOUR (3)

HOUR (4)

TIME	SBP	DBP	HR	RR	INSERTION SITE: PAIN? BLEEDING? HEMATOMA?	ANY CHEST PAIN?	FEMORAL SITE PULSES: PT	FEMORAL SITE PULSES: DP	FOOT WARM?	RADIAL SITE PULSES: RADIAL	RADIAL SITE PULSES: ULNAR	HAND WARM?	NURSE SIGNATURE

ASSESSMENT AT END OF BEDREST

ORTHOSTATIC BLOOD PRESSURE

TIME		SYSTOLIC	DIASTOLIC	HR	GROIN?	PAIN?							
	BP LYING												
	BP SITTING												
	BP STANDING												

NURSING CARE: PRE-PROCEDURE CHECKLIST & ASSESSMENT

DATE: _____ **PATIENT NAME**_____ **TIME OF DEPARTURE TO LAB:**_____

	What is their height?	_____cm						
	What is their weight?	_____kg						
	What are their vital signs?	BP	_____/_____	HR	_____	RR	_____	Temp _____

YES	NO	
		Does the patient have any allergies? If so, was the MD informed?
		Is the patient pregnant or suspects she is pregnant?
		Has the patient taken Viagra or other erectile dysfunction drugs? *(If yes, when was the last dose?)*
		Has the patient had hair clipped, groin and abdomen to midthigh bedline to bedline? *(Do not use razor as it increases risk of infection.)*
		Does thepatient have an IV flushes well?
		Are IV fluids infusing if ordered?
		Has patient urinated when called to the lab?
		Does the patient have on only a gown? *(No metal snaps on gown.)*
		Was the patient and family taught what to expect? (*Length time expected, sedation, procedure, may wear glasses, etc*)
		Does the patient confirm they will tell the doctor if they experience pain? *(Especially chest pain or pain at insertion site or back pain.)*
		Have you confirmed the patient has had nothing to eat or drink since midnight last night?
		If they are diabetic, have you confirmed the timing of NPO and held any diabetic medications?
		If they are scheduled for diagnostic cath in the afternoon have you asked MD if patient can have clear liquids & until what time?
		Did you ask MD if patient can take morning medications with sips of water?

PRE-PROCEDURE PATIENT ASSESSMENT

What is their mental status?	_____ Alert & oriented		____confused or agitated		_____sedated		_____not responsive
Is the extremity warm?	YES		NO				
What are their distal pulses?	LEFT	RIGHT	+	ABSENT			
Dorsalis Pedis							
Posterior Tibial							
Radial							
Patient's baseline groin assessment?	LEFT	RIGHT					
Clean and Dry							
Hematoma							
Bruising							

NURSE SIGNATURE:_____

NURSING CARE: IMMEDIATE POST- CATH LAB PROCEDURE CHECKLIST

NOTIFY MD IMMEDIATELY IF ANY NUMBNESS/TINGLING, DECREASE/ABSENCE OF PULSE, SWELLING/BLEEDING AT INSERTION SITE, CHEST PAIN, SEVERE BACK PAIN, HYPOTENSION, SLOW OR FAST HR, UNABLE TO URINATE AFTER 4 HOURS, OR CHANGE IN MENTAL STATUS

NURSING CARE POST-PROCEDURE CHECKLIST & ASSESSMENT

YES	NO	IMMEDIATELY ON ARRIVAL FROM THE CATH LAB
		1. Connect to telemetry monitor
		2. Check initial arrival vital signs
		3. Check the insertion site for any oozing or bleeding **HOLD PRESSURE AND INFORM MD IMMEDIATELY IF BLEEDING**
		4. Check vital signs
		5. Ask if any chest pain? **INFORM THE MD IMMEDIATELY. BE PREPARED FOR A STAT EKG**
		6. Confirm the IV fluids are infusing at the proper rate
		7. Put affected knee straight and tuck a sheet over the affected knee and under the other knee as a reminder to keep the leg straight
		8. Check appropriate distal pulse (s)
		9. Remind patient to report any feeling "wet" around insertion site, any pain at insertion site, any chest pain, any back pain
		10. Was the patient and family taught what to expect? (How long is bedrest; how often vital signs will be checked; what symptoms to report; When they can drink, when they can eat, how they will urinate while on bedrest, how to hold pressure if they cough or sneeze or vomit; that after bedrest is over they must wait to get out of bed only with the help of a nurse; to expect orthostatic blood pressure prior to walking)
		12. Does the patient confirm they will tell the nurse if they experience pain? *(Especially chest pain or pain at insertion site or back pain.)*

POST-PROCEDURE ASSESSMENT

What is their mental status?	___ Alert & oriented	___confused or agitated	___sedated	___not responsive

NURSE SIGNATURE:_____

Appendix: Informed Consent

Title: Assessing Nursing Professional Self-Perception
Principal Investigator: Kimberly Hires, PhD, RN
Co-Investigator: Kenya Kirkendoll, PhD, RN
Student Principal Investigator: Anita Rich, BSN, RN, CHFN, DNP Student

Introduction and Key Information

You are invited to take part in a research study about nursing professional self-perception. It is up to you to decide if you would like to take part in the study. The purpose of this study is to determine if educational training affects nurses' professional self-perception. Your role in this study will last five hours over 1 week.

If you take part in the study, you will be asked to fill out a survey before the training, attend the training, fill out a survey immediately after class and again one week later. The training will last 4 hours, and it will take about 20 minutes to finish each survey.

It is hoped that the information gained from this study will help us understand whether educational training has an impact on nurses' professional self-perception.

Purpose

The purpose of the study is to determine if educational training has an impact on nurses' professional self-perception. You are invited to take part in this research study because you are a nurse. A total of 200 people will be invited to take part in this study.

Procedures

If you decide to take part, you will be asked to do the following:

1. Fill out a survey prior to the educational cardiac patient care training
2. Attend the training session lasting 4 hours
3. Fill out a survey immediately after the training
4. Fill out a survey 7 days after the training
5. Fill out a survey 3 months after the training
6. Fill out a survey 6 months after the training
7. Each survey will take about 20 minutes to finish.

Study participation will span 6 months . The study will be conducted at Intermed Hospital, Ulaan Bataar, Mongolia beginning in May 2019. The three month survey will be conducted in August 2019 and the six month survey will be conducted in November 2019.

Future Research

Researchers will remove information that may identify you and may use your data for future research. If we do this, we will not ask for any additional consent from you.

Risks

In this study, you will not have any more risks than you would in a normal day of life. No injury is expected from this study, but if you believe you have been harmed, contact the research team as soon as possible. Georgia State University and the research team have not set aside funds to compensate for any injury.

Benefits

This study is not designed to benefit you personally. Overall, we hope to better understand whether educational training impacts nurses' professional self-perception.

Alternatives

The alternative to taking part in this study is to not take part in the study.

Voluntary Participation and Withdrawal

You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. You will not be treated any differently in the workplace if you decide not to participate in the study. If you decide not to participate in the study, you can attend the training session.

Confidentiality

We will keep your records private to the extent allowed by law. The following people and entities will have access to the information you provide:

- Kimberly Hires, Kenya Kirkendoll, Anita Rich, Ariunaa Erdenebileg, Tanya Owens, Jane Thomas
- Georgia State University Institutional Review Board
- Office for Human Research Protection

We will not use your name on any records. The consent forms you sign will be stored in a locked case and the key will be kept only by the student investigator. When we present or

publish the results of this study, we will not use your name or other information that may identify you.

Contact Information

You can contact the following research team members:

- If you have questions about the study or your part in it
- If you have questions, concerns, or complaints about the study
- If you think you have been harmed by the study

Anita Rich	678-644-8159	arich15@student.gsu.edu
Kimberly Hires	404-413-1177	khires@gsu.edu
Kenya Kirkendoll	404-413-1163	kkirkendoll@gsu.edu

The Institutional Review Board at Georgia State University reviews all research that involves humans. You can contact the IRB if you would like to speak to someone who is not involved directly with the study. You can contact the IRB for questions, concerns, problems, information, input, or questions about your rights as a research participant. Contact the IRB at 001-404-413-3500 or irb@gsu.edu.

Consent

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research, please sign below.

_____

Printed Name of Participant

_____

Signature of Participant

_____

Date

_____

Signature of Researcher

Questionnaire Part 1: Demographics

1. What is your age in years? _____
2. What is your gender?
    a. Female
    b. Male
3. Are you married?
    a. No
    b. Yes
4. Is anyone else in your family a nurse?
    a. No
    b. Yes,

    If yes please indicate which family member □ grandmother □ mother □ aunt □ sister □ male relative
5. What is your highest level of education completed?
    a. Proficiency level nursing certificate
    b. Bachelor's in nursing
    c. Master's in nursing
    d. Doctorate in nursing (PhD or DNP)
    e. PhD in another field
6. Where did you attend nursing school? Mark all that apply.
    a. Mongolia
    b. Korea
    c. Russia
    d. Other _____
7. How many years have you been a nurse? _____
8. Was being a nurse your first career choice?
    a. Yes
    b. No. If no, what was your first career choice?_____
9. Why did you become a nurse? _____
10. What shift do you work?
    a. 7 am to 3 pm
    b. 3 pm to 7 am
    c. Office hours such as 9 am to 5 pm.
    d. Different shifts
11. What is your current nursing role? Mark all that apply
    a. Staff nurse
    b. Nurse Manager or Director
    c. Administrator
    d. Nurse Educator
    e. Other
12. What is the amount of your scheduled work time you work in each area?
    a. General medical □ 100% □ 75% □ 50% □ 25%
    b. General surgical □ 100% □ 75% □ 50% □ 25%
    c. Office □ 100% □ 75% □ 50% □ 25%
    d. Intensive Care □ 100% □ 75% □ 50% □ 25%
    e. Labor & Delivery □ 100% □ 75% □ 50% □ 25%
    f. Other □ 100% □ 75% □ 50% □ 25%
    g. Postpartum or Nursery □ 100% □ 75% □ 50% □ 25%
    h. Emergency Department □ 100% □ 75% □ 50% □ 25%
13. Are you a member of a professional nursing organization in Mongolia?
    a. No
    b. Yes. If yes what is the name of the organization? _____

ИНТЕРМЕД ЭМНЭЛЭГ
Intermed Hospital

МОНГОЛЫН АНХНЫ
ОЛОН УЛСЫН МАГАДЛАН
ИТГЭМЖЛЭГДСЭН ЭМНЭЛЭГ

ЕРӨНХИЙ АСУУЛГА

1. **Та хэдэн настай вэ?**
   ☐☐

2. **Таны хүйс?**
   - ○ Эм
   - ○ Эр

3. **Та гэрлэсэн үү?**
   - ○ Үгүй
   - ○ Тийм

4. **Танай гэр бүлд таниас өөр сувилагч мэргэжилтэй хүн бий юү?**
   - ○ Үгүй
   - ○ Тийм
     - ↳ Хэрэв байгаа бол, зохих хүний өмнө тэмдэглэнэ үү
       - ☐ эмээ
       - ☐ ээж
       - ☐ авга, нагац эгч
       - ☐ эгч
       - ☐ эрэгтэй төрөл садан

5. **Та ямар боловсролтой вэ?**
   - ○ Сувилахуйн мэргэжлийн үнэмлэх
   - ○ Сувилахуйн бакалавр зэрэгтэй
   - ○ Сувилахуйн магистр
   - ○ Сувилахуйн ухааны доктор (PhD эсхүл DNP)
   - ○ Өөр салбарын PhD

6. **Та сувилахуйн ухаанаар хаана суралцаж төгссөн бэ? Тохирох хариултыг сонгоно уу.**
   - ○ Монгол улс
   - ○ Солонгос улс
   - ○ ОХУ
   - ○ Бусад

7. **Та хэдэн жил сувилагчаар ажиллаж байна вэ?**
   ☐☐

8. **Сувилагч болох нь таны анхны сонирхсон ажил мэргэжил байсан уу?**
   - ○ Тийм
   - ○ Үгүй
     - ↳ Хэрэв үгүй бол, та өмнө нь ямар ажил хийдэг байсан бэ?
       _____
       _____

9. **Та яагаад сувилагч болсон бэ?**
   _____

10. **Та аль ээлжинд гардаг вэ?**
    - ○ 07:00 – 15:00
    - ○ 15:00 – 07:00
    - ○ 09:00 – 17:00 гэх мэт өдрийн найман цаг
    - ○ Өөр ээлж

11. **Та сувилахуйн ямар албан тушаал хашдаг вэ? Тохирох хариултыг сонгоно уу.**
    - ○ Сувилагч
    - ○ Сувилахуй эрхэлсэн захирал, менежер
    - ○ Захиргааны ажилтан
    - ○ Сургагч сувилагч
    - ○ Бусад

12. **Та сувилагчдын нийгэмлэг, холбоо гэх мэт мэргэжлийн байгууллагын гишүүн үү?**
    - ○ Үгүй
    - ○ Тийм
      - ↳ Хэрэв тийм бол, ямар нэртэй байгууллагын гишүүн бэ?
        _____

ИНТЕРМЕД ЭМНЭЛЭГ
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МОНГОЛЫН АНХНЫ
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СУРГАЛТАНД СУУСАН ӨДРӨӨС ХОЙШ 1 ДОЛОО ХОНОГ, 3 САР, 6 САРЫН ДАРАА БӨГЛӨХ АСУУЛГА /ЗӨВХӨН СУРГАЛТАНД СУУСАН ХҮМҮҮС БӨГЛӨНӨ/

42. Та сургалтанд суусан өдрөөс хойш судас нөхөн сэргээх мэс заслын өвчтөнг сувилсан уу?
- ○ Үгүй
- ○ Тийм
  - ↳ Хэрэв тийм бол, нийт хэдэн өвчтөн сувилсан бэ? _____

43. Сургалтаар сурч мэдсэн зүйлс танд хэрэг болсон уу, үр өгөөжтэй байж чадсан уу?
- ○ Үгүй
- ○ Тийм

44. Сургалтаар сурч мэдсэн зүйлсээ сургалтанд сууж амжаагүй бусад сувилагч нарт хэлж өгч, тэдэнтэй сурсан зүйлсээ хуваалцсан уу?
- ○ Үгүй
- ○ Тийм
  - ↳ Хэрэв тийм бол нийт хичнээн сувилагчид хэлж өгсөн бэ? _____

45. Таныг улам чадварлаг сувилагч болоход энэ сургалт хувь нэмэр болно гэж та үзэж байна уу?
- ○ Үгүй
- ○ Тийм

46. Өөрийгөө мэргэжлийн сувилагчийн түвшинд үнэлж ажиллахад тань энэ мэтчилэн нэмэлт сургалтууд хувь нэмэр болно гэж та үзэж байна уу?
- ○ Үгүй
- ○ Тийм

47. Өөр ямар сэдвээр та сургалт авахыг хүсч байна вэ? Хамгийн чухал гэсэн сэдвээ нэг, хоёр гэсэн дараалаар жагсааж бичнэ үү.

1. _____
   _____
2. _____
   _____
3. _____
   _____

ЭНЭХҮҮ СУДАЛГААНД ОРОЛЦОЖ БАЙГААД БАЯРЛАЛАА!!

Сувилагч нарын мэргэжлийн үнэт зүйлс – Гурав (NPVS-3)©

Сувилахуйн ажил мэргэжилд дараах үнэт зүйлсүүд хэр чухал болохыг тэмдэглэнэ үү.
Ингэхдээ, тохирох баганы сонгож, ☐ нүдэнд X тэмдэглэгээ хийнэ үү.

(**1**=чухал биш, **5**=зайлшгүй чухал)

	Чухал биш	Бага зэрэг чухал	Чухал	Их чухал	Зайлшгүй чухал
	1	2	3	4	5
1. Өөртөө байнга дүгнэлт хийнэ.	□1	□2	□3	□4	□5
2. Хувь хүн нэг бүрийн угаас заяасан нэр төр, үнэ цэнэ, эрхийг хүндэтгэнэ.	□1	□2	□3	□4	□5
3. Өвчтөн/олон нийтийн эрүүл мэнд, аюулгүй байдлыг хамгаална.	□1	□2	□3	□4	□5
4. Өөрийнхөө эрүүл мэнд сайн сайхан байдалд хариуцлагатай хандана.	□1	□2	□3	□4	□5
5. Баг хамт олондоо ажлаа үнэлүүлж цэгнүүлнэ.	□1	□2	□3	□4	□5
6. Мэргэжлийн стандарт шаардлагуудыг тогтооно.	□1	□2	□3	□4	□5
7. Оюутнуудын сургалт, дадлага хийдэг цэгүүд дээр тавигдах шаардлага, стандартуудыг дэмжиж, баримтлана.	□1	□2	□3	□4	□5
8. Сувилахуйн ажлын орчныг сайжруулах арга хэмжээнүүдийг санаачлана.	□1	□2	□3	□4	□5
9. Ур чадвараа бэхжүүлэх үүднээс нэмэлт сургалтанд хамрагдаж мэдлэг чадвараа шинэчлэнэ.	□1	□2	□3	□4	□5

3 month, and 6 month Questionnaire:

1. Since you attended the class, have you taken care of any angioplasty patients?
   - No
   - Yes

   If yes, how many patients? _____

2. Was information you learned in class helpful?
   - No
   - Yes

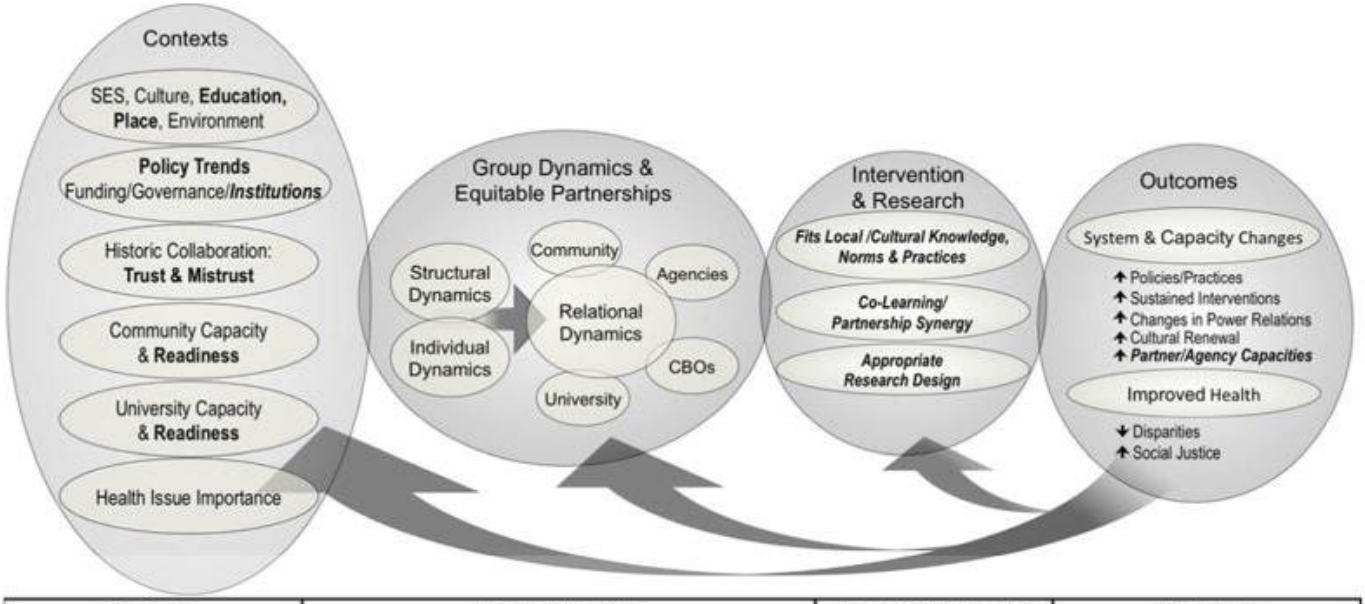
3. Since you attended the class, have you shared this information with other nurses who were not able to attend the class?
   - No
   - Yes

   If yes, how many nurses? _____

4. Do you think this class will help you be a better nurse?
   - No
   - Yes

5. Do you think additional education will improve how you see yourself as a professional nurse?
   - No
   - Yes

6. What other topics would you like to learn about? Please list them in priority
   1. _____
   2. _____
   3. _____



Contexts	Group Dynamics		Intervention/Research	Outcomes
•Social-economic status (SES), culture, ***spirituality, place, education,*** history, environment •Policy Trends: National/local governance & funding/political climate •***Role of Institutions, i.e., education; research (positive and negative)*** •Historic degree of collaboration & ***trust*** between university & community •Community: capacity, readiness & experience •University: capacity, readiness & reputation •Perceived severity of health issues	*Structural Dynamics:* • Diversity • Complexity • Formal Agreements • Real power/resource sharing • Alignment with CBPR principles • Length of time in partnership *Individual Dynamics:* • Core values • Motivations for participating • Personal relationships • Cultural identities/humility • ***Bridge people on research team*** • Personal belief: ***Spirituality*** • Community reputation of PI	*Relational Dynamics:* • ***Safety: Community voice/ community language*** • ***Trust*** • Dialogue, listening & mutual learning as ***Flexibility*** • Leadership/Influence • Power dynamics/***Stewardship*** • Self & collective reflection • Participatory decision-making & negotiation • Integration of local beliefs to group process • Task roles & communication	•Intervention created or centered in local culture •Intervention informed by local settings & organizations •***Shared synergy & trust between partners*** •***Community language vs. expert language*** •***Research & evaluation design reflects partnership input*** •***Bidirectional translation, implementation & dissemination***	CBPR System & Capacity Changes: • ***Changes in Policies /Practices -In Universities & Communities*** • Sustainable/cultural-centered interventions/***Broader reach*** • Changed Power Relation/***Empowerment*** -Community voices heard • ***Develops skills to benefit*** individual members & partner agencies -***Collective reflection***/Critical thinking • Cultural revitalization & renewal Health Outcomes: • Transformed social/economic conditions • Reduced health disparities

Revised CBPR Conceptual Model (2013)

CBPR Conceptual Model: 2013

Adapted from: Wallerstein, Oetzel, Duran, Tafoya, Belone, Rae, "What Predicts Outcomes in CBPR," in CBPR for Health From Process to Outcomes. Minkler & Wallerstein (eds). San Francisco, Jossey-Bass, 2008); and Wallerstein & Duran, CBPR contributions to intervention research: The intersection of science and practice to improve health equity. Am. J. Public Health; S1, 2010: 100, S40–S46.