

Examination of the Use of Evidence-Based Practice by Rural Mongolian Nurses

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By Rural Mongolian Nurses

Nursing in rural settings is an important part of the nursing world that requires examination apart from nursing in other settings due to the many differences that exist. With over 70% of the world's poor living in rural areas it is critical that these areas needs are studied and recognized in order to improve patient outcomes (The World Bank, 2014). The investigative team had the opportunity to go to Mongolia to study the role and challenges of the rural nurses there. The investigative team in this project included three nursing students: Lauren Robison, Oriana Turley, and Jessie Hardin, led by public health nurse and Montana State University Professor Michele Sare. The investigative team was able to participate in the project because of the joint efforts between the Montana State University College of Nursing and the BioRegions Program. BioRegions uses a holistic management approach to bring interdisciplinary teams together to work with local people to collaborate and problem solve.

**Goals**

The research team's primary goal in this project was to translate and evaluate the application of rural nursing theory in partnership with Mongolian registered nurses while working side by side with them to create a partnership of equal learning. There were three secondary objectives under this larger goal; each one being examined in more depth by one of the three individual nursing students. The first objective was to observe and describe nursing and nursing interventions in rural Mongolian settings. The second objective was to describe the use and knowledge (or lack thereof) of evidence-based practices [EBP] by nurses in rural Mongolia. The final objective included observing and learning about the nursing role as an independent

profession and describing the relationship between nurses and physicians in the rural Mongolian setting.

### **Current Conditions**

#### **Orkhon Soum**

The investigator's primary observations took place in Bulgan Province which is located in northern Mongolia. Orkhon is the capital of the soum and the soum can be considered a "district" within Bulgan province. The total population of Orkhon soum was 3,464. Within the soum there are five Baghs, which can be equated to "sub-districts". The people of Orkhon Soum are spread throughout Orkhon and within the baghs. Within the soum the investigative team stayed and collected information in various places including: Orkhon city, Bagh 2, and Bagh 4.

Orkhon city is a rural community and its' hospital has limited supplies and medications. Orkhon is more than 300 km away from Ulan Bator, the capital of Mongolia and the only place where very advanced treatments can be sought. The investigative team was told that the drive to the capital from Orkhon took approximately six hours. Similar to the findings of Lee and Winters (2004), if one was to seek surgery or specialized treatment it would be necessary to travel to the specialist's location, likely a larger and more populous city. Additionally, Lee and McDonagh (2013) describe that, "The rurality and remoteness of a given place affects access to health services" (p. 24). This statement is very true for this rural Mongolian area. Most of the herders and their families live in gers out in the various baghs which are very far away from any healthcare, thus greatly hindering their access to healthcare. This is an example of isolation and distance, two key factors described by Long and Weinert (1989), which are vital when considering rural nursing and population health.

### **Environment**

The environment, both built and natural, greatly affect the health of a population. The roads in the Mongolian country side are dirt roads that are very bumpy and in poor condition. The investigative team learned first-hand that when it rains the roads very quickly become extremely muddy and vehicles can easily get stuck. In the winter time the snow on the roads could be a great barrier from getting place to place. Similar to the Montana environment, Mongolia can have harsh winters where the temperatures drop below zero, and also hot summers with high temperatures. The winter's cold conditions and snowy terrain could also be a hindrance when seeking healthcare in rural areas. Skolnik (2008) describes the environment as being an important health determinant along with accessibility to health care services- which in turn can be affected negatively by the environment (e.g. snowy conditions).

The Orkhon hospital had four regular patient rooms each having two to four beds in them. The hospital also has one room designated as the emergency room and another one specifically for patients with infectious diseases. The hospital was in rough physical condition with cracking walls, holes in walls, poor flooring, chipped paint, etc. Additionally, the hospital had no plumbing or running water. Each morning one of the house keepers had to go to the well and fill large jugs of water that would then be used throughout the day. The hospital did have internet access, but it was rarely utilized by healthcare providers because of the lack of knowledge of how to and/or what to look for. The investigative team spent several days at the hospital learning about the nurses' role there and about their knowledge and use of evidence-based practice. When asked about evidence-based practice each of the three nurses responded that they had never heard of that or learned about it in school. When asked about the basis for their protocols in certain situations each one also responded that they did not know about the

evidence behind them and that they just did them. During one meeting with the Orkhon hospital staff it was specifically stated via translation that “The trouble with working in the country-side is that it is really slow on updating the new information and there is a big lag before we hear about stuff. One updated practice will be learned and put into use and then the next one comes out. Often we miss many steps so certain practices are skipped all together because we never knew about them”. This statement clearly shows both the lack of availability and teaching about new skills and information and also the lack of access to new equipment and new and upcoming technology.

### **Health Definition**

It is clear that rural Mongolian people and their healthcare providers greatly value their health; however, they lack the necessary tools to provide care supported by evidence-based research. One discovery by the research team that goes against EBP and helps define their health was that many people only took their prescribed daily medications solely when they would have symptoms. For example: one of the diseases that was observed in many patients was hypertension, thus most of the people diagnosed had prescription medications for treatment. The antihypertensive medications are supposed to be taken daily to maintain a lower blood pressure, but many of the patients were only taking it when they had symptoms such as a headache or neck pain. It is unclear whether this was due to lack of education of and by their physicians’, noncompliance, or a mix of both. This also shows how their definition of health is related to their ability to work and to how they feel ‘right now’. Long and Weinert (1989) had similar findings in that “rural dwellers define health primarily as the ability to work, to be productive, to do usual tasks” (p. 120). Another common chief complaint of patients was pain in their knees, wrists, and/or joints. They wanted to know what they could do to treat it to make it go away. Tying in

with the above statement, these arthritic symptoms were affecting their ability to do their required work and that is why they were seeking care for it. The patient population is required to do hard manual labor on a daily basis for their livelihood and it does play a role in their health and health behaviors.

### **Patient**

The patient population was very diverse and the nurses could see issues that ranged from any health problem or injury related to maternal or child health, or seeing older adults suffering from chronic diseases. As mentioned before, a large portion of the population relies on living off the land and their animals to make a livelihood, thus their ability to work played a part in health-seeking behaviors. Living far out in the countryside is also key to consider because it greatly minimizes access to healthcare. According to the World Health Organizations (2014) common non-communicable diseases in Mongolia include: cardiovascular diseases, cancers, injuries, respiratory diseases, and digestive system diseases.

### **Definition of a Nurse**

The investigative team had the opportunity to spend several days at the hospital in Orkhon city and work side by side with the all of the hospital staff, including the nurses. The three hospital nurses observed and interviewed were each female and ranged in age from mid-thirties to sixties. The older nurses, one who graduated in 1974 and the other in 1991, had two year diploma degrees. The newest nurse, graduating in 2007, had a four year BSN degree. The single Bagh nurse observed was age 55 and had a two year diploma degree as well. The nurses were very skilled and provided excellent patient care with the resources they had.

### **Literature Review**

The examination of rural nursing and rural nursing theory began because of the limited

information known about the challenges that rural nurses face and the differences between rural and urban nursing were unstudied. Long and Weinert (1989) found that often times in rural areas nurses were the sole healthcare providers and that the population had different needs than populations of other settings; thus prompting more studies to be done regarding rural healthcare needs. The challenges found and described in the rural nursing theory are applicable to all rural areas, including the rural areas that the research team studied in in Mongolia.

Skolnik (2008) describes the determinants of health as being vital when determining and examining the health of a population. Some key health determinants include the physical environment, social environment, access to healthcare, health behaviors, and individual characteristics such as sex, age, and genetic make-up (Skolnik, 2008). These are all things that need to be looked at when studying a population and their healthcare needs.

### **Methods**

One method used by the research team to gather information included participatory action research. This was done as the team worked side by side with the nurses to learn from each other and as the research team mentored the critical thinking process that goes into a staffing. Other methods included observation, peer-shadowing with the Orkhon hospital nurses, team teaching with scenarios, direct interviews, and system interviews. Each method let the research team see a different aspect of the nursing role and helped lead the team to a better understanding overall.

### **Findings Related to Evidence-Based Practice**

The healthcare providers in Orkhon and the baghs lack both the equipment to provide EBP care and also the access to learning new information about best practices and appropriate protocols. For example, the Bagh 2 doctor had one adult-sized blood pressure cuff that was given to him over 10 years ago that was clearly in very poor condition. That was the sole cuff he had;

no other sizes. Research has been shown that an incorrect blood pressure cuff will give an incorrect reading, thus showing a lack of use of EPB because of lack of supplies and funds. The Bagh 2 nurse informed the investigative team that she had the following minimal supplies to do her job: a white coat, one blood pressure cuff, a stethoscope, and a thermometer. With these supplies she is expected to provide full care to patients both during home visits and at the small clinic/hospital that she sometimes staffs by herself. Like many others, she has no computer skills nor access to the internet to research new information. One positive aspect is that she is required to take 3 credits of continuing education each year to maintain her license. Examples of subjects covered at her continuing education seminars, many of which are put on by College of Nursing in Ulan Bator, are professional development, nursing care, and the nursing process.

Another finding of the research team was that that there were no standing orders (nor had they heard of them) at the Orkhon hospital and that the average length of hospital stays was 10 days; both of which contradict current evidence-based practice. It is known that standing orders are in place because of the chance of a better outcome for the patient, and also that longer hospital stays increases the patient's risk of infection.

After working with the nurses and healthcare team at the Orkhon hospital it was clear that a large asset they have is their eagerness to learn the newest information and best way to do things. They are the ones who take care of the ill and injured people of the community and thus wanted to be the best they could be for their people. In part, the nurses attempted to learn as much as they could by taking their continuing education credits. It was explained to the investigative team by the Orkhon nurses that three CE credits per year were required to maintain their nursing licenses and thus fifteen credits every five years. If all fifteen credits are done within the five years then the nurse's license gets renewed without a fee. Examples of topics

covered at CE conferences attended by these nurses included information about blood transfusions and newborn care. The local Orkhon nurses wanted to know about up and coming research and they asked many questions about how things were done in the United States. Skolnik (2008) explains that education is a “powerful determinant of health” (p.18). Education can change one’s own health practices and behaviors, both of which are also important health determinants (Skolnik, 2008). These health care providers want to be educated to the best of their abilities and with that to educate the community and provide better care for them.

### **Inferences**

It seems that the Mongolian healthcare model is currently in an evolution and undergoing a lot of change. That may be why there are no clear standards for nursing currently.

At the Orkhon hospital none of the nurses knew where their protocols came from and they just did things one way because that’s the way they had always been done. Also, the idea that the healthcare model was changing in Mongolia was brought to attention by the faculty at the nursing school in UB. They mentioned that they had previously been trying to copy the European healthcare model but more recently were trying to adapt a more American healthcare system.

### **EBP at the Nursing School in UB**

The research team also had the opportunity to spend some time at the school of nursing at the Mongolian National University of Medical Sciences in Ulaanbaatar and ask about their stance on evidence based practice and how it is taught there. The Mongolian School of Nursing has one mandatory 2 credit research class and they also have some optional student clubs that examine evidence-based practice research articles and information. Also, while at the nursing school, the research team learned that many of the faculty members had done extensive research

themselves, thus proving that Mongolia is producing evidence-based research from within and then sharing their results.

### **Conclusions**

Overall, it is clear that the use of evidence-based practice is lacking in the rural settings observed in Mongolia. A variety of barriers exist that include limited access to new and upcoming information, complete lack of knowledge about basing practice on evidence and research, and basically having no set standards to base their healthcare performance. The nurses work in a setting where they have only the most basic tools and equipment to carry out their jobs. The nurses are very skilled in the practices that they do, however, they wish to know and be informed about the most current and appropriate up to date knowledge and skills.

### **Limitations**

The largest limitation to the conducted research was the language barrier and having to rely completely on translators. Words do not always translate exactly so that can lead to difficulty in understanding. Other limitations included cultural differences, the limited number of interviews performed, the lack of time available to investigate more, and the ability of the investigators' presence to influence answers or actions.

### **Future Recommendations**

More research needs to be done in other rural Mongolian areas to further understand the nursing role, challenges, and what can be done to improve their access to information and the peoples' access to care. In regards to EBP and continuing education credits, more research is needed to fully understand the content and context of what is taught at their continuing education seminars. It is unknown if the information being taught at the seminars is based on evidence or not. Also, a more in depth look at the nursing school's curriculum to see and understand what is

being taught and if it is appropriate and applicable. More studying of the healthcare policies in Mongolia would be beneficial in determining and developing the scope of practices and standards in their healthcare system.

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