Research Critique and PICOT Statement Final

 NRS 433V Grand Canyon University

 5/6/2018

Introduction

The nursing practice problem of interest in focus is hands only CPR. It will be the focus of research in this case. The research will specifically focus on the adult's populations while seeking to intervene to their health problems through the integration of the hands only type of CPR. Besides, the study will seek to compare between the hands-only CPR and the standard hands plus breathing while the anticipated research’s outcome is the reduced mortality rate among the adult population.

**PICOT Statement**

P – Adults

I – Hands only CPR

C – Hands plus breathing CPR

O – Mortality prevention

T – 5 minutes

**Research Question:**

In adults, how much more effective is the hands only type of CPR compared to the hands plus breathing type of CPR at mortality prevention, within the 5 minutes given for ensuring the survival of the adult?

**Qualitative Study**

**Background**

For a long time, clinical research has been taken for granted on asthma, a respiratory disorder which mostly occurs in young children than in adults. The reason for the negligence could stem from the fact that the disease is thought to be old in that it is well known amongst medical professionals as well as the general populace hence there was no need for additional individual research or even group medical research on the same. The fact that escaped their realization was the issue of similarity in symptoms between the condition and other respiratory affiliated infections, a factor that contributes to misdiagnosis causing delayed treatment for more than 2.2 million people who have the disease but are placed on cures to other illnesses based on misdiagnosis. The research analyzed sought to answer the questions of the magnitude of the misdiagnosis problem, the faults of the current diagnostic system and the improvements to which it could be subjected to attain a clinically accurate diagnosis

For that reason, a study found it necessary to embark on research on which this paper is based on establishing better means of achieving accurate diagnosis of occurrences of asthma. In an attempt to reduce the instances of misdiagnosis, the researchers sought to increase the chances of response to treatment and management despite the absence of an absolute cure to the condition. Based on recent studies, asthma diagnosis is made following clinical tests alone not only in the united states but also in Canada and Europe (Burns & Grove, 2011). For this reason, a good number of people end up either treating a disease which they do not have or assuming safety when actually they are patients. However, the most affected class of people are the adults who are more likely to be misdiagnosed based on the fact of the rarity of the infection on people their ages leading doctors to rule out the case in the presence of even a single iota of doubt. The actual increase to 75% as the number of physicians diagnosed asthma in the United States and Canada does not help matters either (Burns & Grove, 2011).

**Method**

During such a study, the researchers involved face some risks which are almost as many as the benefits resultant of the project. However, results obtained are a creation of the methods employed in the study hence the importance of determination of the methods applied in the study. As is quite evident from the clarity of their messages, the information was obtained through direct means or rather primary means of information which usually consists of observation and direct interaction with the participants of the action on the field. In this case, the actors on the ground refer to the doctors and the patients as well as the families of the asthma patients. Apart from direct observation and interaction with the participants of the fields, they had to compare the newly acquired information with whatever has been known in the discipline for years and crosscheck them a process that is only possible with subsequent references (Burns & Grove, 2011).

In observing tradition, it would be prudent in highlighting the benefits of the research to the participants before focusing on the potential risks. For one, direct interaction with the patients gives a real picture rather than a reported faction thereby increasing the knowledge on the subject. Additionally, the research puts them on the map of medical scholars, and therefore they become household names, an authority in the field and could be quoted. On top of that, the experience obtained during the research may prove useful in future occasions when they are called to research by profession. On the flipside, they risked failure as the most prominent fear since not everything ends as planned. The part from the general fear of loss, there is the possibility of being sued for either breach of privacy during the process or copyright/patent violation as they are not the first people to exploit that field of research.

The qualitative research method was indeed appropriate in answering the research question. This is because the study was directed by the Biber’s model of linguistic analysis which enables the systematic deliberation of multiple issues such as implication and rate of asthma plan terms. The researchers were not clear on a given perspective in which the research was developed from since the primary purpose of the study was to conduct a linguistic analysis of the asthma literature. Since the study was all about linguistic analysis of the asthma plans patterns, there are varieties of the quantitative and qualitative study cited by the researchers in efforts to answer the research questions. Moreover, the qualitative research used both the qualitative and quantitative sources which are older than 5 years. The researchers were also categorically in highlighting some of the study limitations. For instance, they mentioned that they were only able to choose a small selection of research examples. Nonetheless, the literature review was explicitly covered as it provided enough information which could help in providing a logical research argument. The researchers develop a framework or a diagram which illustrated the proposed taxonomy highlighting the likely relationship between the different forms of asthma plans.

**Findings**

Concluding the facts of the survey as recorded in the charts and graphs as well as based on the real circumstances, the problem of misdiagnosis is more widespread than it was earlier thought. A proper diagnosis would probably result in 25% more successful management attempts that could play a significant role in ensuring the victims maintain their day to day lives and play the position they are supposed to especially among adults. However, this is not to say that children are void of misdiagnosis as that would be untrue. Minors constitute about 8% of the total misdiagnosed population of misdiagnosis cases (Burns & Grove, 2011). Since the credibility of the findings is yet to be questioned, there is all confidence in quoting the figures in this work based on the unwavering faith in the statistics presented as far as they correspond with the reality on the ground which they tally towards.

Despite the presence of figures and success in completing the project, the study was not without challenges at least as far as the researchers were concerned. One of the main challenges was obtaining the required information without betraying the hospital's privacy policy which forced them to look for the patients that had been treated in the aspect relevant to the research and seek their permission in accessing their hospital records. Furthermore, analysis of the information obtained proved to be a hard nut to crack especially because the information discovered in the observation and interaction phase of the research had to be authenticated using credible secondary sources to determine the authenticity was just another process as well.

The study will significantly impact all areas of nursing including education and administration among other practices. Specifically, the research will provided more insight and knowledge on how to handle the condition of asthma among the patients.

**Ethical Considerations**

The acceptance of the research as the credible source of information on the issue of asthma diagnostics indicates the legality of the study based on the clearance conducted by the Institutional Review Board. By the permission obtained, the conduct of the researcher can no longer be in question especially in regards to ethics during the research since the IRB has certified that the process was approved and followed all the rules and regulations that touch on ethics and privacy of the patients. The certification by IRB is an official concession that the process of acquiring the information entailed in the research was above board and therefore regulation-oriented (Burns & Grove, 2011).

**Conclusion**

The study points to a discrepancy in the system along with an indication of a loophole in the treatment system as far as asthma is concerned and therefore a vulnerability agent in human health. Establishment of standard methods applicable in all the hospitals and health facilities that could help in stabilizing the process of accurately diagnosing asthma and improving the health of individuals who may be suffering from asthma but are placed under different treatment as well as those who may be put under asthma management yet they are in no way asthmatic.

**Quantitative Study**

**Background**

At one point or another, the challenges faced by the medical community in an attempt to provide quality medical care that is effective in prevention and treatment of disease and health conditions require further research to come up with the matching solutions. Such kinds of studies are conducted by a group of researchers, always composed of experts in their fields and for research of this kind, there is the need for a diverse group of professionals with specialties in both medical and diagnostic expertise, public health improvement and maintenance and even research and data documentation.

**Summarizing the study**

The goal of summarizing the study is providing a brief glimpse of the content covered within the article and in this case the summary is done as a segmentation of the parts of the research which include the content of the study, the inspiration behind the study as well as the methods that were applied by the select team during the research and finally, results achieved from the information gathered in the process of the research.

*Contents of the research and the inspiration behind it*

The study focused on asthma as a respiratory infection and the means of its diagnosis from the fact that the signs and symptoms that characterize asthma could be present in any infection of the respiratory duct of an individual. The study, therefore, focused on finding a means of standardizing the methods of diagnosis to ensure a timely diagnosis that would allow for optimum intervention. Through the research, the community involved hoped to reduce the impact of the ailment in the society and therefore improve the general health of the populace.

**Method**

In a matter of speaking, the methodology for the analysis was not limited to one aspect or type, and therefore there is no surprise when it turns out that the methods used in the study were either qualitative or quantitative. However, that is not to say that there wasn't a more popular method than the other because the qualitative analysis far outweighs its counterpart in the preference of utilization as far as the article in question is concerned.

In the course of the study, the researchers engaged in the application of techniques that would guarantee a most informed representation of facts that was as detailed as it was accurate to ensure that the findings generated were on point. Integration of the essential qualitative ideas assured their goals were achieved since their study entailed direct observation of patient check-ups and diagnostic procedures and conducting interviews with both the patients and their doctors. In this way, it was easier to find out where the challenge emanated from and how it could be addressed at every point of the process. However, that is not to say that qualitative analysis was not influential in the research. Such an assertion would be a lie based on the fact that quantitative analysis formed the most of the secondary information gathering processes used since the points from the doctors on instances, effects of misdiagnosis on the basis of numbers and projections of improvement once a solution is established are all the workings of quantitative analysis (Green, & Thorogood, 2018).

Despite being relevant, the authors failed to mention some of the notable benefits and risks of participating in the study. However, the informed consent was obtained from all the research participants including the parents and children who voluntarily participated in the study. It is also notable that the necessary institutional review board approved the study after the presentation of the appropriate documents or information such as the informed consent forms. The case studies were the primary method of collecting the research data since they could provide the exact picture of the subjects under study. Moreover, the data were collected during the cold and rainy season since it presented the time where there were many cases of asthma. The data collection among the research participants were systematically performed from the selected chest clinics in the community. The researchers used a standard statistical test including the linear and logistic regression with the aim of assessing the interrelationships which exist between the asthma-related characteristics in the models such as age, sex, among other environmental factors. The author was not clear on how rigor the procedure was. The SAS software was used to ensure the accuracy of the results. The researchers independently analyzed the data and compared their analyses as this was a sure way of minimizing the research biases.

**Findings**

Given the resources and human resources allocated to the research, the results must have been considerable and logical if not useful once applied in the field, and that is the position of the article as well. Apart from obtaining the statistics on the current misdiagnosis trends, the study found out the effects of the problem and the potential solution in fixing the same. The facts of the situation are that appropriate diagnosis would probably simplify or even influence positively the management attempts in 25% of the cases of asthma, an action that would considerably impact their daily lives for the batter more so in the case of adults. In spite of the preceding statement, children are as much under the ax as the adults are since they constitute 8% of the total misdiagnosed population. With the absence of controversy or contest in regards to the statistics presented above, the verdict is that the data in the article are as accurate and detailed as they should be and gives anyone who reads it all the information that regards the topic of concern (Altman, 1990).

From the study conducted, the most significant result achieved about the topic of concern was the inclusion of isolation methods during diagnostic tests for asthma. In addition, the respiratory infections for which asthma could confuse are tested first in cases where medical examinations are viable hence leaving asthma as the only option. Apart from that, care for potential patients could be elongated meaning that rather than letting a patient go immediately after diagnostics, he or she could stay behind for a couple of nights at the hospital under professional observation to ensure that the right call was made. The future research should however focus on the differences in diagnosing the patients based on age, sex among other environmental factors.

From the description of healing as the care and management of patients before and after treatment on the road to recovery, the serious nature of asthma means that the victim is always under the care and hence constantly under nursing. Since the responsibility of inpatient sections are under the authority of the nurses, they have the power of determination or at least contributing to the process by the extensive experiences with patients thereby reducing the workload of the physicians. In addition to that, the management practices for misdiagnosed patients fall directly under the care of nurses hence the need for their familiarity with the same, leaving the establishment no choice but to integrate the two departments, research and nursing to come up with a realistic faction of operations (Balter, et al., 2009).

**Ethical Considerations**

The common denominator in most research actions about ethics is limited to two sectors of the research, obtaining information and releasing it. In most instances, the means of information archiving is not wholly legal since the bureaucratic red tape involved is too much and may cause delays in regards to research deadlines. On releasing information, the credibility of a subject depends on the authority of the source hence information in regards to mode of hospital operations must come from either an employee or patient. Consideration of releasing information labeled alongside the cause if they are not permitted to speak for the institution is a violation of the ethics and puts a target on the back of the individual. In considering morality and ethics, the researchers never mentioned names and had to seek an individual permit from the patients to access their hospital records. The researchers also considered ethics in research by ensuring that the participants signed the consent forms and also voluntarily involved in the study. The approval of the study by the institutional review board is also a clear indicator that the ethical practices were followed in the research.

**Conclusion**

It is necessary to standardize the approaches used in diagnosing asthma as it will ensure that there is timely diagnosis which will also enable maximum intervention. Additionally, it is appropriate to consider the age and sex of a patient while diagnosing and understanding the interrelationships of the variety of the allergy-related phenotypes while handing asthma condition. These findings could ideally help in providing intervention solutions to the asthma conditions in both the adults and children.

**Proposed Evidence-based Practice Change**

**List of the articles**

**Sayre, M. R., Berg, R. A., Cave, D. M., Page, R. L., Potts, J., & White, R. D. (2008). Hands-only (compression-only) cardiopulmonary resuscitation: a call to action for bystander response to adults who experience out-of-hospital sudden cardiac arrest: a science advisory for the public from the American Heart Association Emergency Cardiovascular Care Committee. *Circulation*, *117*(16), 2162-2167. Retrieved from:** [**http://circ.ahajournals.org/content/117/16/2162.short**](http://circ.ahajournals.org/content/117/16/2162.short)

This is research conducted to provide a recommendation regarding the “2005 American Heart Association (AHA) Guidelines for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC)” meant for the bystanders who experience an adult out-of-hospital abrupt cardiac arrest. The research has used previously published peer-reviewed articles to provide advisory on the guidelines for CPR and ECC. The article outlines the importance of bystanders taking charge of a situation in which a victim is in a situation where they need CPR conducted on them to improve their survival rate following their sudden collapse. The bystanders are encouraged to activate the Emergency Medical Services (EMS) system and be in a position to provide chest compressions of high quality. This follows the recommendation by the American Heart Association Emergency Cardiovascular Care (ECC) Committee. This article is for the sake of clarifying the as well as amending the Guidelines for CPR with focus on the bystanders who may witness a sudden cardiac arrest.

**Hazinski, M. F., & Field, J. M. (2010). 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care science. Circulation, 122(Suppl), S639-S946. Retrieved from:** [**http://circ.ahajournals.org/content/122/18\_suppl\_3/S685.short**](http://circ.ahajournals.org/content/122/18_suppl_3/S685.short)

The research article has identified three primary lifesaving steps of BLS including the immediate Recognition and Activation of the emergency response system, early CPR as well as Rapid Defibrillation for VF. The article also provides the guidelines on what should be done by the rescuers and healthcare providers in case of an emergency. The research question raised in the study is the related to the relevance of CPR as a lifesaving mechanism. The focus of this article is the Basic Life Support (BLS) especially when it comes to cardiac arrest cases. The fundamental aspects of basic life support have been discussed in detail in this article. The guidelines with regard to BLS have been given great attention based on the 2010 laid out guidelines. Focus on this note is on the healthcare providers as well as the lay rescuers. Sudden Cardiac Arrest is considered to be the leading cause of death in the United States.

**Rea, T. D., Fahrenbruch, C., Culley, L., Donohoe, R. T., Hambly, C., Innes, J., ... & Eisenberg, M. S. (2010). CPR with chest compression alone or with rescue breathing. New England Journal of Medicine, 363(5), 423-433. Retrieved from:** [**http://www.nejm.org/doi/full/10.1056/NEJMoa0908993**](http://www.nejm.org/doi/full/10.1056/NEJMoa0908993)

The research article seeks to determine the relevance of CPR in an emergency situation. The article hypothesizes that the bystanders should offer chest compressions as this would lead to an improved rate of survival when compared to instructions to offer chest compression along with rescue breathing. The researchers performed a multicenter and randomized trial of instructions to the bystanders with the aim of performing CPR. The outcome of the research is that the dispatcher instructions which only entails chest compression cannot enhance the rate of survival. This article focuses on the having bystanders provide services in terms of chest compression alone in improving the survival rate of the victims who experience sudden cardiac arrest. It is easier to have bystanders conduct the chest compression-only CPR compared to having them receive instructions on how to conduct chest compressions plus rescue breathing which might rescue the chances of survival for the victim. Randomized trials were conducted by bystanders following given instructions on how to conduct CPR.

**Lerner, E. B., Rea, T. D., Bobrow, B. J., Acker, J. E., Berg, R. A., Brooks, S. C., ... & Nadkarni, V. M. (2012). Emergency medical service dispatch cardiopulmonary resuscitation prearrival instructions to improve survival from out-of-hospital cardiac arrest: a scientific statement from the American Heart Association. Circulation, 125(4), 648-655. Retrieved from:** [**http://circ.ahajournals.org/content/125/4/648.short**](http://circ.ahajournals.org/content/125/4/648.short)

This research article highlights and reviews the methods or processes of offering CPR pre-arrival instructions determines the necessary instructions or guidelines as important to the Chain of Survival along with the description of the framework which will offer a programmatic appropriate best approaches for the provision of the CPR prearrival guidelines. The scientific statement review also focuses on the significance of monitoring and evaluating the performance of dispatcher at the same time provide regular feedback. Sudden cardiac arrest is a leading cause of death following the collapse of the cardiovascular system. To help increase the survival chances of the victims, there are rescuer actions required to make this possible. The Chain of Survival link ought to be strengthened so that the survival rates are increased which then means that the chain has link interdependence. This is where bystanders come in.

**Hallstrom, A., Cobb, L., Johnson, E., & Copass, M. (2000). Cardiopulmonary resuscitation by chest compression alone or with mouth-to-mouth ventilation. New England Journal of Medicine, 342(21), 1546-1553. Retrieved from:** [**http://www.nejm.org/doi/full/10.1056/NEJM200005253422101**](http://www.nejm.org/doi/full/10.1056/NEJM200005253422101)

The researchers provided randomized research with the aim of comparing the CPR by chest compression with the CPR through chest compression together with the mouth-to-mouth ventilation. The study results indicated that after CPR through chest compression alone is the same to the chest compression by the use of mouth-to-mouth ventilation. The results are also indicated that the chest compression alone is the most preferred approach for the bystanders who are lack experience in CPR. The Seattle area has seen the citizens undergo training on CPR to help improve survival rates of those that end up suffering from sudden cardiac arrests. However, those who end up being bystanders in such scenarios do not perform CPR on the victims thus lowering the survival rates. Following conducted experiments, chest compression CPR and chest compression plus mouth to mouth ventilation CPR have both been found to be successful. This article details the comparison between these two following a conducted experiment. A central dispatching EMS system was considered in this case at the fire department.

**Cabrini, L., Biondi-Zoccai, G., Landoni, G., Greco, M., Vinciguerra, F., Greco, T., ... & Zangrillo, A. (2010). Bystander-initiated chest compression-only CPR is better than standard CPR in out-of-hospital cardiac arrest. HSR proceedings in intensive care & cardiovascular anesthesia, 2(4), 279. Retrieved from:** [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3484593/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3484593/)

The researchers conducted the systematic review along with the meta-analysis of randomized controlled clinical trials to compare the simplified type of CPR. Besides, the researchers researched, examined and reviewed published literature sources on out-of-hospital CPR related to the non-traumatic cardiac arrest in various databases. According to the researchers, there is much superiority of bystander compression CPR. Cardiac arrests that occur out of the hospital have been proven to have a lower survival rate compared to hospital discharge. Survival rates have been compared in this article between chest compression-only CPR and standard CPR with ventilation. Meta-analysis and a systematic review have been considered in these trials. The focus is on the non-traumatic cardiac arrest.

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