

The Effectiveness of the Anemia Prevention Education Program for Muslim Adolescent Girls in Indonesian Rural Areas

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ABSTRACT

Introduction: In adolescent girls, the need for iron increases due to accelerated growth and monthly iron loss because of menstruation. Anemia in adolescent girls can cause a decrease in learning concentration, headaches, dizziness, drowsiness, weakness, pale skin, and others. This study aimed to determine the effectiveness of the anemia prevention education program on adolescent girls' knowledge, attitudes, and practices in Indonesian rural areas.

Method: The research sample consisted of 81 respondents (40 in the control group and 41 in the intervention group) from two schools, who were selected using total sampling for the control group and quota sampling for the intervention group. The anemia prevention education intervention consisted of 4 meeting sessions held every week for a month with 30-40 minutes for each meeting.

Result: Data analysis revealed that the anemia prevention education program effectively increased anemia knowledge ($p=0.00$) and practice ($p=0.02$). However, this program was ineffective in changing adolescent girls' attitudes about anemia prevention ($p=1.00$) because adolescent girls had a positive attitude (100%) both before and after receiving education.

Conclusion: As a result, it can be stated that nurses and other health workers can apply for the anemia prevention education program conducted by the Public Health Center to improve adolescent girls' knowledge and practice of anemia prevention.

Keywords: Knowledge, Attitude, Practice, HBM

INTRODUCTION

Latin word 'nurtrire' meaning to suckle or wet nurse was the origin for the word 'nurse'. Almost around 16th century the meaning was directed towards a person caring for infirm.¹ Today nursing has been defined 'as a profession within the health care sector focused on the care of individual, families and communities so they may attain, maintain or recover optimal

health and quality of life'.² Broad approach for caring patient, training and extending scope related to practice differentiate nursing field from other health related fields. From the first perspective to the second definition there were the centuries involved. This paper aims to clarify the philosophical transitions for nursing knowledge development and explain how our discipline is guided by philosophical paradigms.

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Philosophy is the process people undertake while trying to understand fundamental truth about their existence, the world where they live, relationships to the world. This is applicable in different academic fields as well. A Philosophy of nursing is 'a statement encompassing ontological claims about the phenomena of central interest to a discipline, epistemic claims about how those phenomena come to be known and ethical claims about what the member of discipline value'.³ Scruton suggests that philosophy is important in nursing as it involves 'a natural extraction of our interest in truth'.⁴ Thus, it helps to explore variety of approaches for nursing knowledge and practice.⁵ Philosophy helps nursing fraternity for critical thinking and reflects the influence of nursing values on practice and way of being. Thus, clear insight of philosophy is vital to nursing discipline and professional practice.⁶

Nursing epistemology or nurse's way of knowing involves emergence of nursing knowledge, its structure, method, pattern of knowing of its members and claims validation criteria. It has engaged nurse scientist, clinicians, and educator for developing phenomena helping to explain and clarify relationships between health and illness behavior, wellbeing and nursing action. Pamela Reed & Lisa Lawrence defined nursing knowledge as "Nursing knowledge refers to knowledge warranted as useful and significant to nurses and patients in understanding and facilitating human health processes".⁷ Carper described four basic patterns of knowing in nursing; empirics that is the science of nursing and is 'empirical, factual, descriptive', second is esthetics; encompassing the art of nursing, personal knowledge, which is focused on the knowing, encountering and actualizing of the concrete, individual self and finally ethics concerned with moral knowledge of nurse.⁸ Chinn & Kramer explained emancipatory knowing that includes socio-political, cultural context of nursing and health care, it calls for action for eliminating inequalities and injustice.⁹ Further the integrated expression of emancipatory knowing is praxis which brings about change that is intended to be benefit for all.

As pattern of knowing in nursing were conceived as a process of knowing nursing, end product of nursing epistemology was identified as clinical, conceptual and empirical knowledge.¹⁰ This knowledge is the ontology. Ontology concerns itself with the nature of reality. In accordance with philosophical prospective in scientific realism ontology address debate among the concepts of disciplines.¹¹ Real means the existence of the entity or process in the universe, not depending on the content like belief, perception, and attitude of mind. Axiology is the science of how human value and make value judgements.¹²

There was high urge to demark nursing as a unique discipline. Donaldson and Crowley argued stating basis for nursing was 'tacit rather than explicit' and focused that nursing research should be in the discipline of nursing rather than conducted by nurse.¹³ Schwab argued that discipline constitute substantive structure; concept, theories, principles, and ideas making knowledge base of discipline while syntax included method used in inquiry, means to evaluate values, credibility or usefulness of enquiry done in discipline.¹⁴ Thus, as a response to this concern, unique language had been created as nursing diagnosis and taxonomies have been developed as the evolution of nursing science. The process of empirical scientific enquiry has been guided by the philosophy of Aristotle before 16th century that is premodern, naturalism era.

Empiricism has been defined as a bridge conjunction between nursing theory and their practice.¹⁵ They have a belief that there is only one reality and that can be verified through senses. Empiricism believes reality being not dependent of its context and truth can be defined.¹⁶ Further empirical knowledge allows nurses to describe, predict and even control phenomenon in nursing discipline by testing hypothesis, comparison of interventions.⁸ They used quantitative research designs like experiments, surveys and analysis of secondary-source data.¹⁷ Conformation of results is done through replication that

allows comparison across research setting or timeframe.¹⁸ Empirical paradigm governed both positivism and post-positivism. The core natural science was value free.

Postpositivist empirical paradigm admit that absolute truth cannot be ascertained thus contextual factors play important role in understanding relationships between variables.¹⁶ Thus, this makes it applicable to nursing research and practice. Logical empiricism was pertinent since 1940's to 1960's which focused on understanding nature of scientific knowledge with logical principles of reasoning. And this view governed more than 2 decades. The positivism came as a model for understanding the society; French philosopher Comte saw science as a means for getting insight about society and human behavior. He coined the term 'positive' originated from Latin word 'positum' meaning posited, thus for positivism objective truth existed and goal of science was to discover it. This purpose was termed as 'naturalism' which has been used by researcher to describe study of people in their own natural environment¹⁹. Logical positivism aimed to strengthen positivism empiricism at the era where science matter was not directly observable arguing for the need of theoretical axioms for explaining phenomenon not being able of direct verification but anchored empirically by 'correspondence rules'²⁰ which were amenable for observational testing. Also, they supported the positivism to argue that empirical knowledge was the only valid form of knowing.

Logical positivism influenced the knowledge development in nursing since the end of 1960's. This placed nursing as a unique discipline, distinct from basic science. Further developing nursing as a professional discipline, involved having social construct, licensing requirements, and special context for nursing in public. This emphasized nursing science to focus on role of theory in nursing. Mechanism of theory development were emphasized for the development of nursing science from 1960's through 1980's. Logical positivism was basis for theory development.

Nursing theory development were visible in this period, 1961 (Orlando), 1970 (Roger), 1970, 1971 (Roy).²²⁻²³ The influence of logical positivism was gone in the early 1980's.

At this point nursing was attracted by a new paradigm following Thomas Kuhn (1970- 1974) which changed the philosophy of science from a focus on product to focus on a process. He believed science being organized around the idea of central paradigm. Also, paradigm was supposed to serve as disciplinary matrix that include the values and aims inherent in major substantive content of discipline. And the work of scientist was to articulate the paradigm. The word 'paradigm' became popular in nursing discipline; also 'meta-paradigm' in nursing was discussed. With some limitation Kuhn's ideas did not rule longer. Laudan (1977) focused on science as problem solving activity, providing view of science which address role of both conceptual and empirical problem while conducting science and determination of progress. As there was residual of logistic positivism and emergence of postmodernism, Laudan's idea got less attention.²²

With the influence of historicism during 1970-1980's nurses were focused on resolution of conceptual problems. Still was not consistent with historicism but had positivist orientation. Concepts as building blocks of theory were valued. Analysis, synthesis and derivation for concept, statement and theory were focused on 1990's by Catherine Norris (1982), Walker and Avant (1983,1988), John Wilsom (1969). This is influenced by the recognition of role of theory in science. A philosophical view of concept development was formed by Rodgers (1989); targeted for providing solid foundation for conceptual work as a part of development of science and discipline in nursing ²³. As predominant problems in nursing field are conceptual in nature, and importance of concept in giving identity and scope of nursing as a discipline is crucial concept development is extremely needed. With these efforts for identifying essence of nursing, fundamental concepts were postulated as constituting core of nursing knowledge. Kim, Flaskerud and

Halloran, and others identified 'nursing', 'person', 'health' and 'environment' as key concepts in nursing.^{24,25} The post positivist approach utilizes different variety of data, both sensory experiences and perception of those experiences. Use of different forms of data is done to falsify hypothesis, providing support to theories. Traditional postpositivist approach undertakes using both quantitative and qualitative data in understanding phenomenon making it more flexible than positivism.

Then comes interpretive perspective which incorporates naturalistic, constructivist interpretive and humanistic paradigms. It examines phenomena through the eyes of the people who live it. In this paradigm reality is complex, multifactorial and content dependent.¹⁶ As per this paradigm, reality is composed intersubjectively through socially and experimentally developed meaning and understanding (relative ontology). Also, it assumes we cannot be separated from what we know, thus our understanding about the world is central to understanding self, others and the world (subjectivist epistemology).²⁸ Relationship networks, believes, cultures, languages construct social reality. The main aim of interpretive paradigm is describing and interpreting the phenomenon existing in the world for gaining shared meaning with others thus believes human experience as a process of interpretation rather than sensory perception only. Interpretive paradigm has critical concerns regarding moral values.²⁸ Interpretation involves search for vast perspectives regarding certain event or phenomena which might provide with some possibilities regarding the truth but can't offer certainty of future event as outcome. Further interpretations are moment specific (distinguished context or situation or time), like quality of life of cancer patients immediately after diagnosis, during chemotherapy, during radiation therapy, after mastectomy, during survival. Though all of them represent cancer patient's quality of life but they differ due to their unique context and timing. Hermeneutics is

a term referring to the art of interpretation. Interpretative approach uses interviewing, observation along with analysis of existing texts.²⁸ It includes phenomenology, grounded theory, ethnography, participatory action. The process includes formulating research question, deconstructing and critical analysis of prior conceptions, capturing the phenomena, bracketing the phenomena, construction of phenomena and finally contextualization of phenomena.³⁹ Research conducted in interpretive paradigm is difficult to generalize findings but is in accordance with the aim of nursing that is meeting the need of patients as it helps to uncover information about individual's experience which can be used in nursing discipline.¹⁶ Interpretive paradigms focus on induction and theory development unlike in empirical paradigm that focus on deduction and theory testing.³⁰ Interpretive paradigm had value laden and meaning of values of lived experiences.

In the mid to late 20th century great movement across philosophy, arts, architecture and criticism occurred making modernism depart and introduced postmodernism. Incorporating wide approaches and discipline, postmodernism was defined as attitude of skepticism, irony or rejection of ideologies of modernism. Postmodern critique included Universalist notion of objective reality, morality, truth, human nature, reason, science, language and social progress. Postmodernism is a mode of disclosure or intellectual stance which rejects the possibility of reliable knowledge denies existence of universal, stable reality further frames aesthetics and beauty as arbitrary and subjective.^{31,32} In nursing post modernism involved emphasizing narrative tradition and disclosure, critical social theories and feminism. It was based on ideas of individual truth, consistent with nursing emphasis on whole person and individual approach to care. Also, the power differences present in the society, its reflection in health care system including its interaction with care provider were considered by post modernism.

Another paradigm is Critical theory. It is 'a general perspective that uncovers social, historical and ideological forces and structures that limits human potential and that produce injustice and inequality in society' 33. Critical paradigm, focusing on social struggle, domination, and institution with the aim of bringing egalitarian society is important paradigm for nursing.¹⁷ Critical theory aims at man's emancipation from slavery. The global goals changes with time and nursing knowledge development cannot be addressed only by positivism and interpretative paradigm. Rationalist, interpretivist, mediation and emancipation were the four-position suggested by Kim for explanation concerning nursing practice.³⁴ Critical theory applied to nursing explores the reason behind some group of people having some predisposition for some illness reduce health disparities of social origin, understand cultural differences while treating patients.

According to Butterfield bringing change in health status of patient by changing patient's belief is one of the aims of nursing, but for acknowledging the antecedent factors influencing patient's behavior and health, a wide perspective is required 35. It incorporates the role of nurse as an advocator. As nursing moves beyond carrying only for illness and focus on minimizing harmful effect of society and contextual circumstances on individual critical paradigm is significant.³⁶ Critical paradigm includes participatory action research as it focuses on creating change.¹⁷

Feminist theory evolved through critical paradigm. Feminism evolved as a movement for arranging the world in terms of gender equality and getting rid of gender-based power differences. Being not only limited to gender it included all the minorities and marginalized group for uncovering inequalities persisting in every society. Liberal feminism, radical feminism, socialist feminism and womanism are the distinguished types of feminism.³⁸ Feminism was of interest for nursing fraternity as it was considering some crucial values of nursing, emphasizing the uniqueness of each

individual; importance of reality of individual in terms of gender, class, social, economic, religious aspects, awareness of power differences within health care system itself.

These new philosophical emergences came along with new modes of inquiry and new methodologies in nursing. Belief of an individual, culture, social context, power differences, and multiple realities needed the development of new methods able to manifest its crucial aspects of existence through research. These philosophical differences imply that traditional scientific principles are not applicable for studying human in individual and social context pointing at the need of pluralistic approach focusing on holistic tradition of inquiry.

Post modernism accelerated the growth of qualitative methodologies for knowledge development in nursing.³⁷ With the presence of all of these paradigms, the demand for identifying diverse but valid opinions has let pragmatism arise. Pragmatism evaluates idea utilizing 'What difference does it make?' rather than criterion 'Is it true?'.³⁸ Nurses face diverse situations and multiple approach of problem solution are necessary.¹⁶ Thus, selection of best course of action applicable for the client is the priority. With pragmatism appraising and selecting a nursing paradigm is possible.

CONFLICT OF INTEREST

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