Short Communication

Evidence-Based Quality Improvement: A Knowledge Transformation in Nursing Care

Yogesh Kumar

Associate Professor, Child health Nursing, M. M. College of Nursing, Maharishi Markandeswar University, Mullana-Ambala (Haryana)

ABSTRACT

Knowledge usually is not taught in its original form as stored in the teacher's memory. A knowledge transformation is considered necessary. During the transformation, the teacher may elaborate on the subject content knowledge, identify various representations for the concepts, and reshape the knowledge into a teachable form to maximize its comprehensibility for student learning. To provide a standard quality of nursing care knowledge transformation is necessary before the sources are usable in clinical practices or clinical decision making.

Key Words: Knowledge Transformation, Evidence-Based Practice

INTRODUCTION

In the area of health care to provide the effective and qualitative nursing care various sources are available to integrate in knowledge of nursing personnel, but knowledge transformation is necessary before these sources are usable in clinical practices or clinical decision making.

Knowledge transformation means the conversion of research findings from primary research result, through a series of stages and forms, to impact on health outcomes by way of evidence-based nursing care.

Evidence-based nursing care refers to a body of scientific knowledge of nursing care and its relationship to health care services. [1] Nurses must seek to apply evidence-based practice to enhance the effectiveness of health care by qualitative nursing care and to participate in research and outcomes measurement so that additional strong evidence can be gathered on the best approaches to nursing care. [2]

METHODS

Processes of Knowledge Transformation are derived by the theories of organizational learning as proposed by Polanyi and Nonaka based on the conversion of knowledge between tacit and explicit forms. [3]

Tacit knowledge: is actionable knowledge that is derived from experience of the learner and therefore is pragmatic and valuable. According to Nonaka "the key to knowledge creation lies in the mobilization and conversion of tacit knowledge."

Explicit knowledge: is based on the interaction and communication process assisted with the technology via which the knowledge can be stored, transferred and

communicated using some technology or media such as a document, video, audio, images, and multimedia.

Modes of the Knowledge transformation:
Modes of the Knowledge transformation are as follows:

1. **Socialization** that is the knowledge from the tacit to the tacit form and includes the shared formation and communication of tacit knowledge between people generally via meetings and discussion forums. The tacit knowledge sharing is connected to ideas of communities and collaboration.

2. **Externalization** that is knowledge from the tacit to the explicit form and that is accomplished by the steps of the conceptualization, elicitation and articulation in collaboration with the sources of the tacit knowledge that is captured in explicit form for further dissemination and communication. This conversion is accomplished by dialog among the knowledge team members using analogies and story board techniques and storing the results using technology media.

3. **Combination** that is knowledge from the explicit to the explicit form and that is shareable through meetings, discussion forms, education and training, documents, e-mails, etc. The use of technology to manage and search collections of explicit knowledge is well established. The collected information from various sources can be organized, classified, reconfigured, made searchable as well as expandable using collaboration by means of appropriate technology solutions.

Obstacles in science based nursing care:
The nursing care nurses provide does not reflect current knowledge due to a number of obstacles.

In order to achieve science based nursing care, two principal obstacles must be addressed:

- the complexity of knowledge, including volume and
- The form of available knowledge.

Obstacles and their best possible solutions: Complexity with volume of literature is one obstacle in moving research rapidly into patient care is the growing complexity of science and technology. No unaided human being can read, recall, and act effectively on the volume of clinically relevant scientific literature.

The best possible solutions can be the evidence summaries, including systematic reviews and other forms, reduce the complexity and volume of evidence by integrating all research on a given topic into a single, meaningful whole.

Form of knowledge is also a obstacle as well. Literature contains a variety of knowledge forms, many of which are not suitable direct practice application.

The best possible solutions is, from the point of discovery, knowledge can be transformed through a series of stages to increase meaning to the nurses, clinician and utility in clinical decision making.

Models of the EBP process: EBP models offer frameworks for designing and implementing EBP projects in practice settings. Some models focus on the use of research from the perspective of individual clinicians (e.g., the Stetler Model), but most focus on institutional EBP efforts (e.g, the Iowa Model). [4]

The many worthy EBP Models are too numerous to list comprehensively, but include the following:

- ACE Star Model of Knowledge Transformation (Academic center for EBP 2009)
- Advance research and clinical practice through close collaboration (ARCC)

Model (Melnyk and Fineout-overholt, 2011)
- Clinical nurse scholar Model (Schultz, 2005)
- Diffusion of Innovations Theory (Rogers, 2003)
- Iowa Model of Evidence-Based Practice to promote quality care (Titler et al...2001)
- Johns Hopkins Nursing EBP Model (New House et ai.2005)
- Model for change to evidence -Based Practice (Rosswurm and Larabee, 1999)
- Promoting Action on research implementation in health services (PARiHS) Model, (Rycroft-Malone et al. 2002)
- Stetler Model of research utilization (Stetler, 2001)

ACE Star Model of Knowledge Transformation:

Knowledge Transformation by ACE Star Model is done through the following Stages-
Star point 1-Discovery Research
Star point 2-Evidence Summary
Star point 3-Translation of Guidelines
Star point 4-Practice Integration
Star point 5-Process, Outcome Evaluation
Each model offers different perspectives on how to translate research findings into practice, but several steps and procedures are similar across the models. [4]

Learners commonly experience difficulty in applying appropriate knowledge to solve a novel problem; a transformation strategy is needed to supplement and/or transform their existing knowledge base (Desforges, 2000). [5]

CONCLUSION

Knowledge transformation is necessary before sources are usable in clinical practices or clinical decision making. Model offers different perspectives on how to translate research findings into practice.

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