

KNOWLEDGE AND UTILIZATION OF STANDARDIZED NURSING LANGUAGE AMONG NURSES IN JOS UNIVERSITY TEACHING HOSPITAL PLATEAU STATE, NIGERIA.

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Abstract

Standardized Nursing Language is an emerging concept which marks the dawn of a new era in nursing practice. NANDA-I, NIC and NOC (NNN) are three in one Standardized language incorporated within the nursing process. Standardization of nursing terminologies enhances better communication within and across health professionals, thus making nursing visible. The study therefore, aimed at determining the knowledge and utilization of Standardized Nursing Language (NANDA-I, NIC and NOC) and to identify barriers to their use among nurses in Jos University Teaching Hospital Plateau state, Nigeria. The study was a non-experimental descriptive survey, in which questionnaire was used to gather relevant data from a stratified randomly selected 230 professional nurses in the teaching hospital but 220 were retrieved which represented 95.7% response rate. Data was presented in frequency tables and percentages. Hypotheses were tested using Chi-square. The findings revealed that majority (73.2%) of the respondents had knowledge about SNL especially NANDA-I (82.7%). However, most of the respondents did not know about NIC and NOC (54.5%). Similarly, Most of the respondents (55.9%) utilizes SNLs in their institution especially NANDA-I diagnoses (74.5%), with majority (57%) having adequate levels of utilization of NANDAI, while most of them were not using NIC and NOC in Nursing documentation. Nurses in Jos University Teaching Hospital, generally have adequate knowledge about NANDA-I but have inadequate knowledge about NIC and NOC. They also adequately use NANDA-I but have inadequate usage of NIC and NOC in nursing documentation, for reasons such as inadequate manpower, lack of appropriate equipment, inadequate knowledge etc. Furthermore, chi – square analysis (X²) shows that there is significant relationship between knowledge and utilization of SNLs among nurses in JUTH. Therefore, the need for more awareness on SNL and how to apply them to clinical practice among nurses in the hospital is recommended.

Introduction

Sani and Sani (2015) observed that throughout the history of nursing profession, nurses have documented nursing care using individual, hospital, and unit-specific methods; consequently this brought about a wide range of terminology to describe the same care. Although there are other more complex explanations, Meum, Ellingsen, Monteiro, Wangenstein and Igesund (2013) defined Standardized Nursing Language (SNL) as a common language that is readily understood by all nurses to describe care to individual, family, and community. Olaogun (2014) defines SNL as content standards that include terms which represent a focus of diagnoses, interventions and outcomes consistent with the scope of nursing practice. On a similar note, Rutherford (2008) opined that SNL describe nursing care concepts such as diagnosis, interventions and outcomes using common terms to communicate within and across health care systems, health care providers, and other health professionals. Fajemilehin (2014) also describes standardized terminologies as hierarchical information structures, representing but not replacing nursing process of problem solving.

Yearous (2011) observed that some of these SNLs are specific to practice settings, and others are more comprehensive and can be utilized in a variety of practice settings. These SNLs provide consistent terminologies or coding of data which in turn allows for aggregation of data and provides the basis for research, quality improvement, and ultimately helps define best practices and evidence-based guidelines. Examples of SNLs include North American Nursing Diagnosis Association-International (NANDA-I); Nursing Intervention Classification (NIC), Nursing Outcome Classification (NOC) etc. NANDA-I, NIC and NOC are comprehensive, research-based, standardized classifications of nursing diagnoses, nursing interventions and nursing-sensitive patient outcomes. These classifications provide a set of terms to describe nursing judgments, treatments and nursing-sensitive patient outcomes (Olaogun, 2014).

Herdman (2012) defined Nursing Diagnosis as a clinical judgment on human response to health conditions / life processes, or vulnerability of an individual, family, group or community. Similarly, Herdman (2012) described NANDA-I as a clinical judgment

about individual, family, group or community responses to actual or potential health problems. It provides a basis for selection of nursing interventions to achieve outcomes for which the nurse has accountability. Nursing Diagnoses consists of Problem-Focused diagnosis, Risk diagnosis, Syndrome and Health promotion diagnosis (Olaogun & Adejumo, 2014). Bulechek, Butcher, Dochterman and Wagner (2013) defined NIC as a comprehensive standardized classification of interventions that nurses perform. They defined an intervention as any treatment that a nurse performs to enhance patient outcomes. Moorhead, Johnson, Maas and Swanson (2013) define NOC as an Individual, family, or community behaviour that is measured along a continuum in response to nursing interventions. It is a comprehensive classification of patient outcomes developed to evaluate the effects of nursing interventions. (NANDA, 2012)

According to Yearous (2011) it is essential and critical that nurses document nursing cares, processes used in health, and outcomes with standardized methods. Fischetti (2008) and Westendorf (2007) reported that the documentation methods used by nurses varies for a range of reasons including, but not limited to, differences in hospital policies, lack of organizational oversight, and lack of resources for documentation such as computers or computerized documentation programs. According to Thoroddsen and Ehnfors (2007) there is significant improvement in the use of NANDA for nursing diagnosis, NIC for nursing intervention in patient daily documentation and Functional Health Pattern for nursing assessment. This means that nurses preferred these three frameworks than the other ones. Similarly, Olaogun, Ogini, Oyedeji, Nnahiwe and Olatubi (2011); Odutayo, Olaogun, Oluwatosin and Ogunfowokan (2013) reported that there are few studies conducted in Nigeria on Standardized Nursing Language. The studies revealed that there is poor knowledge and low utilization of SNL among nurses in Southern Nigeria. But no study has been conducted in Northern Nigeria to examine the nurses' knowledge and utilization of standardized nursing language. Therefore, the need to explore the knowledge of standardized nursing language among nurses in Northern Nigeria.

Statement of the Problem

According to Yearous (2011) hospital based policies, state and federal laws provide guidance for nursing practice. However, some of these policies fail to address how nurses should document nursing language in Electronic Health Records. The extent that nurses use clinical information systems and SNL is unknown. To date there is minimal literature describing how SNLs are incorporated into daily use for practicing nurses' documentation. According to Yearous (2011) Nurses are accountable for documenting in a manner that captures the nursing process, including assessment, diagnosis, outcomes, planning, implementing interventions and evaluation to determine if outcomes were met. He also noted that while some literature is available to guide nursing documentation; evidence suggests that nursing documentation practice varies across states, within states and even across districts.

In spite of global efforts made into sensitization update and inclusion in training curricula of nursing for all and sundry to meet up with necessary reforms (Fajemilehin, 2014) a good number of nurses in Nigeria, especially the northern part of Nigeria are still unaware of the existence of SNL or unable to utilize it in their clinical practice. Sani and Sani (2015) also reported that no studies have been conducted in Northern Nigeria to examine the nurses' knowledge on SNL. Hence, the need to explore the knowledge and utilization of SNL among nurses in Northern Nigeria. Therefore the purpose of this research is to determine the level of knowledge and utilization of SNL (NANDA, NIC and NOC) among nurses in Jos University Teaching Hospital Plateau state, Nigeria.

Specific Aims and Objective of the Study

The specific aims and objectives for this study are:

- 1. To determine the levels of knowledge of Standardized Nursing Language, NNN among nurses in Jos University Teaching Hospital (JUTH) Plateau state, Nigeria.
- 2. To assess the levels of Utilization of NNN among nurses in JUTH Plateau State, Nigeria.
- 3. To identify barriers to the utilization of Standardized Nursing Language, NNN, in the clinical nursing documentation among Nurses in Jos University Teaching Hospital, Plateau State.
- 4. To determine what the Nurses in Jos University Teaching Hospital perceive as ways of improving the knowledge and utilization of Standardized Nursing Language, NNN.

Significance of the Study

The study is very important because Standardized Nursing Language (SNL) has become the most used, researched, and documented terminology for nursing care delivery globally (Olaogun & Adejumo, 2014). Therefore, the findings of this study will provide the foundation for future efforts and studies regarding the incorporation of SNL in nursing documentation within the clinical settings in Nigeria. It will assist the management of the teaching hospital to incorporate the use of this standardized

terminology in nursing practice and documentation. It will also assist nurses to identify factors that hinder the utilization of SNL and as such help in proffering lasting solutions to the problems identified. The long-term goal of this research is to identify and facilitate a process by which nurses consistently use SNL in documenting care. The global use of standardized nursing language to describe, explain, and predict the health of patients in clinical settings will provide an opportunity to improve the quality health care by allowing for the testing of effectiveness of interventions and development of evidence-based guidelines. Standardization of the documentation process will also allow for the development of large data for further research, guide policy development, and provide a framework to evaluate nursing interventions in the hospital setting (Yearous, 2011).

Literature Review

According to Herdman (2012) NANDA-International originally known as NANDA i.e. North American Nursing Diagnosis Association, founded in 1982 grew out of the National Conference Group, a task force established at the First National Conference on the Classification of Nursing Diagnoses, held in St. Louis, Missouri, USA, in 1973. This conference and the ensuing task force ignited interest in the concept of standardizing nursing terminology development. Although the name 'North American Nursing Diagnosis Association' is no longer in use, "NANDA" remained in the name because of its international recognition as the leader in nursing diagnostic terminology. NANDA is responsible for the creation, testing, and validation of existing and new nursing diagnoses. Its taxonomy i.e. Classification system and diagnostic labels are the most widely used resources for nursing diagnosis (Mohr, 2009). The NANDA International is a global organization that started the whole process of developing and testing standardized Nursing Languages (SNLs) in order to build up a body of knowledge for Nursing. The Nursing process was developed prior to the effort of NANDA-I as the tool for nursing practice. That tool needed a scientific and organized body of knowledge for its implementation. The SNLs is the pathway for making the Nursing process useable and visible. After over 40 years, this organization has changed the frontier of nursing by making the Nursing process the global tool for nursing practice meaningful (Olaogun, 2014).

NANDA-I is a member driven grassroots organization committed to the development of nursing diagnostic terminology. The Association desires to provide nurses at all levels and in all areas of practice with a standardized nursing terminology with which to name human responses to actual or potential health problems and life processes, develop refine and disseminate evidence-based terminology representing clinical judgments made by professional nurses, Contribute to the development of informatics and information standards, ensuring the inclusion of nursing terminology in electronic healthcare records among others. Nursing terminology is the key to defining the future of nursing and ensuring the knowledge of nursing is represented in the patient record – NANDA-I is the global leader in this effort (Herdman, 2012).

According to Olaogun (2014) the network was started in Nigeria on Thursday, June 18th 2009, at the Department of Nursing Science, Obafemi Awolowo University (OAU), Ile- Ife with 21 nurses and students in attendance. Three Biennial conferences had been held in 2010 and 2012 at OAU and in April 2014 at the University of Ibadan, Nigeria. A step down conference/workshop was organized in October, 2014 in Abuja. Though in Nigeria, we are still facing a lot of challenges in the use of the Nursing Process, but from the experience of the NANDAI-NIC-NOC team that was formed in OAU, Ile Ife has shown that very soon many of these challenges will be resolved. Training workshops were run on NNN in many teaching hospitals and at many Mandatory Continuing Professional Development Programme (MCPDP) workshops in Nigeria. The enthusiasm demonstrated by nurses at every workshop has shown that in spite of the challenges in implementing the Nursing Process, nurses are desirous of the knowledge.

According to Bulechek, Butcher, Dochterman and Wagner (2013). Nursing Interventions Classification (NIC) is a comprehensive standardized classification of interventions that nurses perform. It is useful for care planning, clinical documentation, and communication of care across settings, effectiveness research, productivity measurement, competency evaluation, reimbursement, teaching, and circular design. The classification includes interventions that nurses perform on behalf of patients, both independent and collaborative interventions, both direct and indirect care. An intervention is defined as any treatment based upon clinical judgment and knowledge that a nurse performs to enhance patient/ client outcomes. Although an individual nurse will have expertise in only a limited number of interventions reflecting her or his specialty, the entire classification captures the expertise of all nurses.

According to Olaogun, Adejumo and Fatoye (2014) NOC is defined as an individual, group, family and community health status, behavior or perception that is measured along a continuum in response to nursing intervention (s). Each outcome has an associated group of indicators that are used to determine current status in relation to the outcome. In order to be measured, the outcome requires identification of a series of more specific indicators. An outcome indicator is a more concrete individual, family or community state, behavior, or perception that serves as a cue for measuring an outcome. According to Moorhead, et al (2013) a rating is provided by a five-point Likert scale that quantifies patient outcome or indicator status on a continuum from least to most desirable. It is a standardized scale, a rating of 5 is the best possible score and a rating of 1 is the worst score. Measurement of the outcome prior intervention helps the nurse establish a baseline score and can then rate the outcome after the intervention is provided, and to follow changes in patient's status. Measurement will reflect a continuum such as 1 = severely compromised, 2 = substantially compromised, 3 = moderately compromised, 4 = mildly compromised, 5 = not compromised. For example, the outcome 'Cognition' can be measured on this five point scale.

As a result of proliferation of computerized information systems, efforts to standardize and validate nursing diagnoses, interventions and outcomes have intensified during the past few years. Standardized care plans typically list nursing actions and interventions with rationale and expected outcomes. They are organized according to nursing diagnosis. Their purpose is to achieve consistent care of specific clients within an organization. In other words, a standardized care plan reflects the facility's goal that all clients with a specific health problem, regardless of context of care such as shift, nursing skill or day of the week, will receive the same care. Standardized care plans for a wide range of diagnostic categories can be found in reference texts and computerized information systems (Mohr, 2009). Yearous also reported findings on the barriers to adopting the use of NANDA-I, NIC, and NOC. The two greatest barriers reported were financial resources to pay for necessary equipment to document nursing care such as computer and computerized documentation program (56.9%) and lack of understanding of standardized nursing languages by other school personnel such as principals and school administrators (50.2%).

According to Kautz, Kuiper, Pesut and Williams (2006) NANDA diagnoses were correctly stated in 92% of the OPT models of baccalaureate nursing students. NOC were explicitly stated in 22%, and applied in 72%. Interventions matched appropriate NIC activities in 61%. Therefore, NANDA, NIC, and NOC (NNN) language was used inconsistently by nursing students in this sample. This is contrary to the findings of Thoroddsen and Ehnfors (2007) who reported that there is significant improvement in the use of NANDA for nursing diagnosis, NIC for nursing and nursing intervention in patient care. Mahmoud and Bayoumy (2014) reported that majority (94.6%) of nurses in Saudi Arabia said that they had good knowledge of the Nursing Process and confidence in ability to apply the Nursing Process. Similarly, Afolayan, Donald, Dume, Baldwin, Onasoga and Babafemi (2013) found that Nurses at Neuro Psychiatric Hospital, Portharcourt had adequate knowledge and understanding of the Nursing Process.

Methods

Research Design

The study adopts a non-experimental descriptive survey research method, in which questionnaire was used to gather relevant data from a stratified randomly selected 230 professional nurses in Jos University Teaching Hospital Plateau State, Nigeria.

Population of the Study

The study population is nurses working in Jos University Teaching Hospital. The Target Population is about 541 Nurses/Midwives of different cadres such as Chief Nursing Officers, Assistant Chief Nursing Officer, Principal Nursing Officers, Senior Nursing Officer, Nursing Officer I and II. However, nurses who were on leave during the study were excluded from this research.

Sampling Size/Sampling Technique

Stratified random sampling was used in selecting representative samples across the wards/units in the institution. Stratified random sampling was used because it provides for equal representation across the various nursing cadres and reduces bias. A list of nurses in the hospital was used which was collected from the office of the Assistant Director of Nursing Services (ADNS) as the sampling frame. Out of about 541 nurses in the hospital, 230 nurses selected using stratified random sampling. The Nurses were stratified into upper cadre nurses of 338 Chief and Assistant Chief Nursing Officers. The middle cadre nurses comprising 110 Principal and Senior Nursing Officers while lower cadre nurses include 39 Nursing Officer I and II. All wards/units of JUTH where nurses are working were included in the study. The Sample Size was calculated using Slovin's formula (Andale, 2012).

$$n = \frac{N}{(1 + Ne^2)}$$

Where, n = number of samples, N = total population and e = Error tolerance (This is obtained depending on what choice of confidence level to be used e.g. 95% confidence level will give a margin error of 0.05 which is gotten by subtracting the confidence level from 1.) Therefore the Sample Size = 230 Nurses.

Instrument of the Study

The instrument used for data collection was two standardized questionnaire which was adapted and modified for this study. These include Standardized Nursing Language Questionnaire (SNLQ) and Yearous Standardized Nursing Language Questionnaire (YSNLQ). The questionnaire was divided into 6 sections. Section one consists of both open and close-ended questions on Socio-demographic characteristics of respondents. Section two also contains open and close-ended questions on knowledge and utilization of SNL and NNN. Section Three comprises likert type questions on the levels of Knowledge and Utilization of SNL and NNN. Section Four contains likert type questions on Perceived Barriers to Utilization of SNL and NNN. Section Five contains suggestions on how to improve the knowledge and utilization of SNL and NNN in Nursing Profession.

Validity/Reliability of Instrument

The questionnaire was developed from two standardized questionnaires and given to the project supervisor for proof-reading and corrections, so as to ensure face validity of the instrument. Pilot study was done in which 10 Nurses in Jos University Teaching Hospital was given the questionnaire to answer. Observations were noted and corrections were made so as to ensure reliability of the instrument. Content validity was done in which the questionnaire was given to two experts who rated the items and a CVI of 0.89 was obtained.

Method of Data Collection

Two hundred and thirty questionnaires were distributed to the respondents hand to hand with the assistance of the unit heads in the institution. Out of which 220 questionnaires were answered and returned which represents about 95.7% response rate.

Method of Data Analysis

The data collected was analyzed using simple frequency distribution tables and percentages. Inferential statistics such as chi-square was used to test the hypotheses. Statistical Package for the Social Sciences (SPSS) Version 22 was used in the data analysis.

Results

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Gender	Frequency	Percent (%)
Male	30	13.6
Female	190	86.4
Total	220	100
Age range at last birthday	Frequency	Percent (%)
21 to 30 years	14	6.4
31 to 40 years	74	33.6
41 to 50 years	100	45.6
51 to 60 years	31	14.1
61 to 70 years	1	.5
Total (Mean age = 44 years)	220	100
Marital Status	Frequency	Percent (%)
Single	30	13.6
Married	177	80.5
Divorced	2	1
Widow	11	5
Total	220	100
Religion	Frequency	Percent (%)
Christianity	209	9.5
Islam	10	4.5
African traditional religion	1	.5
Total	220	100
Ethnicity	Frequency	Percent (%)
Hausa	6	2.7
Yoruba	22	10
Igbo	24	11
Plateau Ethnic Groups	120	54.4
Others e.g. Tiv, Idoma, etc.	48	22
Total	220	100

TABLE 2: RESPONDENT'S EDUCATIONAL QUALIFICATION AND WORKING EXPERIENCE

Year of completion of Nursing Training?	Frequency	Percent (%)
1971 to 1980	114	51.8
1981 to 1990	63	28.6
1991 to 2000	26	11.8
2001 to 2014	17	7.7
Total	220	100
Working duration (in years)?	Frequency	Percent (%)
1 – 10 years	45	20.5
11 – 20 years	68	30.9
21 – 30 years	94	42.7
31 years and above	13	5.9
Total	220	100
What is your highest educational qualification?	Frequency	Percent (%)
Diploma (RN/RM)	77	35
Post Basic Diploma	68	30.9
Bachelor's Degree	69	31.4
Master's Degree	6	2.7
Total	220	100
What is your present rank	Frequency	Percent (%)
Upper Cadre Nurse	142	64.5
Middle Cadre Nurse	42	19.1
Lower Cadre Nurse	36	16.4
Total	220	100

TABLE 3: RESPONDENTS' KNOWLEDGE ABOUT STANDARDIZED NURSING LANGUAGES/NANDA-I DIAGNOSES

Do you know about standardized nursing languages?	Frequency	Percent (%)
Yes	161	73.2
No	59	26.8
Total	220	100
If Yes, what is your source of information?	Frequency	Percent (%)
School	101	62.7
Hospital wards/units	21	13
Seminar/Workshop	22	13.7
Nursing Textbooks/Journals	13	8.1
Internet	4	2.5
Total	161	100
Do you know about NANDA-I Diagnoses?	Frequency	Percent (%)
Yes	182	82.7
No	38	17.3
Total	220	100
If Yes, what is your source of information?	Frequency	Percent (%)
School	93	51.1
Hospital wards/units	20	11
Seminar/Workshop	38	20.9
Nursing Textbooks/Journals	20	11
Internet	11	6
Total	182	100
Do you know about NIC and NOC?	Frequency	Percent (%)
Yes	100	45.5
No	120	54.5
Total	220	100
If Yes, state your source of information about NIC & NOC?	Frequency	Percent (%)
School	35	35
Hospital wards/units	8	8
Seminar/Workshop	32	32
Nursing Textbooks/Journals	12	12
Internet	13	13
Total	100	100
Do you have classroom teaching on the standardized nursing language?	Frequency	Percent (%)
Yes	91	41.4
No	129	58.6
Total	220	100
If Yes, where?	Frequency	Percent (%)
School	63	69.2
Hospital wards/units	12	13.2
Seminar/Workshop	16	17.6
Total	91	100
Do you have a clinical practice on standardized nursing language?	Frequency	Percent (%)