Knowledge and Use of Standardized Nursing Languages: A Study among Nurses at the Federal Medical Centre, Owo, Ondo State, Nigeria

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Abstract

The Standardized Nursing Languages (SNLs) is a new innovation in nursing which is aimed at improving the standard of nursing practice and the professionalism of Nursing. This study was carried out to know the level of knowledge and utilization of Standardized Nursing languages among nurses at the Federal Medical centre Owo. It was aimed at identifying nurses familiarity with the Language, their level of knowledge, use in patient care and also to identify the possible barriers that might prevent the use of the Language in Practice. The use of SNLs is still not gaining popularity among nurses in this tertiary institution, despite its formal introduction to Nigeria since 2010, hence the need for this research work.

A descriptive/correlational design was employed using a self-structured questionnaire. A sample size of 250 nurses was targeted and sampled using a non-probability technique. The data was entered using the SPSS software and analysis done using tables of frequency and percentage, mean and standard deviation, chi test, Pearson correlation where necessary.

Result showed that nurses have a poor knowledge of SNLs. They are mostly familiar with NANDA. The major method of documentation was paper as they have no computer system in their unit. 54% of respondents use SNLs at work most of which are not correct based on the responses given. Correlation showed that there is no significant difference between years of experience, qualification of nurses and their knowledge of SNLs. (p>0.05). The major challenges identified by the respondents include poor knowledge of the language, lack of basic amenities, poor policy, inefficient continuous education, shortage of manpower.

High quality nursing documentation promotes effective communication in the healthcare team, which facilitates continuity and individuality of care. The use of SNLs promotes quality nursing documentation and enhances the visibility of the contribution of nursing to patient care.

Keywords: Standardized Nursing Languages, Knowledge, Practice, NANDA-I, NIC, NOC.

Introduction

The changing mode of delivering health care has brought about the need to provide consumers of care with high quality services i.e. Client/patient centered care that is safe, based on best available evidence with quality indicators and clinical outcomes. Nursing care is highly important in the achievement of the objectives of health care delivery. In nursing practice, documenting the patient record is part of a nurse's daily routine. Documentation is essential for adequate, safe and efficient care (IOM, 2004). Inaccurate nursing documentation can cause misinterpretations, and can lead to unsafe patient care (Koczmara, C., Jelincic, V., Dueck, C. (2005). To identify potential areas for improvement the World Alliance for Patient Safety recommends further research toward medical and nursing documentation. This will enable best practices to be established to develop strategies for improving patient safety (WHO, 2007).

Fajemilehin (2014) observed that has become so difficult to measure the contribution of nurses to the health of their patients In other words, nurse-sensitive outcomes have been so difficult to describe. The reasons have been attributed to the nature of current nursing care. Currently, nurses documentations are usually not structured, presented in narrative forms and full of redundancies. It does not show which of the nurse-sensitive outcomes are obtained in patient situations.

Olaogun and Adejumo (2104) defined Standardized Nursing Languages as current standards that include terms which represent a focus of health problems (diagnoses), interventions and outcomes consistent with the scope of nursing practice. Rutherford(2008) gave a similar definition that SNLs 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 care professionals.

For four decades now, nurses all over the world have been working on how to develop a standardized language for nursing practice, which can be used to serve this purpose. The evolution and development of standardized nursing language has included a systematic program of research over the past 32 years, resulting in significant advancements in nursing knowledge work. The Center for Nursing Classification at the University of Iowa has contributed to the creation of standardized nursing languages that capture nursing interventions (Nursing Interventions Classification [NIC], Dochterman & Bulechek, 2004), and nurse-sensitive outcomes (Nursing Outcomes Classification [NOC], Moorhead, Maas, & Johnson, 2003). When these interventions and outcomes are linked with NANDA diagnoses (NANDA International, 2005), all the standardized nursing language pieces (NANDA, NOC, and NIC or NNN) exist to represent relationships between and among nursing diagnoses, interventions, and outcomes (Johnson et al., 2006).

When these languages are used to structure nursing information systems in hospitals and other healthcare organizations, it will be possible to make nursing care and its associated activities and achievement of nursing-sensitive outcomes evident (Lunney, 2006).

Nurses lack training and education to work with a standardized language in actual patient situations. In situations where Nurses are aware of the standardized nursing languages, they have difficulty in transferring their own reasoning process which is related to the assessment of patient within the standardized nursing languages.

Above all, nursing documentation is majorly handwritten as most nurses don't have regular access to computer based tools which enable them to document their nursing assessments, interventions and outcomes in a structured way.

There is need for nurses to perform at a higher level and therefore communicate this contribution to patient care to their colleagues and other health professionals, else, whatever they have done remains invisible. (Hartley and Warren, 2012).

Fajemilehin (2014) also asserted that SNLs will facilitate communication among nurses and between nurses and other health care providers, provide inclusion of nurses in clinical information systems, provide easy access to evidence based knowledge stored in national and international databases, increase visibility of nursing interventions and improve patient care among other.

Significance: This study will create more awareness about SNLs and emphasize the need to fully incorporate the use of SNLs into nursing practice, provide a foundation for future efforts and studies concerned with inclusion of SNLs into nursing documentation within the clinical settings and also assist nursing management of health institutions to see the need to incorporate the use SNLs into nursing practice. This will go a long way in achieving the goal of transition from the traditional practice to evidence-based practice and also enhance communication between nurses and other healthcare professionals.

Objectives: The study is aimed at assessing the level of knowledge of SNLs among nurses, identify which of the SNLs the nurses are familiar with, ascertain if nurses make use of SNLs, and also identify the perceived barriers to its adoption.

Research questions

1. What is the level of knowledge of SNLs among nurses?
2. Which of the SNLs are nurses most familiar with?
3. Do nurses make use of SNLs?
4. What are nurses' perceived barriers to the adoption of SNLs?

5. Is there a relationship between Nurses level of education, year of experience and knowledge of SNLs?

Methods

Research designs: The design is both descriptive and correlational. The correlational design is used to study the relationship between the situations examined (Burns and Groove, 2005). The descriptive part describes the demographic data, knowledge, adoption and perceived barrier to use.

Study area: The study was conducted at the Federal Medical Centre, Owo. It is an ancient city located in the south-western part of Nigeria. It is a 300-bedded hospital with a staff of about 1200 health professionals out of which nurses constitute about 350. The hospital was changed from a General Hospital to a federal Medical Centre in 1989 after being taken over by the Federal Government. It provides care at all the three levels (Primary, Secondary and Tertiary). It is located very close to Ikare-Owo Express Road. The hospital conducts residency training for doctors and serves an area of practical posting for student nurses.

Sampling method: A non-probability convenience sampling of the Nurses at the Federal Medical Centre, Owo, Nigeria.

Sample size: A total of two hundred and fifty (250) questionnaires were distributed with 98% response rate.

Inclusion/exclusion criteria: All nurses practicing in the various units in the hospital were considered for the study as they all have contact with patients one way or the other.

Instrument for data collection: A self-structured and administered questionnaire was used. It was divided into 4 parts:

1. The demographic data include gender, age, marital status, years of experience etc.
2. Knowledge variables were measured by assessing the nurses' knowledge of the definition of Standardized Nursing languages familiarity with the SNL, source of knowledge and the type of knowledge.
3. The implementation variables are measured by stating which of the languages the nurses are best familiar with and also stating whether the institution uses the SNL in documentation, education and research.
4. The barrier variables were determined by use of open ended question to know the Nurses' perceived barrier to the use of SNL

Ethical consideration: The study is of low risk to participating subjects and the facility.

Copies of the research proposal was submitted to the ethical review board of Federal Medical Centre, Owo for ethical approval of the study. After approval, the purpose of the study was explained to the study participants. Participation in the study was made voluntary and they were told they could withdraw from the study at any point if they wished without any negative consequence. Participants were assured that the information they had given would be treated with confidentially. Informed consent was sought from study participants and each of them signed the consent forms attached to their questionnaires prior to filling them. Respondents did not write their name for the purpose of confidentiality.

Process of data collection: A letter of permission to carry out study was obtained from the authority via the Research Review Committee. The questionnaires were administered to each nurse met in their various units/wards during the period of data collection. Same was collected back from the nurses after 2-3 days. Data collection lasted a period of 2 weeks in all.

Data analysis: The data was entered using the SPSS software version 22 and analysis done using tables of frequency and percentage, mean and standard deviation, chi test, Pearson correlation where necessary.

Results

Demographic distribution

The demographic distribution of the respondents revealed that majority (97.1%) of the respondents was female and 2.9% are male. The age distribution showed that 8.2% of respondents were aged between 21-30, majority (61.2%) were aged between 31-40, 26.5% were aged between 41-50 and just few, 4.1%. It is also revealed that majority of the respondents 78.4%, are Christians while 21.6% are Muslims. None of the respondents is a traditionalist. Most of the respondents (81.6%) are Yoruba, just few (0.4%) are Hausa while 18% are Ibo. It is revealed in the statistics that majority of respondents (78.8%) are married, 15.9% are single, 0.8% widowed 4.5% are separated. Distribution of the year of experience showed that 6.1% have only worked for less than 5 years, 32.7% have worked for 5-10 years, the larger numbers of respondents (36.7%) have worked for up to 15 years, and 16.3% have worked for up to 20 years while 8.2% have worked for more than 20 years. Only 2% of the respondents have a master's degree, 55% have a degree while 43% have only the RN RM qualification. 14.7% of respondents were Nursing Officer II, 9% Nursing Officer I, 33.1% Senior Nursing Officer, 15.9% were Principal Nursing Officer, 12.2% are Assistant Chief Nursing Officers, 14.3 are Chief Nursing Officers, 0.8% are Assistant chief Nursing Officers.

Knowledge

Responses showed that all the nurses are familiar with standardized Nursing languages. Only 37.6% of respondents were able to give a correct definition of Standardized Nursing Languages while 62.4% gave a wrong definition. Only 30% recognized NANDA, NIC AND NOC as Standardized Nursing Languages. 21% chose Evaluation, 18% chose diagnosis while 31% chose nursing process. Only 12.2% of respondents were able to recognize that 12 standardized Nursing languages exists. 14.3% responded 5, 4.1% recognized 7, 2.45% recognized 10, 13.9% recognized 11, 10.2 responded 13, 6.1% recognized 15 while the majority of respondents (36.1%) does not know the number of standardized languages that currently exists. 39% of respondents got to know about Standardized Nursing Languages at the college, 15% in the ward, 69% knew about it from Journals and textbooks while 14% of respondents could not actually recognize how they got to know about it. When asked which of the languages nurses are most familiar with, majority 42% are most familiar with NANDA, 4.8% with aseptic technique, 6.5% familiar with Nursing Intervention classification, 2.4% familiar with Nursing Outcome Classification, 8.9% are familiar with Nursing care plan, 11.4% mentioned Nursing diagnosis, 4.9% mentioned Nursing Process

Nurses' use of SNLs

Responses showed that 100% of the respondents use paper method of documentation in the care of patients. 100% also confirmed that they do not have a functioning computer system in their ward. With paper documentation, 54% of respondents use standardized Nursing languages at work most of which are not correct based on the responses given above, 45.3% do not use at all. Only 34.3% make use of Standardized Nursing Languages in their area specialization, 65.7% does not make use of it. 86% of the respondents confirmed that the hospital does not train nurses on the use of standardized Nursing Languages. 14% had no idea. 91% also confirmed that the hospital does not conduct any research on Standardized Nursing Languages. 9% had no idea.

Identification of barriers

The challenges identified by the respondents are poor knowledge of the language (90%), lack of basic amenities (89%), inadequate computer literacy (48%), nurses attitude to change (62%), lack of policy and standard (77%), poor leadership (81%), inefficient continuous education (86%), lack of management support (72%), shortage of manpower (88%), lack of time (73%)

Discussion of finding

Nurses knowledge of standardized nursing languages

Statistics showed that a larger percentage of the nurses are familiar with Standardized Nursing Languages, but has a poor knowledge of standardized nursing languages as only 37.6% of respondents were able to give a correct definition of Standardized Nursing Languages while 62.4% gave a wrong definition. Only 30% recognized NANDA, NIC AND NOC as Standardized Nursing Languages. Personal interactions with the nurses showed that some of them only read about it in books and journals, only few learnt about it in the school. They were able to give correct definitions some of which were not given off hand but copied. This is in line with study done by Muller Stuab et al (2006) to assess nursing diagnoses, interventions and outcomes implementation. They reported a deficiency in accurately stating and documenting Nursing diagnosis and to relate them with nursing interventions and outcomes. (Table 4.1).

This is also similar to findings by Ehrenberg and Ehnfors (2001) in one of their studies in which they compared patient records against nurses' reports and found that between 41% and 89% of the patient problems identified by nurses 230 were not registered Standardized languages.

A different result was seen in a study conducted by Gusen et al (2016) which revealed that majority (70.9%) had knowledge of NANDA, NIC and NIC.

It was revealed that most of the respondents are familiar with NANDA. This is similar to research by Olaogun et al, 2011 in their study conducted among nurses at the Obafemi Awolowo University Teaching hospital where it was revealed that Nurses are mostly familiar with NANDA. Also, in a survey by Thede and Schwirian 2011 to assess nurses' experience and attitude at the Ohio State University, in which about 1268 nurses were sampled. Only 4 out of the 12 were familiar. The most recognizable Nurses familiarity with standardized nursing languages being NANDA which over 1/3 revealed that they have used in the school.

In a study by Donald Kautz et al (2006) to analyze the degree to which standardized nursing language was used by baccalaureate nursing students completing Outcome-Present State-Test (OPT) model worksheets in a clinical practicum. A scoring instrument was developed and 100 worksheets were retrospectively analyzed. NANDA nursing diagnoses were correctly stated in 92% of the OPT models. Nursing Outcomes Classification (NOC) outcomes were explicitly stated in 22%, and implied in 72%. Interventions matched appropriate Nursing Interventions Classification (NIC) activities in 61%. NANDA, NIC, and NOC (NNN) language was used inconsistently by students in this sample.

Method of documenting nursing care in the hospital?

The major method of documenting nursing care in the hospital is the paper method. It was also revealed that none of the wards in the hospital has a functioning computer system. This is consistent with a case study by Matthew K et al (2014) to assess Nurses attitude towards computerization and also use of computer at work. Study was conducted at two hospitals (private and public) in Nairobi Kenya. It was revealed that only one (6.6%) of the nurses have access to computer system at work in the government hospital. Computers perform a wide range of activities which help nurses to save time with documentation hence improving efficiency of health care. Various studies conducted on standardized Nursing Languages have shown that the use can be made easier with the use of the Electronic Health Record system.

Nurses' perceived barriers to successful adoption of the standardized nursing languages?

Major barriers identified in the study are include poor knowledge of the language, lack of basic amenities, poor policy, inefficient continuous education, shortage of manpower. This study is in line with the study conducted by Sani and Sani 2017 which revealed that the barriers to utilization of SNL include inadequate knowledge, lack of hospital policy and nurses shortage. Similarly, study by Thede and Schiwirian (2010) which revealed lack of knowledge of standardized nursing Languages as major barrier to its successful utilization.

In a study by P Flege in 2009, it was shown that even though classifications have been developed, most nurses have not been trained to use Standardized Nursing Languages. (It is reflected in this study that the hospital does not train nurses on the use of Standardized Nursing Languages).

At the Jos University Teaching Hospital, study by Abraham et al (2015) to determine the knowledge and utilization of SNL among nurses showed inadequate knowledge, lack of man power and lack of equipment as the major barrier.

Relationship between the nurse's year of experience, educational qualification and their knowledge of SNLs

According to Table 4.5 correlation revealed that there is no significant relationship between the nurses year of experience and their knowledge of Standardized Nursing Languages. (P value>0.05). This is in contrast to a study by Sani and Sani (2015) conducted in Sokoto which revealed that there is a significant difference between the knowledge of standardized nursing language and years of working experience among nurses in Sokoto, (p < 0.02). Furthermore, post hoc analysis revealed that nurses with less than 5years working experience (M = 6.32, SD = 1.68) and those with 5-10 years of working experience (M =4.15, SD = 2.03) had more knowledge of SNL, than those with more than 10years of working experience.

Table 4.6 also revealed that there is no significant relationship between the nurses year of experience and their knowledge of standardized nursing languages

Conclusion and recommendation

The evolution of standardized nursing languages (SNLs) has been occurring for more than four decades. The importance of this work continues to be acknowledged as an effective strategy to delineate professional nursing practice. In today's health care environment, the demand to deliver cost-effective, safe, quality patient care is an essential mandate embedded in all health reform policies. Communicating the contributions of professional nursing practice to other nurses, health providers, and other members of the health care team requires the articulation of nursing's focus of concern and responses to these concerns to improve patient outcomes.

The visibility of the electronic health record (EHR) in practice settings has accelerated the need for nursing to communicate its practice within the structure of the electronic format. The integration of SNLs into the patient record offers nurses an opportunity to describe the focus of their practice through the identification of nursing diagnosis, interventions and outcomes .Continued development, testing, and refinement of SNLs offers nursing an accurate and reliable way to use data elements across populations and settings to communicate nursing practice, enable nursing administrators and leaders in health care to delineate needed resources, cost out nursing care with greater precision, and design new models of care that reflect nurse-patient ratios and patient acuity that are data driven.

The continued use of nursing languages and acceleration of nursing research using this data can provide the needed evidence to help link nursing knowledge to evidence-driven, cost-effective, quality outcomes that more accurately reflect nursing's impact on patient care as well as the health care system of which they are a part. The evaluation of research to support the development, use, and continued refinement of nursing language is critical to research and the transformation of patient care by nurses on a global level.

List of tables

Table 4.1. Socio-demographic distribution

Variable	Frequency	Percentage
SEX		
Male	7	2.9
Female	238	97.1
AGE		
21-30	20	8.2
31-40	150	61.2
41-50	65	26.5
51-60	10	4.1
Religion		
Christian		
Islam	192	78.4
Traditional	53	21.6
Tribe		
Yoruba	200	81.6
Hausa	1	0.4
Ibo	44	18
Marital Status		
Single	39	15.9
Married	193	78.8
Widowed	2	0.8
Separated	11	4.5
Years of Experience		
Under 5	15	
5-10	80	6.1
11-15	90	32.7
16-20	40	36.7
20 and above	20	16.3
Qualification		
Masters	5	2.0
BNSc	135	55
RN/RM	105	43
Designation		
NO II	36	14.7
NOI	22	9
SNO	81	33.1
PNO	39	15.9
ACNO	30	12.2
CNO	35	14.3
ADNS	2	0.8

Table 4.2. Knowledge of standardized nursing languages

Variable	Frequency	Percentage

1. Are you familiar with standardized nursing languages?		
Yes	245	100
No	0	0
2. If yes, define standardized nursing languages		
Correct definition	92	37.6
Wrong definition	153	62.4
3. Which of the following is a Standardized Nursing Language?		
Evaluation	51	21
Diagnosis	44	18
NANDA, NIC and NOC	73	30
Nursing process	77	31
4. How many standardized nursing Languages exist?		
5	35	14.3
7	10	4.1
10	6	2.45
11	34	13.9
12	30	12.2
13	25	10.2
15	15	6.1
I don t know	90	36.7
5. Which of the standardized languages are you most familiar with?		
Aseptic technique	12	4.8
NANDA	103	42%
NIC	16	6.5
NOC	6	2.4
Nursing care plan	22	8.9
Nursing Diagnosis	28	11.4
Nursing Process	12	4.9
No response	56	22.85
6. What is your source of knowledge?		
College	96	39
Ward level	44	15
Journal/Textbook	170	69

Table 4.3. Use of standardized nursing languages among nurses at federal medical centre, owo

Variable	Frequency	Percentage
Which method of documentation do you use in patient care?		
Paper	245	100
Electronic health record	-	-
Do you have a functioning computer system in your ward?		
Yes	-	-
No	245	100

Do you make use of standardized nursing languages at work In planning and documenting care?		
Yes	134	54.7
No	111	45.3
Do you make use of Standardized Nursing Languages in Your area of specialization?		
Yes	84	34.3%
No	161	65.7%
Does your hospital train nurses on the use of Standardized Nursing Languages?		
Yes	-	86%
No	210	14%
I have no idea	35	
Does your facility conduct research on Standardized Nursing Languages?		
Yes	-	91%
No	223	9%
I have no idea	22	

Table 4.4. Possible barriers facing the use of standardized nursing languages at fmc, owo

Variables	Frequency	Percentage
Nurses poor knowledge and of Standardized Nursing Languages	221	90
Non availability of basic amenities e.g. computer system,	219	89
Continuous power supply, internet facilities etc.		
Inadequate Computer Literacy	119	48
Nurses attitude to change	152	62
Lack of policy/standard	188	77
Poor Leadership	199	81
Inefficient continuous education	210	86
Lack of support from Management	178	72
Staff Shortage	216	88
Lack of time	178	73

Table 4.5. Relationship between nurse's year of experience and their knowledge of standardized nursing language

		Knowledge of SNL*		Total		
		Poor	Fair		X^2	P-value
Under 5 years	Count	10	5	15	5.246	0.117
	% of Total	4.1%	2.0%	6.1%		
5-10 years	Count	25	55	80		
	% of Total	10.2%	22.4%	32.7%		
11-15 years	Count	50	40	90		

	% of Total	20.4%	16.3%	36.7%		
16-20 years	Count	10	30	40		
	% of Total	4.1%	12.2%	16.3%		
20 and above	Count	10	10	15		
	% of Total	4.1%	2.0%	6.1%		
No response	Count	0	5	5		
	% of Total	.0%	2.0%	2.0%		
Total	Count	105	140	145		
	% of Total	42.9%	57.1%	100.0%		

- Knowledge level was determined using questions 1-4 (Table 4.2). Poor (0-1), fair (2-3), good (4)

Table 4.6. Relationship between Nurses Qualification and Knowledge of Standardized Nursing Languages

		Knowledge of SNL*		Total		
		Poor	Fair		X^2	P-value
RNRM	Count	44	51	95	1.442	0.114
	% of Total	18%	20.8%	38.8%		
BNSc	Count	53	72	125		
	% of Total	22%	29%	51.0%		
MSc	Count	0	5	5		
	% of Total	.0%	10.0%	10.0%		
No response	Count	4	16	20		
	% of Total	10.0%	31%	41%		
Total	Total	21	28	245		
	% of Total	42.9%	57.1%	100.0%		

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