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Knowledge and Attitude of Nurses about the Nursing Process in Selected Public Hospitals in South-West Ethiopia

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Abstract

Introduction: The nursing process is a standard for delivering individualized, continuing nursing care using standardized nursing language and helps improve the relationship between nurses and patients, allowing use of available resources for patient care and creating good interaction between practitioners. The aim of this study is to assess nurses ' knowledge and attitude about the nursing process in selected public hospitals in southwestern Ethiopia.

Methods: An institution-based cross-sectional descriptive study was conducted in three selected public hospitals in south-west Ethiopia using pre-tested self-administered questionnaires from March-April 2016. With simple random sampling, a total of 138 nurses from the three hospitals were included in the study. Data were categorized, coded, entered in version 7 of Epidemiological Information (EPI info) and exported for analysis to the Statistical Package for Social Science (SPSS) version 20. Descriptive statistics have been used to describe the variables of the study.

Results: Nurses ' knowledge of the nursing process was found to be poor as six out of ten nurses had poor knowledge and five out of ten nurses had a positive attitude towards the nursing process.

Conclusions: The majority of nurses had poor nursing knowledge and nearly half of nurses had a positive attitude to the nursing process.

INTRODUCTION

The nursing process is a standard for providing individualized, ongoing nursing care using standardized nursing language and helps improve the relationship between nurses and patients, utilizing available resources for patient care and creating good communication between nurses [1]. Practice in nursing requires the efficient use of the nursing process and the participation of the nurse in activities which improve knowledge of the nursing process. Successful application of the nursing process improves the quality of care and promotes the development of expertise based on clinical practice [2]. From a study on documentation, knowledge, attitude, and barriers to the use of standardized nursing languages: only 11.7% had superior knowledge, 41.6% had adequate knowledge, and 34.5% had minimal knowledge. In terms of attitude, 11% generally agreed, and 89% completely agreed that school nurses would properly record the nursing care they provide. Just 47.3% of respondents acknowledged that the method of using structured nursing languages is fairly complex [3].

According to a study at Naivasha District Hospital Kenya, nurses had a positive attitude to the nursing process where 51.8 % strongly agreed that the nursing process facilitates total patient care while 32.7 % agreed and 86.7 % strongly agreed that setting goals would enable meaningful evaluation of care and the majority of nurses had a positive attitude to the nursing process [4].In Harari region Ethiopia, 52.9% of nurses had favorable attitude [5].In Nigeria, 94.2% of nurses had good knowledge of nursing process [6]. About 13.3% of nurses were highly knowledgeable and 15.3% were moderately knowledgeable in a study conducted at Arbaminch General Hospital, Ethiopia. Highly knowledgeable nurses were more likely to implement the nursing process than inexperienced nurses (OR: 8.78[95% CI: (2.97-77.48)] and moderately knowledgeable nurses were 3.49 more likely to carry out the nursing process [7].

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According to a study done in Mekele town, 90 % of respondents scored below 50 % on questions related to knowledge and nearly all respondents 99.5 % had positive attitudes. About 39.5 % of nurses in the Tigray region of Ethiopia had little knowledge of the nursing process [8, 9]. The nursing process is at the heart of the nursing profession and allows quality nursing care to be delivered [10, 11]. While nurses are the highest in number in the health system in Ethiopia, they faced many problems, such as underestimating their work [12].According to a meta-analysis study, the pooled prevalence of nursing process implementation in Ethiopia was 42.4 % and lack of knowledge about the nursing process was the determining factor for the nursing process to be implemented [13].

Proper application of nursing process promotes critical thinking, creativity, problem solving and decision-making skills in clinical practice. It would improve the quality of health care which results in increased patient working time from reduced hospital stay leads to decreased cost of health care which would have economic benefit to a country [14]. Daily application of individualized humanistic nursing care is dependent on knowledge of professionals involved in the care. In recent days even though, due emphasis is given to quality of nursing care, there is still huge gap on the implementation of nursing process among nurses working in hospitals. If nurses fail to carry out necessary nursing care, then the effectiveness of patient progress may be compromised and can lead to preventable adverse patient events [9, 15].

If the Nursing process is not implemented well it could lead to Poor quality of nursing care, disorganization of the service, conflicting roles, medication error, poor diseases prognosis, readmission, dissatisfaction with the care provided, and increased mortality. These problems could be managed if a nurse can properly implement nursing process [16].

In health care systems in most developed countries, the NP is considered as a standard for nursing practice. Efficient and effective application of the NP in clinical practice leads to improved quality of patient care, improved patient outcome and promotes nursing profession as scientific discipline. The nursing process is used to detect, prevent and treat both actual and potential health problems and promotes wellness within an individual patient. It is based on the methodological process of problem-solving and creates the basis for nursing practice. It has five interrelated steps and when all the steps are implemented well, the planning and provision of quality and comprehensive nursing cares are achieved [17-20].

It is known that nursing services are the backbone of the healthcare system in almost all countries in the world. In general, accreditation in nursing education endorses quality and is recognized globally as an important, objective method to evaluate professional educational programs. Nurses' engagement in the development and application of nursing knowledge will not only impact nursing practice but also improve the quality of nursing education. Research has shown that some clinical quality measures are strongly related to good nursing care. In addition, patients know that a good relationship with a caring, knowledgeable and competent nurse can significantly improve the comfort and effectiveness of hospital care. The quality of nursing care is also perceived as poor. To improve the quality of nursing care, the nursing process has to be implemented and for its implementation, students have to be educated at school level based on the nursing curriculum. But the application of this knowledge in practical setup is not well known yet [8, 21, 22].

The world health organization recommends the nursing profession to consider the nursing process approach in the training of academic nursing students and to reinforce this approach in patient care to align the professional and development role of nursing profession in line with other health professionals [23]. The training curricula of nurses are incorporating the nursing process as a framework for nursing care at clinical setting, but its effectiveness/implementation is still a challenge. Despite the incorporation of the nursing process in training curricula for nurses as a frame work for nursing care, nurses still find it difficult to practice the nursing process which leads to poor quality of patient care [24]. Majority of nurses did not apply the nursing process in their day-to-day care of patients [25]. Implementation of nursing process in patient care is associated with improved quality of care and motivates nurses in building of knowledge grounded on best clinical practice. While malpractice in the implementation of nursing process negatively affects the quality of nursing care [9].

During our master's practice in one of the hospitals wenoticed nurses writing medical diagnosis on nursing diagnosis part of nursing process chart and some nurses were not interested of filling the chart. The quality of nursing care is also perceived as poor. To improve the quality of nursing care, the Ethiopian government has been investing on educating students in different educational status at school level based on the nursing curriculum. But nurse knowledge and attitude on practical setting is not yet investigated and knowledge gap and attitude problems were not identified scientifically. There was no literature in southwestern part of Ethiopia, which shows the knowledge and attitude of nurses about the nursing process. Based on the above gaps, this study aimed to examine nurses ' knowledge and attitude about the nursing process in three public hospitals in southwestern Ethiopia, and results from this study would be a guide for policy makers, educators, local health officials, clinicians and researchers working on the nursing process to develop new strategies or review existing approaches.

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METHODS

Institution based cross-sectional descriptive quantitative study included 140 nurses working in GebretsadikShawo General Hospital, Mizan Aman General Hospital, and Teppi Hospital from March-April 2016 using a single population proportion formula, considering the error margin (d) 5%, the confidence level of 95%, α = 0.05, p = 0.5 and 10% for non-response. Using proportional allocation to size of population 23 nurses from Teppi Hospital, 57 nurses from GebretsadikShawo General Hospital, 60 nurses from Mizan Aman General Hospital were selected by simple random sampling. The three hospitals were selected because among four hospitals in the southwest part of southern region of Ethiopia, there was no any study done about the topic in the three hospitals. Nurses with diploma and above educational status and worked for more than six months were included in the study.

MEASUREMENT OR TOOLS

Data was collected through self-administered questionnaires developed by the researchers by reviewing different literature [8, 15, 26], It had three parts: socio-demographic information, knowledge of the nursing process, and attitude to the nursing process. Demographic questions included eight questions: age, sex, marital status, ethnicity, monthly income, experience, religion and graduation institution.

The knowledge questionnaire included eleven questions: do you know components of nursing process, list components of nursing process, Mention types of nursing diagnosis, which one is the first step of the nursing process, Which one is not performed during the planning phase of nursing process, nursing diagnosis for a patient with diabetes mellites with a chronic complication in future, what makes NP different from the medical approach, Gordon approach is directly targeted at, individuals not mandatory for the better accomplishment of nursing process, and identify the problem, etiology and evidence from nursing diagnosis disturbed sleep pattern related to unresolved fear & anxiety evidenced by difficulty in falling sleep. Knowledge questions have been calculated after questions have been administered. Score 1 was given for correct answers and score 0 was given to incorrect answers. The score was computed and those who scored above the mean were labeled knowledgeable and those who scored below the mean were labeled not-knowledgeable.

Attitude questionnaire included 6 questions: I am ready/willing to implement nursing process, I like the aim of the nursing process, I am fed up of hearing about nursing process, I think the introduction of nursing process will cause a problem, I think the nursing staffs have no willingness to implement nursing process and I do not see the need to utilize nursing process. Questions on variables of attitude were calculated with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), this score was subsequently reversed to 1 (strongly agree) to 5 (strongly disagree) for negative statement. The score was calculated and dichotomized to be favorable and unfavorable. Respondents who scored above the mean scores were labeled favorable and those who scored below the mean were labeled unfavorable.

VALIDITY AND RELIABILITY

The validity of tool was checked with content validity for relevance and clarity, the questionnaire was given to 10 college of health science members of Mizan Teppi University, based on their suggestion and comments modification was made. The content validity ratio score was greater than the number of Lawshe table (0.62), and result of content validity index was greater than 0.8. Reliability was determined by internal consistency and Cronbach's alpha coefficient, which was found α= 0.73.

DATA GATHERING

Three bachelor degree nurses collected data and three master holder nurses monitored it after one day of training on data collection methods and procedures. Nurses filled out questions at their workplace. Data collection was conducted after minor modification was made on tools based on pre-test findings. The pre-test was conducted on 5 % of nurses serving in the Shenen Gibe General Hospital. Data collection was started after receiving written permission from each hospital. Then by taking list of nurses from human resource department of the hospitals used it as sampling frame. The data collection purpose and procedure have been cleared and confidentiality and privacy guaranteed. All participants received written informed consent and it was also explained that participation was entirely dependent on participants ' willingness.

STATISTICAL ANALYSIS

Data was checked for completeness and consistency, categorized, coded and entered in EP info version 7 and exported to SPSS version 20for analysis. Descriptive statistics like frequencies, percentages, mean and standard deviations were computed. Questions on attitude were calculated with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), this score was subsequently reversed to 1 (strongly agree) to 5 (strongly disagree) for negative statement. The score was calculated and dichotomized to be favorable and unfavorable. Respondents who scored above the mean scores were labeled favorable and those who scored below the mean were labeled unfavorable. Knowledge questions have been calculated after questions have been administered. Score 1 was given for correct answers and score 0 was given to incorrect answers. The score was computed and those who scored above the mean were labeled knowledgeable and those who scored below the mean were labeled not-knowledgeable. Finally, result was presented by tables, figures and narratives.

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ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study was conducted after it was reviewed and approved by Nursing and Midwifery, Health Science School, Addis Ababa University's Institutional Review Board (IRB) with protocol number 19/21/SNM. Before collecting data, a letter of permission was given to the hospital administrator and approved. Data collection purpose and procedure have been cleared and confidentiality and privacy guaranteed. All participants received written informed consent and it was also explained that participation was entirely dependent on participants ' willingness.

RESULT

During the study period, 138 of the 140 sampled respondents in the selected hospitals agreed and participated in the study making the response rate of 98.5 %, two nurses did not want to participate as there was no incentives to participants. Table 1 presented sociodemographic characteristics of respondents.

Table 1. Sociodemographic Characteristics of Nurses in Selected Public Hospitals in South-West Ethiopia, 2016

Characteristics /Response	Frequency	%
Sex		
Male	74	53.6
Female	64	46.4
Age		
20-24	49	35.5
25-29	65	47.1
30-34	15	10.9
>=35	9	6.5
Marital status		
Single	83	60.1
Married	55	39.9
Religion		
Orthodox	87	63.0
Protestant	35	25.4
Muslim	13	9.4
others*	3	2.2
Ethnicity		
Kaffa	43	31.2
Amhara	37	26.8
Oromo	13	9.4
Sheka	10	7.2
Others*	35	25.4
Educational status		
Diploma	88	63.8
BSC	50	36.2
Year of experience		
<5	83	60.1
5-9	47	34.1
>=10	8	5.8
The institution where the educational award is obtained		
Government	119	86.2
Private	19	13.8
Monthly salary		
<=1663	55	39.8
1664-3145	76	55.1
>=3145	7	5.1

*- Wolayta, Tigre, Gurage, bench, dizi, silitte

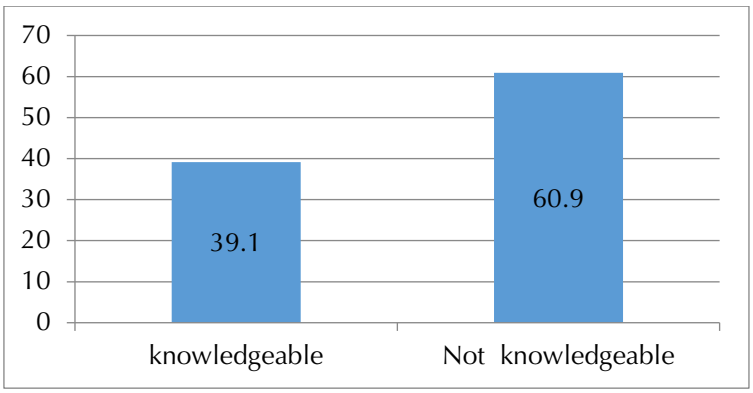

Figure 1. Percentage distribution of knowledge of nurses about NP in selected public hospitals in south-west Ethiopia, 2016.

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Table 2. Knowledge about NP in Selected Public Hospitals in South-West Ethiopia, 2016

Questions /Responses	Frequency	%
Do you know components of NP(N=138)		
Yes	135	97.8
No	3	2.2
If yes for q201 list components of nursing process (N=138)		
Assessment	119	86.2
Diagnosis	116	84.1
Planning	113	81.9
Implementation	122	88.4
Evaluation	117	84.8
Mention types of nursing assessment (N=138)		
Initial assessment	10	7.2
Focused asst	14	10.1
Time-lapsed asst	12	8.7
Emergency asst	13	9.4
Ongoing asst	6	4.3
Mention types of nursing diagnosis (N=138)		
Actual	104	75.4
Potential	104	75.4
Possible	26	18.8
Wellness	17	12.3
Collaborative	9	6.5
A nurse should do one at the first step of the nursing process(N=138)		
Correct answer	110	79.7
Incorrect answer	28	20.3
Activities not performed during the planning phase of nursing process (N=138)		
Correct answer	43	31.2
Incorrect answer	95	68.8
Nursing diagnosis for a patient with diabetes mellitus with a chronic complication in future(N=138)		
Correct answer	79	57.2
Incorrect	59	42.8
What makes nursing process different from the medical approach (N=138)		
Correct answer	65	47.1
Incorrect answer	73	52.9
Gordon approach is directly targeted at (N=138)		
Correct answer	61	44.2
Incorrect answer	77	55.8
Individuals not mandatory for the better accomplishment of nursing process (N=138)		
Correct answer	72	52.2
Incorrect answer	66	47.8
Disturbed sleep pattern r/t unresolved fear & anxiety AEB difficulty in falling /remaining sleep (N=138).		
Identified problem	76	55.1
Identified etiology	80	58
Identified signs/symptom	75	54.3

Table 3. Attitude of nurses towards the NP in selected public hospitals in south-west Ethiopia, 2016

Question	Responses									
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Freq	%	freq	%	Freq	%	freq	%	freq	%
I am ready/willing to implement NP(N=138)	76	55.1	55	39.9	4	2.9	2	1.4	1	0.7
I like the aim of the nursing process(N=138)	85	61.6	43	31.2	8	5.8	1	.7	1	0.7
I am fed up of hearing about NP(N=138)	41	29.7	43	31.2	5	3.6	22	15.9	27	19.6
I think the introduction of NP will cause a problem(N=138)	17	12.3	36	26.1	9	6.5	44	31.9	32	23.1
I think the nursing staffs have no willingness to implement NP(N=138)	16	11.6	33	23.9	16	11.6	41	29.7	32	23.2
I do not see the need to utilize NP(N=138)	20	14.5	17	12.3	12	8.7	50	36.2	39	28.3

In this study regarding knowledge, 54 (39.1%) of nurses were knowledgeable, 86.2% of respondents know nursing assessment, 84.1% know nursing diagnosis, 81.95 know planning phase, 88.4% know implementation phase and 84.8% know evaluation phase of nursing process Table 2 and Figure 1.

Considering attitude, 68 (49.3%) of nurses had a favorable attitude with mean score of 21, minimum score of 7 and a maximum score of 30 out of 30 (Figure 2). More than half (55.1%) had willing to implement the nursing process, (61.6%) liked the aim of the nursing process, 12.3% thought that the introduction of NP will cause problem (Table 3).

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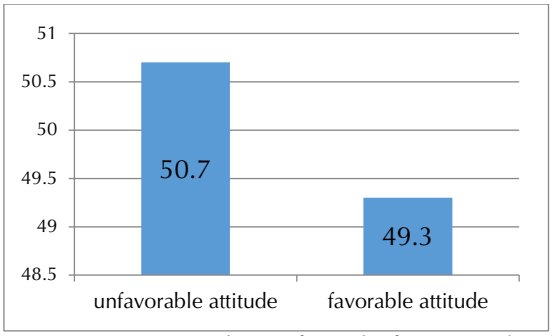

Figure 2. Percentage Distribution of Attitude of Nurses in Selected Public Hospitals in South-West Ethiopia, 2016

DISCUSSION

Nursing process is globally recognized and accepted as a scientific method used to guide procedures and provide quality nursing care. However, poor use of nursing process in providing quality care to patients has been observed in most healthcare facilities. During our master's practice in one of the hospitals we noticed nurses writing medical diagnosis on nursing diagnosis part of nursing process chart and some nurses were not interested of filling the chart. The quality of nursing care is also perceived as poor. To improve the quality of nursing care, the Ethiopian government has been investing on educating students in different educational status at school level based on the nursing curriculum. But nurse knowledge and attitude on practical setting is not yet investigated and knowledge gap and attitude problems were not identified scientifically. There was no literature in southwestern part of Ethiopia, which shows the knowledge and attitude of nurses about the nursing process.

Based on the above gaps, this study aimed to examine nurse's knowledge and attitude about the nursing process in three public hospitals in southwestern Ethiopia. The knowledge and attitude of diploma holder nurses were assessed because, in Ethiopia nurses who are obligated to implement nursing process are diploma and above educational level. Hence assessing their actual knowledge and attitude would be important to recommend on their gaps and possible interventions to fill the gaps.

Results of this study showed that less than half (39.1%)of nurses in this study were knowledgeable. This study's result was higher than result of studies done in: Arbaminch General Hospital28.6 % [7], Mekele zone hospitals10 %[8]. The variation might be due to the difference in the sample size or the setting of the study. It might also be due to difference in nurses work experience.

Finding of this study was lower compared to studies conducted in: Harari region, Ethiopia87.7% of nurses was knowledgeable [5], Debremarkos and Finoteselam 58.1% of nurses were highly knowledgeable, 30.6%of nurses were moderately knowledgeable [15] and in Addis Ababa 52.6% of nurses were knowledgeable about the nursing process [16]. The discrepancy might be due to difference in hospital type that is most of the hospitals include in the other studies were referral and specialized hospitals, while in the current study they were general hospitals. As nursing care is practiced in specialized care units, it might be due to the difference in sample size.

Regarding attitude, 49.3 % of nurses in this study had a favorable attitude. It was found consistent with result of study in Harari region Ethiopia 52.9% had favorable attitude [5], a survey in Kenya's Naivasha District Hospital, where 51.8 % strongly agreed that the nursing process facilitates total care for patients [4]. It was found lower compared to study in Mekele zone hospitals 99.5 % [8] and Uganda 67% of nurses had positive attitude [16]. The discrepancy could be attributable to the difference in the study area, where the hospitals were a mixture of private, public, referral and general hospitals in the Mekele district, but in this study only the public general hospitals were involved. In Uganda 54% of nurses were found to have an acceptable attitude after the intervention [16].

Experienced nurses in Ghana did not want the nursing process to be implemented and had limited knowledge of the nursing process [18]. Generally speaking, nurses had poor knowledge and more than half had a negative attitude towards the nursing process, and inexperienced nurses and nurses with a negative attitude would be difficult to implement the nursing process. Strategies should therefore be planned nationally and/or globally for enhancing nurse awareness, shifting nurses ' attitude to the nursing process, and determining factors should be investigated and intervened.

LIMITATION OF THE STUDY

The study evaluated selected public hospitals in southwest Ethiopia, making it impossible to generalize to all public hospitals and private hospitals in the area as well. There might be social desirability bias.

CONCLUSION

This research examined the knowledge and attitude towards nursing process in three public hospitals in southwest Ethiopia. Nurses ' knowledge of the nursing process was found to be poor as six out of ten nurses had poor knowledge and five out of ten nurses had a positive attitude towards the nursing process. Nurses should have sufficient knowledge and a positive attitude to implement the nursing process. Therefore, nurses should read more about the nursing process in order to improve their knowledge. The nursing association and the health ministry should adjust the nursing process training, Universities and colleges should teach in-depth about the nursing process and further research on a large sample size, and factors affecting nurses ' knowledge and attitude about the nursing process should be conducted.

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LIST OF ABBREVIATIONS

BSc- Bachelor of Science
Epi Info- Epidemiological Information
IRB- Institutional Review Board
M&E- Monitoring and Evaluation
NP- Nursing Process
P- Proportion
SPSS- Statistical Package for Social Science

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AVAILABILITY OF DATA AND MATERIALS

All data are found in the document and the corresponding author can be contacted / asked if requested for additional materials.

ETHICAL CONSIDERATION

The study was conducted after it was reviewed and approved by Nursing and Midwifery, Health Science School, Addis Ababa University's Institutional Review Board (IRB) with ethical code of 19/21/SNM. Before collecting data, a letter of permission was given to the hospital administrator and approved. Data collection purpose and procedure have been cleared and confidentiality and privacy guaranteed. All participants received written informed consent and it was also explained that participation was entirely dependent on participants ' willingness consideration?

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest

AUTHORS' CONTRIBUTION

ZA made a significant contribution to the conception and design, data acquisition, or data analysis and interpretation; participated in the drafting or critical revision of the article for important intellectual content; endorsed the version to be published; and agreed to be accountable for all aspects of the work.
AC made a significant contribution to the conception and design, data acquisition, or data analysis and interpretation; participated in the drafting or critical revision of the article for important intellectual content.

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