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Compliance of Nurses to National Nursing Process Guideline in Tercha General Hospital, Southern Ethiopia 2018: Case Study

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Abstract

Introduction: Ethiopia adopts nursing process guideline and had been implementing at all hospitals since 2010. It is essential for improving quality of nursing care provided for admitted patients. However, there is no clear evidence on the compliance of nurses with this national guideline specifically to the study area.

Objective: To assess the compliance of nurses with national nursing process guideline at Tercha general hospital, Southern Ethiopia, 2018 B.C.

Methods: This study was conducted in the Tercha General Hospital of Dawuro zone, which is located 554 km far from Addis Ababa in the southern part of Ethiopia. Single case study design with mixed methods of data collection was employed from March 15-30/2018. Data were collected through observation sessions of 125 clients to nurse interactions and review their charts, and 14 key informants. Descriptive statistics like frequency, mean, media and percentage were done by using SPSS version 23. Qualitative data were analyzed manually by categorizing in to different themes and triangulated with the observation findings. The results were presented in form of texts and table.

Results: The overall compliance of nurses with national nursing process guideline in Tercha general hospital was 47%. Nursing assessment and diagnosis were performed for 67% and 62% of patients, respectively. Whereas, nursing care planning, implementation and evaluation were made only for 54%, 52% and 47% of admitted patients, respectively. Qualitative study explained that these under performances were due to inadequate medical supplies, reference materials, staffing, and limited capacity building activities like training.

Conclusion and recommendation: The practice of nursing process as the national standard was low. We therefore recommend the hospital to fulfill resources for practicing nursing process and should provide capacity-building activities like training and regular internal mentorship.

Keywords: Nursing process; Compliance; Tercha hospital

Introduction

Nursing is a profession that entails the humanistic blend of scientific knowledge and the art of holistic practice to address the basic human need of achieving health and wellness. Nursing process means assessment, diagnosis, planning, implementation and evaluation of patients for the promotion and maintenance of health, the management of illness, injury or infirmity, and the restoration of optimal function, or palliative care [1,2].

Nursing process was first described by the nurse theorist Ida Jean Orlando in her theory 'Deliberative Nursing Process' and introduction by North American Nurses Diagnosis Association (NANDA) to be a means of standardizing nursing care and in maintaining professional autonomy. Effective practice of the nursing process leads to improved quality of care and stimulates the construction of theoretical and scientific knowledge based on the best clinical practice [3,4].

Compliance of nurses with nursing process helps to speed up diagnosis and treatment of actual and potential health problems, reducing the incidence of hospital stays, has precise documentation that improves communication, to prevent errors, omissions, and unnecessary repetitions, promotes flexibility and independent thinking, and tailors interventions for the individual (not just the disease). Furthermore, helps nurses to gain satisfaction of getting results [1].

Ethiopian Federal Ministry of health has been engaged in improving quality of nursing care across the country in the last five years. Among these national nursing process guideline was developed, national nursing mobilization activities were conducted, national dressing code guideline was launched, national nursing service quality improvement audit tools were developed [5].

Poor compliance nurses with nursing process can lead to poor quality of nursing care, disorganization of the service, conflicting roles, medication administration error, readmission, dissatisfaction with the care provided, and increased mortality. These problems are manageable if a nurse can properly practice nursing process as the guideline [6].

Though these are in place, there is no study on compliance of nurses with national nursing process that explain why nurses were not provide nursing care based on national nursing process guideline. In addition, to the best knowledge of investigators, there was no previous studies was conducted on compliance of nurses with national nursing process guideline in the study area.

Therefore, this study try to describe and explain compliance of nurses with national nursing process guideline which will help heath care planner and local managers to identify gaps on nursing care

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practices, take remedial actions on it, and serve as baseline for scholars interested on this area.

Materials and Methods

Study settings and period

This study was conducted in Tercha general hospital, Dawro zone from March 15-30, 2018, which is located 554 km far from Addis Ababa, 327 km from regional city Hawassa and 160 km from Jimma in South west of Ethiopia. Tercha general hospital has 125 beds and 244 health workforces; among these 68 are nurses and midwifes. The hospital is expected to provide health services for 601,904 populations in the catchment area. Currently, the health services volume of this hospital is approximately 4,000 inpatients, 50,000 outpatient attendants, 4,800 emergency cases, and 1,500 deliveries in a year [7].

Study design

Single case study design with mixed methods of data collection including observation, Key Informant Interview (KII), and document review were used.

Population: The study population in this study was those randomly selected nurses who were assigned at in-patient nursing case team. The key informants were ward (case team) head nurses who had working at least for six month in the specified position.

Sample size and sampling procedure

For observation and document review: The number of sessions (sample size) to be observed were determined based on the number of nurses in the hospital. In the study hospital, 50 nurses are assigned at in-patient nursing case team. Based on the recommendation of Agency for Health care Research and Quality (AHRQ), 25 (50%) nurses were included in this study by using simple random sampling to represent the hospital [8]. Based on the recommendation of USAID five nurses to patient interaction sessions from each nurse were observed [9]. One hundred twenty five observation sessions were conducted. In addition, all patients chart that were included in observation were reviewed.

Key Informant Interviewee (KII): 14 head nurses from Tercha General Hospital were included in the study based on the criteria of information richness and closeness they have to in nursing services provision.

Data collection instruments: Structured observation checklist was used. This checklist includes 25 items with "Yes" or "No" responses and used to assess compliance of nurses with national nursing process guideline. Furthermore, KII guide with it probing questions was utilized to assess contributing reasons for being comply or not. The tool was adapted from national nursing process guideline [10,11].

Data Collection Procedure

A total of five data collectors and one supervisor who had Bachelor of Science in nursing field and took basic training on nursing process were recruited. Data were collected by direct observation of nurse to patient interaction. The time of observation was at daytime (both morning and afternoon) when the patient admitted to the ward. Patient charts were reviewed to crosscheck the variable that were included on observation and assess what nurse's document components of patient's diagnosis and nursing care planning. Patient's charts were reviewed after the end each shifting while the nurse who included in the observation ends his/her working day. Provider identification (under name and signature column) was used to be sure for assessing single nurses' compliance on document reviewer. Key informants were interviewed after conducting observation and document reviewed and principal investigator conducted it. Field note for each questions and responses was taken in Amharic language, and tape recorder was used to capture their responses properly.

Data Quality Assurance

The data collection tools were pretested two day before data collection in neighboring on 5% (sample of size=7). Data collectors and supervisors were trained for two days. Supervisors and principal investigator conducted regular supervision during data collection. Data completeness was check by data collectors and supervisor during data collection. Moreover, for qualitative data, the preliminary findings were presented for the peers to receive input and comments (Peer debriefs). Triangulation via use of key informants at different department was made.

Data Processing and Analysis

Data from observation sessions were entered in to Epi data 3.1 and transported to SPSS version 23 for analysis. Data completeness and consistence were checked. Descriptive analysis was done by using frequency and percentage of the variables. For the In-depth interview, data were analyzed thematically. First verbatim was transcribed to language in which the interview was considered then translated to English. The analysis starting by recording the text repeatedly to understand the concept of the data then followed by coding and regrouping of similar codes under one category finally themes were identified from codes and presented in support observational findings.

Ethical Consideration

Letter of ethical clearance was obtained from Institutional Review Board of Jimma University, Institute of Health Sciences after approval of the proposal. Official permission was obtained from Tercha General Hospital. Furthermore, informed consent was obtained from each key informant and nurses who included for observation. Names and other personal information, which can violate the confidentiality of the respondents, were recorded.

Operational definitions

Assessment practiced: In this study assessment was considered as practiced if a nurse assess all the following: sleeping history, sexual history, elimination status, health perception, role and relationships, activity and exercise, coping mechanism, value and belief, demographic details, nutritional status, and cognitive history during admission [1,2].

Diagnosis practiced: In this study diagnosis was considered as practiced, if a nurse diagnosed the patient based on NANADA list, diagnosis was/were documented based on problem etiology and sign/symptom format, and prioritizing the diagnosis/problems [1,2].

Planning practiced: In this study planning was considered as practiced, if a nurse set expected outcome of the nursing intervention, expected outcomes was/were SMART, and setting nursing interventions [1,2].

Implementation practiced: In this study implementation was considered as practiced if a nurse provide planned nursing interventions (that was documented under planning) for the patient [1,2].

Evaluation practiced: In this study evaluation was considered as practiced if nurses evaluate/re-assessment of the patient based on the plan [1,2].

Compliance of nurses with national nursing process guideline: Nursing process considered as practiced if nurse use five consecutive steps of nursing process based on the standard for each patient [1,2]. In this research, nursing process considered as practice: if nurses perform all components Assessment (11 components of Gordens approach), Diagnosis (using NANADA list, use problem etiology and sign/ symptom format, and prioritizing problems), Planning (set expected outcome, expected outcomes were SMART, and setting nursing interventions), Implementation (Does the planned intervention implement as planned?) and Evaluation (Does the planned intervention implement as planned time?).

Results

Description of study participants

Fourteen key informants were included in the study. Eleven (78.5%) key informants were males. The mean age of the key informants was 30.7years (SD= ± 2.9), mean work experience was 5.8years (SD= ± 3.9) (Table 1).

All observation sessions 125 (100%) were conducted, which was used to identify clients-nurses interaction. Twenty-five nurses were involved and among this 18 (72%) were females. The mean age and work experience of nurses who were involved for observation were 28.5 years (SD= ± 4.9) and 4.1 years (SD= ± 3.1), respectively (Table 2).

Sex (n=14)	Work experience in years (mean)	Age in years (mean)	Educational status (n=14)
Male =11 (78.5%)	5.8 ± 3.9	30.7 ± 2.9	Diploma=5 (35%)
Female =3 (21.5%)			BSc=7 (50%)
			MSc=2 (15%)

Table 1: Socio- demographic characteristics of Key informant on the compliance of nurses toward national guideline in Tercha general hospitals of Dawro zone, SNNPR, May 2018.

Sex (n=25)	Years' of work experience in years (mean)	Age in years (mean)	Trained on nursing process guideline	Qualification (n=25)
Male=18 (72%)	4.1 ± 3.1	28.5 ± 4.9	Yes=6 (24%)	Diploma =16 (64%)
Female=7 (28%)			No=19 (76%	Bachelor Degree=9 (36%)

Table 2: Socio-demographic characteristics of Nurses on compliance of nurses on national guideline in Tercha general hospitals of Dawro zone, SNNPR, May 2018.

Activities during patient assessment (Cordens Approch)	Yes		No	
	№	(%)	№	(%)
1. Sleeping history	85	67.9	40	32.1
2. Sexual history	85	67.9	40	32.1
3. Elimination status	90	71.6	35	28.4
4. Health perception	116	92.6	9	7.4
5. Role and relationships	94	75.3	31	24.7
6. Activity and Exercise	91	72.8	34	27.6
7. Coping mechanism	83	66.7	42	33.3
8. Value and belief	90	71.6	35	28.4
9. Demographic details	123	98.8	2	1.2
10. Nutritional status	85	67.9	40	32.1
11. Cognitive history	94	75.3	31	24.7
All components of assessment practiced	83	66.6	42	33.3

Table 3: Compliance of nurses with patient assessment standards at Tercha General Hospitals, Dawr Zone, 2018 G.C. (n=125).

Compliance of nurses with nursing assessment standards

Eighty-three (66.6%) patients were received comprehensive nursing assessment. Majority of (98.8%) of patients were assessed their demographic history. However, 31 (24.7%) of patients were not assessed their role and relationship status, 40 (32.1%) patients were not assessed their nutritional status, 22 (27.8%) patients were not assessed their sleeping history and 42 (33.3%) patients were not assessed their sleeping history (Table 3).

Majority of key informants said that assessment of patients at admission is not done for all and it is time consuming. Among this, 28 years old male head nurses 01 explained as *"I think some nursing standards; especially nursing assessment by itself is time consuming task. It takes at least 30 minutes to implement all components of nursing assessment, due to this nurses may not implement it for all patients"*.

Another 25 years old KI explained as *"…Shortage of nurses in health care market and regional health beuro wasn't allocate enough nurses based on our request is the major reason. For example in this hospital the nurse to patient ratio is 1 to 10, this implies one nurse give nursing care for extra patients (four) as compare to the national standard. This affects the compliance of nurses with the guideline"*.

Compliance of nurses with nursing diagnosis standards

Forty-eight (38.3%) of patients nursing diagnosis did not carry out based on all standards. Nurses did not write nursing diagnosis based on NANDA list for 37 (29.6%) of patients and prioritization of patients' problem were not made for 48 (38.3%) patients. The overall practice of nursing diagnosis was 77 (61.7%) (Table 4).

One of the KI explained as *"majority of nurses were not trained on nursing care standards, especially those nurses who come from college (diploma nurses) were not implemented nursing standards based on expected, they took at least three months for sharing experiences form other staffs because there is no courses about nursing process in their curriculum"*.

Compliance of nurses with nursing care plan standards

Among all diagnosed patients, nurses did not carry out correct nursing care plan for 37 (61.7%) of patients. Expected patient health outcomes were not planned for 45 (35.8%) of patients, and expected nursing intervention were not planned for 57 (41.9%) patients (Table 5).

Nursing Diagnosis Standards	Yes		No	
	№	%	№	%
1. Diagnosis was based on NANADA list	88	70.4	37	29.6
2. The diagnosis was based on PES format	85	67.9	40	32.1
3. The diagnosis were prioritized	85)	67.9	40	(32.1)
All nursing diagnosis standards practiced	77	61.7	48	(38.3)

Table 4: Compliance of nurses with patient diagnosis standard in Tercha general hospitals, Dawro Zone, 2018 G.C. (n=125).

Nursing care planning standards	Yes		No	
	№	%	№	%
1. Expected patient health outcome planned	80	64.2	45	35.8
2. The expected outcome were SMART	77	61.7	58	38.4
3. Expected nursing intervention was planned	68	54.32	57	41.9
All nursing planning standards practiced	68	54.32	57	41.9

Table 5: Compliance of nurses with nursing care planning criteria in Tercha general hospital, Dawro Zone, 2018 G.C. (n=125).

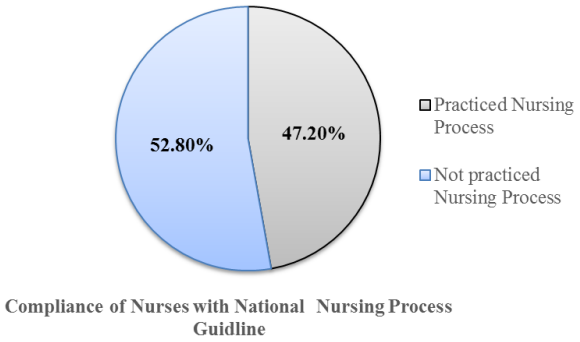

Figure 1: Compliance with nursing process among nurses working in Tercha General Hospital Dawro Zone, 2018 G.C. (n=125).

Compliance of nurses with nursing intervention and evaluation standards

Nursing interventions were given based on pre-set nursing care plan for 65 (52%) admitted patients. Regarding to conducting nursing evaluation/daily progress note, only 59 (47.2%) of patients nursing care plan were evaluated by ward nurses on daily base.

In this research nursing process practice: considered if nurses perform nursing process using the five consecutive steps of nursing process. Therefore, the overall level of nursing process practice in Tercha general hospital was 59 (47.2%) (Figure 1).

Majority of key informants were said that shortage of resources, limited support and absence of dedicated budget were the major constraint for low level of nursing process practice. A 35 years old male key informant responded as *"….Shortage of material resources), negative staff attitude, and limited support from higher offices were the big challenge for providing compliance of nurses with the guideline. Beside this, there is no budget code specifically assigned for nursing department"*.

Similarly, absence of reference books and limited capacity building activities like in service training sessions were big problems as mentioned by majority of key informants.

One of 25 years old female key informant head nurse explained as *"… most nurses including me didn't refer nursing guideline when providing care; simply we provide care based on our previous experience and what we get from education. I think this is due to shortage of capacity building activities like nursing round, nursing morning section, in service training, different seminars, and presentations. In addition, there were shortage of reference materials, lack of incentives, inadequate supplies and inadequate staffing in this hospital"*.

Discussion

The findings of this study show that the overall compliance of nurses with national nursing process guiding was 52%. This finding is comparable with the study finding in Addis Ababa and public hospitals of Harari People National Regional State which was 52.1% and 48.9%, respectively [12]. On the other hand, this finding is vary from finding of a study conducted in central Taiwan which was revealed that nurses generally followed the nursing process and charting sequence to complete care plans [13]. And study conducted in Sweden that shows 98% of the respondents used standardized nursing care plan in their everyday work [14]. The difference might be due to difference between the two countries health belief of patients, organizational facilities and income of patient that facilitate the practice of nursing process. The findings of the qualitative study also strengthened the findings of the quantitative findings, in which all the participants said that any of the nursing process steps was not practiced based on the national guideline in the study hospitals.

However, it is much better than the finding of the study conducted in Arbaminch general hospital and conducted in Debremarkos hospitals which were reported 32.7% and 37.1%, respectively [15,16]. The discrepancy might be due to difference in the study time, it was conducted four years back from the present study. Therefore, concerns might have been given to nursing process nationally within these four years.

According to the present finding, the practice of nursing process by nurse was vary among different components/steps of nursing process unlike the recommendation of national guideline which states that each steps should be practiced for all admitted patients. This suggest that nurses were not gave attention for regular documentation of nursing care provided for the patient and patients might not receive continues and systematic nursing care from nurses. This may leads to poor communication among staff nurses and decrease quality of nursing care provided for the patient.

The result of this study indicated that the compliance of nurses during comprehensive nursing assessment was 66.6%. The finding is not similar with the study conducted in Brazil, which stated assessment was performed for 98.7% of admitted cases [17]. The variation might be due to difference in the study area and the advancement of the nursing profession as well as resource and technology. Moreover, nurses in the study hospital give nursing care for extra four patients unlike the study hospital in Brazil. This high workload on nurses may affect the practice of nursing assessment. Under a heavy workload, nurses may not have sufficient time to perform tasks that can have a direct effect on patient safety. In other words, nursing process may not be implemented in hospital with high patient flow beyond the capacity of nurses.

The compliance of nurses with nursing diagnosis standard was practiced for 61.7% of patients. This low practice might due to absence of NANDA list nursing diagnosis booklet in the study hospital. In the absence of nursing diagnosis booklet, it will be difficult to give diagnosis for each problems collected by nursing assessment. This study is also less than study conducted in Public Hospitals of Harari that nursing diagnosis was practiced for 78.2% cases. This difference may be due to lack of training and reference books in the study hospitals unlike Harari, which was teaching hospital and guidelines and on job training sessions was available [6].

Our study showed that nursing care planning was not practiced for almost half of patients (45.68%). Which is much better than the study conducted at Kenya in which, the proportion of patients received nursing care plan appropriately ranged between 15.7% to 30.1% [12]? This implies that it will be difficult to know about the patient's priority problems and its expected outcomes, and the proposed nursing interventions. Moreover, if there is no documented nursing care plan, the nursing care provided for the patient may not be systematic and this may interrupt communication between nurses.

Patient evaluation was practiced for 47.2% of patients. These findings vary with the study finding at Mansoura University Hospital which was stated that, evaluation was practiced for 93% of patients [18]. The discrepancy might be Mansoura University Hospital is relatively urban hospitals, and better organizational facilities, human resources with the educational level of BSc and above, equipment access and material supply that contribute for the better practice of patients nursing care evaluation may present [14].

Strength of the Study

The use of both qualitative and quantitative methods makes the finding more strong and credible for improvement of the compliance of nurses per the guideline.

Limitation of the Study

There was direct observation of nurse to patient interactions this procedure might have led to reactivity or behavioural distortions (the Hawthorne Effect), to minimize this two observations was dropped from each session from analysis but still the effect may happen.

Conclusion

Based on the findings of our evaluation compliance of nurses with the national guideline is low as compared to the national guidelines. It was explained by qualitative study as it was due to inadequate medical supplies, reference materials, staffing, and limited capacity building activities like training. Therefore, we recommended the hospital managers to avail resources and provide regular refreshment capacity building activities like internal mentorship and training.

Consent for Publication

Not applicable

Availability of Data and Materials

The data supporting our findings are found at, kept in confidential and stored at the correspondent author both in hard and soft copies. If someone wants our data, we are voluntary to share it and the correspondent author should be contacted through the email address under the author's information.

Competing Interests

I declare that I have no competing interests.

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This study was sponsored by Jimma University, Institute of Health. The funder of the study had no role in study design, data collection, data analysis, data interpretation, writing of the report and in writing the manuscript.

Authors' Contributions

AAF developed the proposal, carried out data collection, conducted the analysis, involved in reviewing the manuscript and had full access to all the data in the study and had final responsibility for the decision to submit for publication. YA and MG provided general guidance in the overall study progress and participated in reviewing the proposal, reviewing the analysis and final study document development. All authors read and approved the final manuscript.

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