Evaluating the quality of nursing documentation in pediatric wards of Motahari Hospital of Urmia in 2017

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Abstract

Introduction: Nursing documentation is one of the main functions of the nurses and it involves recording of measures taken for patients. Observing the proper principles protects the life of patients and nurses. The current research was carried out to evaluate the quality of nursing documentation in pediatric wards.

Methodology: In this descriptive research, the quality of nursing documentation in pediatric wards was evaluated. Demographic questionnaire and a checklist to evaluate the nursing documentation quality were used to collect data. The checklist validity was examined by obtaining the views of 10 nursing professors. The level of agreement of observers was used to determine its reliability. Accordingly, 10 primary medical records were examined and scored by two people and the level of agreement between the observers by using Cohen's kappa coefficient was obtained to be 0.7, which is an acceptable value. The checklist used to evaluate the quality of the nursing documentation included four options. The sample size was 175 nurses, of which three documentations of each nurse were evaluated. The documentations related to each nurse selected randomly among the existing medical records. Descriptive and inferential statistics were used to analyze the data.

Findings: The employed nurses had mean age of 28.48±5.57 years, they had mean working experience of 5.09 ± 4.86 years, and they cared for 9.55 ± 3.06 patients on average. In total, 95.4% of the documentations were related to morning shift, 83.4% of them were related to evening shift, and 94.9% of them were related to night shift. The findings revealed that the quality of the documentation was reduced significantly by increasing age ($r = -0.28$, $r = 0.000$) and working experience of the nurses ($r = -0.27$ and $p = 0.000$).

Discussion and conclusion: The findings revealed that the quality of nursing documentation in internal surgical pediatric wards had desirable quality and the quality of the documentation was reduced by increasing age and work experience.

Key words: nursing, nursing documentation, nursing documentation quality

Please cite this article as: Bostanabad M.A.. et al. Evaluating the quality of nursing documentation in pediatric wards of Motahari Hospital of Urmia in 2017. 2018;16(2):295-299. World Family Medicine.
DOI: 10.5742/MEWFM.2018.93273

Introduction

Nursing documentation is a set of written information, transmitted in the form of a document with regard to patient's health and care status (1). It is a legal and professional action for people involved in health care affairs, including nurses (2). One of the important elements of medical documentation is patient records (3). It involves a process, indicating the activities performed by nurses for patients (4). Thus, it should have desirable quality.

Observing the standard principles in recording the nursing reports results in an exchange of information among the members of the care team, ensuring care is provided for clients (2), understanding the defects in the measures taken (5), the continuity of care provided for patients, enhancing the quality of care provided for client, increasing nurses' professional credibility, and increasing the credibility of the therapeutic-care institute and ensured nursing work. In contrast, undesirable recording would result in some problems, for example, the nurses may be sentenced in the legal authorities and slowdown in the treatment process. Legally, the function or performance is accepted and defended in the medical team where it is recorded (3).

Hence, given their importance, nursing documentation should have desirable and comprehensive conditions, in a way that it results in acceding to documentation goals, such as communication, educational, research, monitoring and evaluation goals of the health system and obtaining necessary information on patients based on proper principles (6). Additionally, desirable documentation should have accurate information on nursing examinations, patient problems, caring plans, daily progress course, educational plans and discharge plan. The nursing reporting principles include two dimensions of structure and content, in which the content includes recording the general status, drugs prescribed, instructions and acute changes, preventable cases, paraclinical findings, vital signs, and the recording of the discharge programs. In the structural dimension, the author characteristics, the time and date of the report are considered (7).

Despite the importance of recording nursing reports, various studies have indicated that nursing reports do not have desirable quality and standard. Findings of a study conducted in England revealed that 83% of medical records are incomplete in terms of documentation of the vital signs and the course of disease completed by physicians and head nurses (5). Findings of research conducted on 457 hospital records in the Educational Hamedan University of Medical Sciences in 2010 revealed that none of the medical records was fully completed (8). The research conducted by Paans et al in 2010 (9) showed that only 28% of the reports had a full nursing process.

The research conducted by Jasemi et al in 2012 on documentation (10) also provided the same results. They indicated undesirable quality of documentation at the content dimension and lack of paying attention to the eleven principles by nurses during recording of reports (11). As observing the proper principles in recording the nursing documentations plays a major role in protecting the patient's life and the safety of nurses, and as no research has been conducted so far on the quality of nursing documentation in pediatric wards in Iran and other countries, and given the fact that the pediatric wards are considered among the most critical wards of the hospital and nursing reports require high accuracy in providing the care, investigating this issue in the pediatric wards has high importance. Thus, the current research was conducted to evaluate the quality of nursing documentation in the pediatric wards of the Shahid Motahari Hospital of Urmia in 2017.

Methodology

The current research is a descriptive study (with ethical code of IR.TBZMED.REC.1395.1326, approved by Tabriz University of Medical Sciences), in which the quality of nurses' documentation in the internal surgical pediatric wards of Shahdi Motahari Hospital of Urmia was investigated. The research population included all nursing staff of the hospital. Inclusion criteria of research included having at least three months of work experience, having a bachelor degree and higher and direct clinical work with the patient. Lack of willingness to participate in the research was the exclusion criterion of the research. The sample size was calculated to be 159 nurses using the previous studies. Considering the probability of sample drop out, all 175 qualified nurses were selected as sample of study using the census method (12). In order to evaluate the quality of each nurse's documentation, a number of medical records in the ward were selected randomly after obtaining informed consent from them. Among the reports of working shifts and previous days, three reports (one report of each shift) were evaluated for each nurse, and if three reports of one nurse were not found in one medical record, other records were used.

The data collection tool was a demographic questionnaire (including questions on individual and job information of the nurses) and a checklist for reviewing the documentation. Demographic characteristics were completed through interviewing with nurses and information recorded in the reporting book of the ward. A 59-item checklist was used for examining the documentation of the patients' record. It was developed by reviewing the research literature and standards developed by the Ministry of Health. It included 4 options, in which the option "yes" received the score 2, option "relatively" received the score 1, and the option "no" received the score 3, and if one of the items in the checklist was not true in a medical record, that item was not considered in calculating the total score. The mean score of each checklist was obtained by dividing the total scores of the used items on the number of items. To match all items uniformly, the mean score of each item was converted to a percentage. In order to facilitate the process of judgment on quality of the documentation, the obtained scores were classified and reported in three levels of poor (less than 33%), moderate (33-66%) and desirable (66-100%). The validity of this checklist was evaluated by obtaining the view of 10 nursing professors and required corrections were

applied. The level of agreement of observers was used to determine the reliability of the checklist. Accordingly, 10 primary medical records were examined and scored by two people and the level of agreement between the observers was evaluated by using Cohen's kappa coefficient and it was obtained to be 0.70%, which is an acceptable value. After entering the data into SPSS 21 software, they were analyzed using descriptive statistics and reported in the form of mean, SD, number, and percentage.

Findings

In the present research, 525 reports of 175 nurses were evaluated. The mean age of employed nurses was 28.48 ± 5.57 years and their mean work experience was 5.09 ± 4.86 years, and they cared for 9.55 ± 3.06 patients on average. Investigations revealed that nurses had physical overtime of 76.98 ± 19.31 hours per month on average, in addition to their obligatory shifts. Other demographic characteristics of nurses are presented in Table 1.

Table 1: Demographic characteristics of nurses working in pediatric wards

Variable		N (%)
Gender	male	2(1.1)
	female	173 (98.9)
Marital status	Single	73 (41.7)
	Married	102(58.3)
Educational level	Bachelor	173(98.3)
	Master	3(1.7)
educational courses on documentation	Completed	139(85.8)
	Not completed	23(14.2)
Age (year)	mean± SD	28.54± 5.49
	Min-max	22-46
Overtime (per month)	mean± SD	76.98±19.31
	Min-max	20-120
Work experience (year)	mean± SD	5.09±4.86
	Min-max	1-20
Number of patients of nurses	mean± SD	9.55±3.06
	Min-max	4-20

The statistical investigations revealed that the documentations of morning shift had desirable and moderate quality, and the quality of the documentations in different shifts was in the range of 83.4 to 95.4%, and all of them were placed in the range of desirable quality. While the general score of documentation quality in the evening shift was low, no significant difference in the quality of the reports of different shifts was seen (Table 2).

Table 2: Quality of reports of nurses working in pediatric wards in different shifts

Variable		Quality					
		Desirable		Moderate		Poor	
		n	%	n	%	n	%
Working shift	morning	167	65.4	8	4.6	0	0
	evening	146	83.4	28	16.0	1	0.6
	night	166	94.9	5.1	9	0	0
	total	165	94.3	10	5.7	0	0

With regard to the relationship between the quality of nursing documentation and some individual and social characteristics of nurses, findings revealed significant and inverse relationship between the age and work experience and quality of the documentations, so that quality of nursing reports is reduced by increasing the age and work experience of nurses (Table 3).

Table 3: The relationship between some of the individual and social characteristics and research subjects' documentation

Individual and social characteristics	age		Work experience		Completing the educational course		Educational level		Marital status		Number of patients	
	P	R	P	R	P	R	P	R	P	R	P	R
Total score of quality of documentations	0.000	- 0.28	0.000	-0.27	0.30	0.08	0.84	0.01	0.15	0.10	0.89	0.01

Discussion

Research findings in general revealed that the documentation examined in the pediatric ward of Motahari Hospital of Urmia had a desirable and moderate quality. In line with present research findings, in the research conucted by Rangraz et al to examine the quality of 540 records of nursing documentation, it was found that only 11% of these medical records did not include the necessary information (13). In addition, in the research conducted by Aryaee, findings revealed that all nursing documentation had necessary information on the nursing care (14). One of the reasons for desirability of nursing documentation in the present research might be holding educational courses on in-service reporting.

Based on the nurses' demographic characteristics, 139 nurses completed the educational courses on in-service reporting. Findings of the research conducted by Abbas Zadeh et al indicate that continuous educational programs have significant impact on knowledge, attitude, and performance of nurses in the reporting area (3). Moreover, findings of the research carried out by Asghari et al suggest the positive impact of continuous educational programs on knowledge and performance of nurses (15). In the research carried out by Karimi et al to identify the factors affecting the quality of documentation of medical records, it was found that the quality of documentation increased as a result of high knowledge and attitude. Thus, holding educational courses on documentation would have great impact on improving the quality of nursing documentation (2), which is in line with the result of the current research.

Findings of our research were not in line with those of some studies conducted in this regard. Examining 140 medical records of nursing reports, Ghasabi et al concluded that the nursing reports did not have desirable quality at content dimension (11). In the research carried out by Nohi et al, findings revealed that nursing reports did not have desirable status (16). Moreover, in the research carried out by Mahjub et al, findings revealed that the completion of the examined papers was not at the desirable level and it was very poor in some cases (17). Some reasons for this inconsistency might be using different sample sizes, general structure of the checklists used to examine the quality of documentations, the wards examined, and different research methods. Investigating the relationship between the quality of nursing documentation and some of the demographic variables in the current research revealed a significant and inverse relationship between the age and work experience and quality of the documentation, so that the quality of nursing documentation was reduced by increasing the age and work experience of the nurses (Table 3). This finding is consistent with findings of the research carried out by Hallajpour in 1997, in which the researcher examined 50 medical records in Tehran. In the mentioned research, the researcher concluded that factors of age, experience, and type of employment affect the quality of recording the documentation, so that quality of nursing documentation is reduced by increasing the age and work experience (17). In a study conducted on 170 nurses working in internal surgical wards of Tabriz hospitals in 2010, Madineh Jasemi et al examined the quality of nursing documentation and factors affecting it. They concluded that there is a significant relationship between demographic variables such as ward type, employment, the hospital where nurses are working, and work experience (10); that finding was consistent with the findings of this research. The inverse relationship between the quality of documentation and work experience and the age of nurses could be attributed to the impact of increased work experience, reduced motivation of nurses, high workload, excessive fatigue during work shift, in which older people experience this fatigue more, passage of time from educational course. In research conducted in 2002, findings revealed that by increasing the work experience of nurses, the educational needs of them also increase (18).

Given the importance of nursing documentation in recent years, authorities have paid increasing attention to quality of documentation. Thus, it is recommended that workshops be held in hospitals in order to enhance quality of the documentation. In this regard, the pediatric ward in Motahari Hospital of Urmia has used these programs. Findings of the current research suggest that these workshops have been effective and they could enhance the quality of nursing documentation. This research suffers from some limitations: first, the wards examined in this research included internal surgical pediatric wards, while intensive care and emergency units were not examined in the present research. Second, only 3 sets of documentation were examined for each nurse, so the number of the examined cases for samples might be low. Thus, it is recommended that other studies with better research methods, larger sample size, and other wards and hospitals be examined. Given the significant relationship between the quality of the documentation and some

of the individual and social characteristics, it is recommended that some studies be conducted on the impact of these factors on the quality of documentation.

Conclusion

According to findings of the present research, the nursing documentation had a desirable quality and examining the relationship between demographic variables and the quality of documentation showed that the quality of nursing documentation is reduced by increasing age and work experience.

Acknowledgement
This paper was derived from a Masters thesis written in the field of pediatric nursing at the Faculty of Nursing and Midwifery in Tabriz University. The researchers of this paper appreciate the Research Deputy of Tabriz University and Nursing and Midwifery Faculty due to their financial support as well as Head and Director of Nursing Services of Shahid Motahari Hospital and all nurses who participated in this research.

References

1. Shahsavari S. Report writing and legal aspects of nursing. Isfahani DHP. 2013.
2. Karami M SZ et al. Factors influencing the quality of medical records documentation: strategies for managers and practitioners working in hospitals affiliated to Kashan University of medical sciences. Iranian Journal of medical education 2009;(4) 9: 351-35.
3. Sabeghi H, Heydari A, Borhani F. Assessment of the effect of continuing education program on nurse's knowledge, attitude and performance about documentation. Evidence Based Care. 2012;2(1):75-83.
4. Hemmati Maslakpak M, Khajeali N, Kazemi N. The impact of problem-oriented reporting education on characteristics of nursing report. Iran Journal of Nursing. 2013;26(85):26-34.
5. Roshan HY, Noorian M, Shakeri N. Auditing NICU nursing documentation in hospitals of Babol University of Medical Sciences. Advances in Nursing & Midwifery. 2015;24(87).
6. Miller DL, Balter S, Dixon RG, Nikolic B, Bartal G, Cardella JF, et al. Quality improvement guidelines for recording patient radiation dose in the medical record for fluoroscopically guided procedures. Journal of Vascular and Interventional Radiology. 2012;23(1):11-8.
7. ShahrakiVahedA M M. Principles of report writing in nursing. Tehran Jamea.
8. SEYF RM, SEDIGHI I, Mazdeh M, Dadras F, SHOKOUHI SM, Moradi A. Study of hospital records registration in teaching hospitals of Hamadan University of Medical Sciences in 2009. 2009.
9. Paans W, Sermeus W, Nieweg R, Van Der Schans CP. Prevalence of accurate nursing documentation in patient records. Journal of advanced nursing. 2010;66(11):2481-9.
10. Jasemi M, Mohajal Aghdam A, Rahmani A, Abdollahzadeh F, Zamanzadeh V. Assessing quality of nursing documentations and effective factors on it in medical-surgical units. Quarterly Journal of Nursing Management. 2012;1(3):37-45.
11. Mohammad Ghasaby M, Masudi Alavi N. Quality and barriers against nursing documentation in Kashan Shahid Beheshti Hospital (2011). Modern Care Journal. 2012;9(4):336-43.
12. Alireza Mojalalaghdam MJ, Farahnaz Abdullahzadeh, Azad Rahmani, Vahid Zamanzadeh, Samere Eghtedar. Quality of nursing documentation in internal-surgical wards of teaching hospitals affiliated to Tabriz University of medical sciences. Tabriz Nursing and Midwifery Journal. Autumn 2008(11):47- 54.
13. Jedi R, Pour F, Mousavi, Abbas SG. Evaluation of the data record in the case of emergency patients in Kashan hospitals. Faiz Scientific Journal of Kashan University of Medical Sciences. Spring 2002;8(3):68-73.
14. Ariyaei M. A Survey on the Contents of Medical Records General Hospitals Affiliated with Kerman University of Medical Sciences During the First three Months of 1377. Journal of Health Administration. 2002;4(11):65-70.
15. ASKARI MH, KAHOUEI M. Survey of the quality of nursing practice of documentation to determine their training needs and providing them with a program of quality promotion. 2004.
16. Nouhi E, Dehbanizadeh A, Zoladl M, Saeedi K, Paghan A. Error Reporting among Nurses Working at Yasuj Shahid Beheshti Hospital in 2014. Iran Journal of Nursing. 2016;29(101):33-42.
17. M. H. Comparison of quality of nursing records in general and surgical wards. [MSc thesis] Nursing Tehran: Tarbiat Modarres University[Persian]. 1996.
18. Jalil A. Educational Needs of Nursing Managers of Qazvin University of Medical Sciences in the field of quality assurance of nursing care. Journal of Qazvin University of Medical Sciences & Health Services. 2012(22):75-80.