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Evaluation of Quality of Nursing Care Provided to Stroke Patients

By

Omar Suleiman Jiyad
Department of Adult Nursing, College of Nursing / University of Baghdad/Iraq
Email: omar.salman1202b@conursing.uobaghdad.edu.iq

Tahseen Rajab Muhammed
Department of Adult Nursing, College of Nursing / University of Baghdad/Iraq

Abstract

Background: The quality of nursing care is a major concern in different countries around the globe, including Iraq.**Objective**: The aim of this study is to detect the relationship between nurses' demographic attributes and the quality of nursing care provided to stroke patients. **Methods**: Descriptive cross-sectional study design approach is done by observational the members of the study population, with the aim of describing the studied phenomenon in terms of its nature and degree of existence only. The descriptive cross-sectional approach is done by observation of the study participants about the quality of nursing care provided for stroke patients. The study was carried out in Anbar Province, at Fallujah Teaching Hospital. The non-probability (purposive) sample was selected to carry out the study which consists of (50) nurses who are deals with stroke is selected among nurses who working at emergency department, medical wards, and critical words. **Results**: Findings demonstrated that there were significant differences in quality of nursing care with regard nurses who are male (M ±SD=1.93±0.640) and those who are female (M ±SD=1.05±0.224) (t=5.922; p=0.000. Furthermore, there were significant differences in quality of nursing care with regard nurses' education level (p=0.000). Nurses who are bachelor's significantly increased quality of nursing care. **Conclusion**: There is a clear correlation in the quality of nursing care with regard to gender, years of experience for nurses, educational level and number of courses.

Keyword: Evaluation; Quality; Nursing; Care; Stroke.

Introduction

Stroke is a clinical syndrome characterized by fast onset of functional incapacity, and it is the leading cause of mortality globally (Timby B et al., 2015). The World Health Organization asserts that between 20% and 50% of persons who suffer from a stroke are at risk of dying, depending on the severity of the stroke based on how severe the stroke was, the patient's age, and other factors management effectiveness (WHO, 2017).

Stroke is the main cause of long-term functional impairment, leaving 15% to 30% of survivors with a permanent handicap and 50% to 70% of survivors functionally independent (Aslani et al., 2016). Furthermore, 32% would use home healthcare services, and 26% will need long-term care (Summers et al., 2009).

A stroke is described by the World Health Organization., sometimes known as a "brain attack," as a neurological impairment of cerebrovascular etiology that either lasts for 24 hours or is cut short by death within 24 hours." (Luker et al., 2017).

To provide the best possible results for stroke patients, nursing care is organized around many principles. Stabilization and safeguarding the patient's safety are the top priorities during the intervention (Alberts et al., 2005). Keep a stable level of

consciousness, the best possible level of functional ability and self-care, the best possible level of communication, the right amount of food, and the best possible degree of personal and familial coping (Mazzucco S et al., 2013).

Another important priority for stroke patients during their hospitalization is determining the appropriate type and level of rehabilitation for the two types of strokes: ischemic and hemorrhagic. Secondary prevention, in conjunction with treatment, aids in the management of complications associated with a neurological disability (Alexandrov et al., 2007; Aliu & Hajdini, 2021).

Rehabilitation planning should begin as soon as feasible following a stroke.As the patient's medical condition improves, the rehabilitation process becomes more active, usually within two days (Lansberg M et al.,2009; ALSoud et al., 2021).

Nurses who care for stroke patients need specialized training that is ongoing in order to provide high-quality patient-centered care. Educational training is required because they are vital members of the stroke neurology team. Critical in order to improve the skills required for successful management (Dennis M et al., 2005; Cesarec, Mikac, & Spevec, 2020).

Methodology

1- Study Design

The descriptive cross-sectional study design approach is done by observation the members of the study population, with the aim of describing the studied phenomenon in terms of its nature and degree of existence only. The descriptive cross-sectional approach is done by the observation of the study participants about the quality of nursing care provided for stroke patients.

2- Setting of the Study

The study was carried out in Anbar Province, at Fallujah Teaching Hospital. This hospital belongs to the Anbar Health Department and has an area of 80,000 square meters. There are four buildings: the main building, the doctor's residence, the services building, and the information building.

3- Sample of the Study

The non-probability (purposive) sample was selected to carry out the study which consists of (50) nurses who deals with stroke is selected among nurses who working at emergency department, medical wards and critical words. These sample is according to the following criteria include:

1. Nurses who deals with stroke patients.
2. Nurses who different level of education.
3. Nurses who are at any age groups

4- Study Instruments

The questionnaire items were adopted and developed by Stroke Nurse Working Group–National Stroke Network (NSN, 2018). This guideline used to evaluate quality of nursing care.

First one deals with socio-demographic information which include (age, gender, education level, years of experience and number of training courses deals with management of patients with stroke. And the second one deals with quality of nursing care for patients with stroke and composed of 20-items checklist.

The researcher adhered to the rules of writing the questionnaire due to the importance of the type of information that the researcher is keen to be sufficient and comprehensive for all aspects of the

problem and can be relied upon and trusted. To vague and complex answers. The type of questions was of the closed type, which required answering with reference to what was appropriate.

5- Reliability of the Questionnaire

The reliability of the study instruments means making sure that the answer will be almost the same, if it is repeatedly applied to the same people, at different times. The researcher applied it to a random exploratory sample of 5 nurses as composed 10% of original sample which collected by two investigators (researcher and well-trained person). Where the members of this sample were later excluded from the original sample on which the final study was conducted.

6- Ethical Considerations

Before the starting of gathering the data from the sample who are participating in the study, the researcher collected socio-demographic information from the nurses without informing them about the purpose of conducting the research because the topic requires it.

7-Methods of Data Collection

The data was carried out from 27 January 2022, and it ended on 30 May 2022. The data have been collected through the use of constructed questionnaire (checklist) observation tool. The researcher has gathered the objective's responses through an application of direct observation as mean of data collection. Nurses were observed while they are working in the cases of stroke patients. The researcher observed each nurse three observations and among each observation (10) days' time period.

Three correct practices out of 3 observations were rated as always and scored (3),
Out of 2-1 correct practice out of 3 observations were rated as sometimes and scored (2). No correct practice out of 3 observation was rated as never and scored (1).

8-Methods of Statistics Data Analysis

In order to statistically analyze the data collected from the study sample to arrive at the results, the researcher used the SPSS-20 and Microsoft Excel (2010) program to analyze this data and deal with it statistically, to find the relationships between the variables, and obtain the final results of the research based on a set of statistical tests.

Result

Table 1. *Descriptive Statistic of Socio-Demographic Variables*

	Classification	Freq	%
Age/years (MS± SD= 27.36±6.84)	20-24 years old	22	44.0
	25-29 years old	16	32.0
	30-34 years old	3	6.0
	35-40 years old	8	16.0
	>40 years old	1	2.0
	Total	**50**	**100.0**
Gender	Male	32	64.0
	Female	18	36.0
	Total	**50**	**100.0**
Education Level	School Nursing	14	28.0
	Diploma Nursing	29	58.0
	Bachelors Nursing	7	14.0
	Total	**50**	**100.0**
Years of Experience	<5 years	27	54.0
	5-10 years	14	28.0
	>10 years	9	18.0
	Total	**50**	**100.0**
Training Courses	No	34	68.0
	1-2 sessions	10	20.0
	>2 sessions	6	12.0
	Total	**50**	**100.0**

"(MS) Mean of Scores, (SD) Standard deviation

Table 2. *Evaluation Quality of Nursing Care Provided to Stroke Patients*

List	Quality of Nursing Care Items	Observatic	No.	%	MS ± SD	Ass.
1	Monitor temperature from 4 to 6 hours every 72 hours	Never	26	52.0	1.92±0.986	Fair
		Sometime	2	4.0		
		Always	22	44.0		
2	Frequently measuring blood pressure (calculating blooc pressure every 2 hours during the first 24 hours and every hours for 48 hours (the second and third days)	Never	36	72.0	1.46±0.787	Poor
		Sometime	5	10.0		
		Always	9	18.0		
3	Monitor tachycardia for at least 24 hours	Never	27	54.0	1.78±0.910	Fair
		Sometime	7	14.0		
		Always	16	32.0		
4	Assessment of respiratory function 2-4 hours within 48 hc of injury, which includes (the position of the patient to facilitate ventilation, respiratory rate, breathing depth, secretion collection)	Never	32	64.0	1.68±0.935	Fair
		Sometime	2	4.0		
		Always	16	32.0		
5	Monitoring (Glasgow Coma scale, pupil reflex and volun limb strength, decreased level of awareness and percepti	Never	45	90.0	1.18±0.560	Poor
		Sometime	1	2.0		
		Always	4	8.0		
6	Assessment of the patient's level of insight, impulsivity a safety by documenting and evaluating (pre-existing situati memory deficits, sensory deficits, changes in mood and behavior, severe delirium).	Never	47	94.0	1.10±0.416	Poor
		Sometime	1	2.0		
		Always	2	4.0		
7	Monitor blood sugar twice daily for 72 hours, and then evaluate and document the results	Never	30	60.0	1.78±0.974	Fair
		Sometime	1	2.0		
		Always	19	38.0		
8	Monitoring the patient's IV fluids (taken and excreted)	Never	47	94.0	1.10±0.416	Poor
		Sometime	1	2.0		
		Always	2	4.0		
9	The patient should not be given any medicine or food ora during the first 48 hours	Never	30	60.0	1.78±0.974	Fair
		Sometime	1	2.0		
		Always	19	38.0		
10	In the early stage of stroke, food and fluids are given throu the stomach feeding tube through the nose	Never	41	82.0	1.32±0.712	Poor
		Sometime	2	4.0		
		Always	7	14.0		
11	Assessment and documentation of the following (incontinence assessment within 48 hours, examination of bladder before and after emptying, documentation of urological functions)	Never	41	82.0	1.34±0.745	Poor
		Sometime	1	2.0		
		Always	8	16.0		
12	Monitoring the stool if the stool is diarrhea or constipatic	Never	27	54.0	1.88±0.982	Fair
		Sometime	2	4.0		
		Always	21	42.0		
13	Maintaining oral care every 2 to 4 hours (noting the condi of the lips, tongue gums, mucous membranes, tonsils.)	Never	27	54.0	1.90±0.994	Fair
		Sometime	1	2.0		
		Always	22	44.0		
14	Work to change the patient's position at intervals of time avoid pressure on the parts of the body that lead to bed so	Never	27	54.0	1.90±0.994	Fair
		Sometime	1	2.0		
		Always	22	44.0		
15	Elevate the affected arm to prevent edema and fibrosis	Never	20	40.0	1.88±0.824	Fair
		Sometime	16	32.0		
		Always	14	28.0		
16	Making a fixed urinary catheter for the patient	Never	13	26.0	2.20±0.832	Fair
		Sometime	14	28.0		
		Always	23	46.0		
17	Frequently examine the site of the cannula (patency of tl sign of inflammation)	Never	13	26.0	2.34±0.871	Good
		Sometime	7	14.0		
		Always	30	60.0		
18	Applying a soft substance to the mouth externally, such glycerin and petroleum jelly derivatives, to prevent crack of the skin	Never	39	78.0	1.38±0.752	Poor
		Sometime	3	6.0		
		Always	8	16.0		
19	Make a daily bath for the patient using warm water and sc because it is exposed to bacterial accumulation	Never	45	90.0	1.16±0.509	Poor
		Sometime	2	4.0		
		Always	3	6.0		
20	Giving treatment according to the time and as directed by specialist	Never	28	56.0	1.76±0.916	Fair
		Sometime	6	12.0		
		Always	16	32.0		

Result of table (1) shows that highest percentage of participants (44%) were with age

group 20-24 years old, also (64%0 of them were male and (34%0 female.

Regarding education level, highest percentage of them (58%) were with diploma nursing, and (54%) of them had less than 5 Years of Experience.

Regarding Training Courses, highest percentage of them (68%) of them not participants in Training Courses.

"(MS) Mean of Scores, (SD) Standard deviation, Level of Assessment (Poor ≤1.66, Fair=1.67-2.33, Good ≥2.34)"

In terms of statistical mean and standard deviation, this table demonstrated that the nurses expressed a poor responses regards nursing care provided for stroke patients at all items of the scale (M ≤1.66) except, the items number (1, 4, 7, 9, 12, 13, 14, 15, 16 and 20) the responses were fair (M=1.67-2.33), as well as, the provide good quality of care related to "frequently examine the site of the cannula (patency of the sign of inflammation)" as indicated by higher mean scores (≥2.34).

Table 3. *Overall Quality of Nursing Care Provided to Stroke Patients*

Quality of Care	***Freq***	***%***	**M ± SD**
*Poor (*M=20-33*)*	*26*	*52.0*	32.84±9.97
*Fair (*M=34-46*)*	*19*	*38.0*	
*Good (*M=47-60*)*	*5*	*10.0*	
Total	*50*	*100.(*	

M: Mean for total score, SD=Standard Deviation for total score

Findings demonstrated that the (52.0%) of nurses expressed a poor quality of nursing care provided for stroke patients as indicated by low level of mean scores 32 and ±SD=9.97.

Table 4. *Statistical Differences in Quality of Nursing Care with regards Nurses Age*

Age Variables	**Source of variance**	**Sum of Square**	**Mean Squa**		**p≤ 0.**
Quality of Nursing Care	Between Groups	.282	.071	.2	.898
	Within Groups	11.910	.265		
	Total	12.192			

d.f: Degree of freedom, F: F-statistic.

Findings demonstrated that there were no-significant association in quality of nursing care with regard nurses age groups (p=0.898).

Table (5): *Statistical Differences in Quality of Nursing Care with regards Nurses Gender*

	Gender	**Mean**	**SD**	**t-value**	**d.f**	**p≤ 0.05**
Quality of Nursing Ca	Male	1.93	.640	5.922	48	0.000
	Female	1.05	.224			

SD: Standard deviation, t: t-test, d.f: Degree of freedom, p: Probability value.

Findings demonstrated that there were significant differences in quality of nursing care with regard nurses who are male (M ±SD=1.93±0.640) and those who are female (M ±SD=1.05±0.224) (t=5.922; p=0.000).

Table 6. *Statistical Differences in Quality of Nursing Care with regards Nurses Education Level*

Education LevelVariables	**Source of variance**	**Sum of Square**	**Mean Squ**	**F**	**p≤ 0.**
Quality of Nursing Care	Between Groups	3.798	1.899	10.63	.000
	Within Groups	8.393	.179		
	Total	12.192			

d.f: Degree of freedom, F: F-statistic.

Findings demonstrated that there were significant association in quality of nursing care

with regard nurses' education level (p=0.000). Nurses who are bachelor's significantly increased quality of nursing care.

Table 7. *Statistical Differences in Quality of Nursing Care with regards Nurses Years of Experience*

Years of Experience	Source of variance	Sum of Squares	d	Mean Square	F	p≤ 0.0
Quality of Nursing Care	Between Groups	5.842	2	2.921	21.62	.000
	Within Groups	6.349	47	.135		
	Total	12.192	49			

d.f: Degree of freedom, F: F-statistic.

Findings demonstrated that there were significant differences in quality of nursing care with regard nurses' years of experience (p=0.000). More years of experience (>10) significantly increased quality of nursing care

Table (8) *Statistical Differences in Quality of Nursing Care with regards Nurses Number of Training Courses*

No. training	Source of variance	Sum of Squares	d	Mean Squa	F	p≤ 0.05
Quality of Nursing Care	Between Groups	3.941	2	1.970	11.2	.000
	Within Groups	8.251	47	.176		
	Total	12.192	49			

d.f: Degree of freedom, F: F-statistic.

Findings demonstrated that there were significant association in quality of nursing care with regard nurses' number of training (p=0.000). More training (>2) significantly increased quality of nursing care.

Discussion

Result of table (1) The mean age of the nurses was (26 and ± SD = 36.84). Regarding the gender, the results showed that more than half of the participants were male. The proportion of males (64%). This finding is consistent with the majority of study. At the educational level, the results of the study showed that more than half of the studied sample have a nursing diploma (n = 29; 58%). This study is consistent with the study conducted by Suz Othman Aziz (2011) In the city of Sulaymaniyah, where they reported that the largest part of the participants are nursing diploma graduates (Suz, 2011). Years of experience The results showed that in terms of years of experience, nurses showed less than 5 years of age (n = 27; 54%).Regarding the number of training sessions, the majority of nurses attended no training sessions (n = 34; 68%) .This study is consistent with the study conducted by Batoul Ahmed Gadawi and Ali Abdel Ghanem 2009 in the city of Baghdad, where the majority of nurses (98%) within the required specialization did not have training courses.

Table (2,3) result showed that (52.0%) of the nurses expressed the poor quality of nursing care provided to stroke patients as evidenced by the low level of mean score 32 and ± SD = 9.97. This study is consistent with the study conducted by Ali Abdel-Ghanim and Batoul Gedo. (2009) in the city of Baghdad, where they reported that the results of the study showed insufficient skills of nurses towards patient care (Ali & Batoul, 2009).

Table (4) Findings demonstrated that there were no-significant differences in the quality of nursing care with regard to nurses age groups (p=0.898) This result is consistent with several studies that found this such as Abul-Azem and Al-Hayy (2019) who reported that there is no significant association between nurses' pretest practice and age variable.

Table (5) Findings demonstrated that there were significant differences in the quality of nursing care with regard nurses who are male (M ±SD=1.93±0.640) and those who are female (M ±SD=1.05±0.224) (t=5.922; p=0.000). This result is inconsistent with a number of studies, for example: Abu Al-Alaizm and Al-Hayy (2019) who showed that there is no statistically significant relationship between the practice of the preliminary test for nurses and the sex variable.

Table (6) Findings demonstrated that there were significant differences in the quality of nursing care with regard to nurses' education level (p=0.000). Nurses who are bachelor's significantly increased quality of nursing care This result is inconsistent with a number of studies, for example: Hamzah Abdul Rahman & Mohammad Sobri (2015) Nurses with higher education were not significantly associated with both quality of care and patient *(*Hamzah *&* Mohammad, 2015*)*.

Table (7) Findings demonstrated that there were significant differences in the quality of nursing care with regard to nurses' years of experience (p=0.000). More years of experience (>10) significantly increased quality of nursing care. The researcher's opinion through these results is that the more years of experience, the higher the quality of nursing care, and this is due to the acquisition of sufficient experience in dealing with nurses with patients during the years of nursing service, unlike nurses who have few years of experience in nursing.

Table (8) Findings demonstrated that there were significant differences in the quality of nursing care with regard to nurses' number of training (p=0.000). More training (>2) significantly increased the quality of nursing care. This study is inconsistent with the study conducted by Muhammad in 2017.

Conclusion

The results showed that (52.0%) of the nurses expressed the poor quality of nursing care provided to stroke patients as indicated by the low level of mean score 32 and ± SD = 9.97.

The ages of the participants were different, as the percentage of participants from the young group was the largest in participation, as the results showed that there are no statistically significant differences in the quality of nursing care with regard to the age groups of nurses.

Regarding the gender of the study participants, the results showed that more than half of the participants were male. (Male ratio 64%), the results showed that there were statistically significant differences in the quality of nursing care with regard to male nurses compared to females, where the nursing care provided by males was better than the care provided by females.

At the educational level, the results showed that there were statistically significant differences in the quality of nursing care with regard to the nurses' education level (p = 0.000). Nurses with bachelor's degrees significantly increased the quality of nursing care compared to nurses with diplomas and nursing qualifications.

The results showed that there were statistically significant differences in the quality of nursing care with respect to the nurses' years of experience (p = 0.000). Years of experience (>10) significantly increased the quality of nursing care.

The results showed that there were statistically significant differences in the quality of nursing care with regard to the number of trained nurses (p = 0.000). More training (>2) led to a significant increase in the quality of nursing care, so that the higher the number of courses, the

higher the quality of nursing care.

Recommendations

1-Increasing the number of male nurses in the units where stroke patients are present (emergency unit, internal unit, intensive care), as the care of stroke patients requires a great effort, and this requires male nurses with the ability to be active to provide integrated nursing care.

2-Increasing the number of nurses, especially those with a bachelor's degree in nursing, to work in the (emergency unit, internal unit, intensive care unit) because of the information and scientific background they have.

References

Abdul Rahman, H & Sabri, M. (2015). Nurse level of education, quality of care and patient safety in the medical and surgical wards in Malaysian Private Hospitals: A cross-sectional study. *Global journal of health science*, *7*(6), 331.

Abul_Azem, S. E., & Elhy, A. H. A. (2019). Effect of Educational Intervention On Nurses' Knowledge And Practices Regarding Endotracheal Tube Suctioning. *SSRG International Jurnal of Nursing and Health Science*, *5*(3).

Alberts M, Latchaw R, Selman W, et al. Recommendations for comprehensive.2015

Alexandrov A, Sharma V, Lao A, et al. Reversed Robin Hood syndrome in acute ischemic stroke patients. Stroke. 2007; 38(11):3045-3048. PMid: 17916768. https://doi.org/10.1161/STROKEAH A.107.482810.

Ali, A.G., & Batool,A. J . (2009). Assessment of Nurses' Practices for Neurological Unconscious Patients in Intensive Care Units. Iraqi National J. for Nursing Specialties, Vol. 24(1).

Aliu, Y., & Hajdini, A. (2021). Examining the Challenges before Public Employment Service in Republic of Kosovo. *Croatian International Relations Review*, *27*(88), 34-52. https://cirrj.org/index.php/cirrj/article/view/457/404

ALSoud, A. R., Abdeljaber, O., Ab Yajid, M. S., Johar, M., Al-masaeed, S., & Azam, S. F. (2021). Adoption of Information Communication Technology (ICT) in International Entrepreneurship: A Way to Promote International Relations Among Business Entities. *Croatian International Relations Review*, *27*(87), 1-31. https://cirrj.org/index.php/cirrj/article/view/416/394

Aslani Z, Alimohammadi N, Taleghani F, et al. Nurses' Empowerment in Self-Care Education to Stroke Patients: An Action Research Study. Int. J. Community Based Nurs. Midwifery. 2016; 4(4): 329-338.

Cesarec, I., Mikac, R., & Spevec, D. (2020). The Concept of Human Security as a Basis for the Application of Big Data Concept in Establishment of Early Warning System for Crisis Management in the Republic of Croatia. *Croatian International Relations Review*, *26*(86), 72-95. https://cirrj.org/index.php/cirrj/article/view/394/388

Dennis M, Lewis S, Warlow C. Effect of timing and method of enteral tube feeding for dysphagic stroke patients (FOOD): a multicenter randomised controlled trial. Lancet. 2005; 365(9461): 764-772. https://doi.org/10.1016/S0140 6736(05)70999-5.

Luker J, Bernhardt J, Graham J, et al. Interventions for the uptake of evidence-based recommendations in acute stroke settings, Cochrane Effective Practice and Organisation of Care Group. 2017; 5: 6. https://doi.org/10.1002/14651858.CD012520.

Mazzucco S, Turri G, Mirandola R. What is still missing in acutephase treatment of stroke: a prospective observational study.Neurol Sci. 2013; 34(4): 449. PMid: 22466805. https://doi.org/10.1007 /s10072-012-1024-y .

Othman, S, A. (2013). Evaluation of Nurses' practices provided to the Patients who undergo Open Heart Surgery in Sulaimani center of Heart Diseases (S.C.H.D) Kufa journal for nursing sciences vol. 3.

SOZ, O. A. (2011). Evaluation of Nurses' practices provided to the Patients who undergo Open Heart Surgery in Sulaimani center of heart diseases (S.C.H.D). KUFA JOURNAL FOR NURSING SCIENCES Vol. 3 No. 1, January through April 2013.

Summers D, Leonard A, Wentworth D, et al. Comprehensive overview of nursing and interdisciplinary care of to the acute ischemic stroke patient. Stroke. 2009; 40(8): 2911-44. PMid: 19478222. https://doi.org/10.1161/STROKEAHA.109.192362.

Timby B, Smith N. Introductory Medical Surgical Nursing, 10th ed. Wolters Kluwer Health, Lippincott, Williams & Wilkins, J. B. Lippincott Company; 2010. 594 p. PMid: 21190418.

World Health Organization. Global Burden of Disease (GBD). Accessed 20 Dec 2017. Available from: www.who.int.access.lib rary.unisa.edu.au/healthinfo/bod/en/index.html.