

How to Cite:

Hassan, H. J., & Mohammed, S. J. (2022). Patient's performance program about self-care after craniotomy surgery. *International Journal of Health Sciences*, 6(S1), 13960–13966.
<https://doi.org/10.53730/ijhs.v6nS1.8478>

Patient's performance program about self-care after craniotomy surgery: Instructional study

Hassan Jassim Hassan

MSc Student, University of Baghdad, College of Nursing.

Corresponding author: Email: hasan.jassem1202b@conusing.uobaghdad.edu.iq

Suad Jassim Mohammed

Professor/PhD. Adult Nursing Department/College of Nursing/ University of Baghdad

Abstract--Background: craniotomy surgery is a terrible experience for patients and their families. Patients' worries regarding daily living activities prior surgery and after discharge are the most prevalent. Nurses assess and educate patients on their abilities to undertake self-care after release from the hospital, but they frequently express worry about what they may face at home. Patients got instructions from surgeons and nurses in our setting, but there was no one discharge document that served as a rapid and thorough reference. Precision postoperative instructions for patients to employ at home are crucial to their health. Aims: To evaluate the impact of an instructional program on patient's performance about self-care after craniotomy surgery. To find out the association between impact of an instructional program on patient's performance about self-care after craniotomy surgery and demographic data of patients. Subjects and methods: A pre-experimental design (one group pre-test/ post-test design) is applied has been done to obtain the study goals. Forty-four patients had craniotomy surgery selecting by non-probability sample (convenience) sampling. Their age ranged from (20-60 or more) years old, fully conscious after operation. One group that gives instructional program. Using a valid and reliable questionnaire, data was collected. Results: the study shows there is a statistical significance deference between pre and post-test for study at $p < 0.05$ which mean impact of instructional program, this indicates to good improvement in total knowledge of the patients about self-care performance after application of instructional program. Conclusion: At the post test, there was a high significant improvement in patients' knowledge about self-care performance after application of the instructional program, this demonstrates the smoothness of the program that was designed for this purpose, as well as the ease with which it was accepted by all of the patients who took part. There is a statistical

significant difference between demographics variables (age, gender, marital status, educational qualification and occupation) and impact of instructional program among the two period (pre and post-test) for patient's knowledge. Recommendation: Conducting specialized courses for medical and health staff concerned with the implementation of self-care programs after neurosurgery in neurosurgery wards.

Keywords---Instructional Program, Self-Care Performance, Craniotomy Surgery.

Introduction

Craniotomy surgery is a procedure that involves opening the head to access the brain (Comasky, 2020). A craniotomy is performed to treat a variety of disorders of the brain and its surrounding structures surgically. A subarachnoid hemorrhage (bleeding on the surface of the brain), a brain tumor (abnormal cell growth in the brain), or a catastrophic head injury are the most prevalent reasons for a craniotomy (Brain and Spine Foundation, 2018). The human brain is a complex network that is highly flexible (Poologaindran et al., 2021) therefore, the craniotomy carries a higher risk of morbidity due to a range of problems. After a time of treatment and rehabilitation, the major survivors return with diverse physical, psychological, emotional, social, and spiritual limitations (Marwein et al., 2018). Disease management and patient self-care is becoming more important in patient-centered treatment as a behavioral component (Bulaj et al., 2016). Patients' self-care performance relates to health-seeking actions such as taking medications, exercising, quitting smoking, and eating a balanced diet (Jang & Shin, 2017). Poor and inadequate self-care is one of the leading causes of patient mortality and poor quality of life. As a result, observing care habits with the aim of improving the quality of life of persons with chronic conditions is critical, and patients can influence their comfort and performance ability by learning to care for themselves (Qoli, et al., 2016).

Aims of the study:

To evaluate the impact of an instructional program on patient's performance about self-care after craniotomy surgery.

To find out the association between the impact of an instructional program on patient's performance about self-care after craniotomy surgery and demographic data of patients.

Research hypothesis:

The knowledge about self-care performance of studied patients after application of the instructional program will be higher than their knowledge before the application of it.

Method

Research design: A pre-experimental design (one group pre-test/ post-test design) is applied has been done to obtain the study goals. Setting: This study was

conducted in neurosurgery hospitals in Baghdad city (Neurosurgery Teaching Hospital, Dr-Saad Al-Witry Neuroscience Hospital and Ghazi al Hariri Surgical Specialties Hospital).

Subjects:

Forty-four patients of both gender had craniotomy surgery were included in this study. Their age ranged from (20-60and above) years old, fully conscious after operation in neurosurgery wards. One group that gives instructional program. The number of males was 23, while the number of females 21. The data collection from study sample beginning from (28th September, 2021) to (20th March, 2022). Those patients were followed up before discharge in the neurosurgery wards, Two week after discharge in the neurosurgery outpatient clinic. Their ages ranged from 20 to 60 years or more.

Tools:

A valid and reliable questionnaire used to data collection.

Ethical considerations:

The recruited patients' written consents to participate in the study were acquired, and privacy and confidentiality were respected. The right of participants to withdraw at any moment during the study was recognized and respected.

Statistical Analysis

The "SPSS" software version 22 was used to analyze the data. The dependability of the developed tool was assessed using Cronbach's alpha reliability test. Descriptive Data Analysis: Tables (Frequencies, Percentages, and mean of scores) and Statistical figure (Bar Charts). Inferential Data Analysis: T-test (paired sample t-test) to determine the mean difference between the patient' responses (knowledge and practices) at two levels of measurements (pre-test and post-test), Analysis of variance (ANOVA) to determine the association between the patient' (knowledge and practices) with demographic characteristics and T-test (independent sample t-test) to determine the mean difference between the patient' (knowledge and practices) according to their gender.

Result

Table (1): Distribution of craniotomy patients according to the demographical characteristics

Demographic data	Rating and intervals	Frequency	Percent
Age / years	20-less than 30	8	18.18
	30 – less than 40	8	18.18
	40 – less than 50	8	18.18
	50 - less than 60	9	20.46
	60 or more	11	25
Gender	Male	23	52.3
	Female	21	47.7
Marital Status	Single	4	9.09

Occupation	Married	32	72.7
	Widow/Widower	7	15.9
	Divorced	1	2.27
	Single	4	9.09
	Employee	9	20.5
	Retired	2	4.5
	Unemployed	21	47.7
	Freelance work	12	27.3

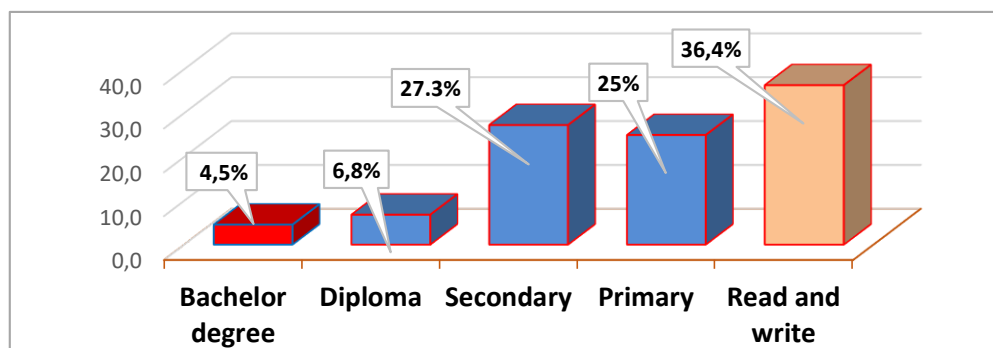


Figure (1): Distribution of craniotomy patients according to the educational levels

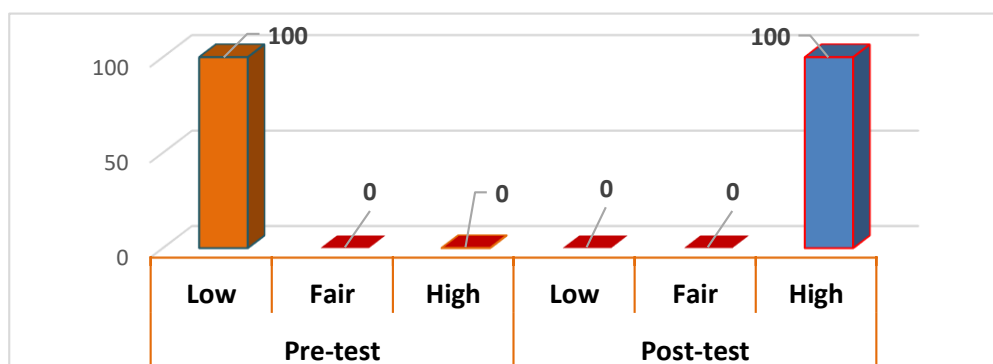


Figure (2): Overall Evaluation of Patients' Knowledge About Self-Care Performance after Craniotomy Surgery at the Pre-Test and Post-Test Measurements

Table (2): Mean Difference (Paired Sample T-Test) Between the Overall Evaluation of Patients' Knowledge at the Pre-Test and Post-Test Measurements

Periods	Mean	n	Std. Deviation	t-value	d.f.	p-value
Pre-test	1.0549	44	0.0688	59.713	43	0.000
Post-test	1.8750	44	0.0654			HS

Table (3): Analysis of Variance (ANOVA) of the Overall Patients' Knowledge according to Demographic Data

Studied Variables	Rating and Intervals	N	Mean	S.D.	F	p-value
Age / years	20- less than 30	8	1.8906	0.05866	0.160	0.95 NS
	30 – less than 40	8	1.8646	0.08259		
	40 – less than 50	8	1.8750	0.04980		
	50 - less than 60	9	1.8750	0.08590		
	60 or more	11	1.8712	0.05730		
Marital Status	Single	4	1.8854	0.06250	0.613	0.61 NS
	Married	32	1.8672	0.06813		
	Widow/Widower	7	1.8988	0.05822		
Educational qualification	Divorced	1	1.9167	0.00	2.54	0.05 S
	read and write	16	1.9063	.06719		
	Primary	11	1.8788	.07325		
	Secondary	12	1.8542	.04530		
	Diploma	3	1.8194	.02406		
	Bachelor degree	2	1.8125	.02946		

Table (1) indicate that 11 (25%) of craniotomy patients within age group of (60 or more). Concerning to the gender, the male more than female in the sample 23 (52.3%). Regarding to marital status, the greater parts is 32 married for (72.7%) over all sample. Concerning of the occupation, an unemployed is the greater number of sample 21 (47.7%).

Figure (1) indicates of (36.4%) educational level of craniotomy patients from read and write level.

Figure (2) displays the overall evaluation of patients' knowledge at the pre- and post-test, which shows that patients lack knowledge about self-care performance after craniotomy at the pre-test and have high knowledge about self-care performance at the post-test.

Table (2) shows highly significant difference between pre- and post-test toward patients' knowledge about self-care performance after craniotomy surgery.

Table (3) displays analysis of variance of the overall patients' knowledge according to demographic data, which shows that all demographic variables non-significant in overall patients' knowledge about self-care performance except educational qualification is significant.

Discussion

Ongoing instructional programs are necessary for consistent promotion of self-care performance, controlling symptoms and prevention of complications. The findings of the current study revealed that the highest age group was (60 or more)

with a twenty-five percentage from overall study sample, whereas, more than half the sample is men 52.3%, married patient was the greater ratio of sample 72.7%. An unemployed patient was the greater number of sample 21 (47.7%). The read and write level is the most among the groups, which is 36.4% of the total sample. In this regard, the findings of a research by Abd elmowla, et al., a (2015) It stated in its results that in both the control (60.0%) and research (56.7%) groups, more than half of the patients were men. More than half of the patients in the control (63.3%) and research (56.7%) groups were between the ages of (35-50) years. Regarding marital status of patients, the majority of patients were married, with (63.3%) in the control group and (86.7%) in the research group. Regarding education, secondary school education was held by (20.0%) of the control group and (26.7%) of the study group, and illiteracy was held by (56.7%) of the control group and (46.7%) of the research group. In terms of occupation, manual labor accounted for (46.7%) of patients in the control group and (36.7%) in the research group.

The overall evaluation of patients' knowledge at the pre- and post-test, that presents the results of the impact of the instructional program on patients' knowledge about self-care performance after craniotomy surgery. Whereas, figure reveal that patients had low knowledge about self-care performance after craniotomy at the pre-test before application of instructional program but high knowledge about self-care performance at the post-test after application of instructional program. Piper (2009) confirmed these findings, stating that a successful health program leads to changes that reflect enhanced understanding of certain medical and health-related topics over time. Short- and long-term behavioral changes in patients depend on the effectiveness of the health program, lowering hazardous behavior and reducing or preventing numerous postoperative problems. Evaluator observations and learner comments can be used to track these changes in behavior.

The mean difference between the pre- and post-test shows that highly significant difference between pre- and post-test toward patients' knowledge about self-care performance after craniotomy surgery. this indicates the impact of the instructional program on patients' knowledge about self-care performance after craniotomy surgery. This impact of the program is due to the great desire of patients to learn and inform their medical condition to reach a full recovery after craniotomy surgery.

The analysis of variance, the results show that there is no significant variance in the results according to demographic variables except in the educational qualification there appears significant variance in the results. The researcher attributes the absence of significant variance in the patients' knowledge according to demographic variables due to the seriousness of the craniotomy surgery and the patients fear from it that creates in all patients a desire an overwhelming desire to learn and this desire is determined by the educational qualification if the element that has significant variance is due to the fact that the percentage of patients' response to the program is governed by the educational qualification of the patients. In this regard, Sheikh et al., (2020) state that craniotomy caregivers did not have a complete understanding of craniotomy care. A substantial significant link between knowledge score and chosen demographic characteristics

such as age, education, and employment was discovered, according to the findings.

References

- Abd Elmowla R.A.A., El-Lateef Z.A., and El-khayat R. (2015). Impact of Nursing Educational Program on Reducing or Preventing Postoperative Complications for Patients after Intracranial Surgery. *Journal of Education and Practice*, 6(9), 60-70.
- Bulaj G., Ahern M. M., Kuhn A., et al. (2016). Incorporating Natural Products, Pharmaceutical Drugs, Self-Care and Digital/Mobile Health Technologies into Molecular-Behavioral Combination Therapies for Chronic Diseases. *Current Clinical Pharmacology*, 11(2), 128-145.
<https://doi.org/10.2174/1574884711666160603012237>
- Jang D.E., and Shin J.H. (2017). Self-Care Performance of Middle-Aged Stroke Patients in Korea. https://www.researchgate.net/publication/320906223_Self-Care_Performance_of_Middle-Aged_Stroke_Patients_in_Korea
- Linda Comasky (2018). Craniotomy: Information for patients and relatives.
- Marwein B., Clement N., Clement I. (2018). Effectiveness of SIM on Care of Patient with Craniotomy among Staff Nurses Working in Neurological Units. Zenodo. <https://zenodo.org/record/2017986>
- Piper S. (2009). Health Promotion for Nurses: Theory and practice. United Kingdom: Taylor and Francis.
<https://www.taylorfrancis.com/books/mono/10.4324/9780203870914/health-promotion-nurses-stewart-piper>
- Poologaindran A., Profyris C., Young I.M., et al., (2022). Interventional Neurorehabilitation for Promoting Functional Recovery Post-Craniotomy: A Proof-of-Concept. *MedRxiv*.
<https://www.medrxiv.org/content/10.1101/2021.07.27.21260088v1.full>
- Qoli A., Nasrabadi T., Abianeh E.E. (2016). The Effect of an Educational Self-Care Program on Knowledge and Performance in Patients with Coronary syndrome. 5(5), 132-137.
- Sheikh S., Tembhare V., and Patil D.M. (2020). To assess the knowledge and practice of home care regarding post craniotomy care among caregivers of craniotomy patients. *International Journal of Modern Agriculture*, 9(3), 16-20.
<https://doi.org/10.17762/ijma.v9i3.100>
- Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2021). Health and treatment of diabetes mellitus. *International Journal of Health Sciences*, 5(1), i-v.
<https://doi.org/10.53730/ijhs.v5n1.2864>