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A Study to Assess the Knowledge of Staff Nurses Regarding Neurorehabilitation in Dhiraj Hospital

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Abstract

Background: Rehabilitation is an integral part of medical care. Rehabilitation includes all measures aimed at reducing the impact of disabling and conditions causing handicap. It is also aimed at enabling the disabled and the handicapped to be an accepted member of the society. Neurorehabilitation assumes that motor learning contributes to motor recovery after injury. However, little is known about how learning itself is affected by brain injury, how learning mechanisms interact with spontaneous biological recovery, and how best to incorporate learning principles into rehabilitation training protocols.This study was designed to assess the knowledge of staff nurses regarding neurorehabilitation in Dhiraj Hospital.In this study Quantitative evaluative research approach with descriptive research design was used. Emphasis was put on trying to establish the relationship between ages, gender, professional experience, previous area of experience, have you undergone any training on neurorehabilitation. The validity and reliability of research instruments was established, and data was collected from 60 staff nurses selected from Dhiraj Hospital using convenient sampling method. To analyze the data and correlation statistical tool was used with the aim of establishing to find out association between knowledge score with selected demographic variables. This formed the basis of the detailed analysis and conclusions and recommendations.

Aims and Objectives: The aim of this study is to assess the knowledge of staff nurses regarding neurorehabilitation and to find out the association between knowledge and the selected demographic variables.

Material and Method: In this research study Quantitative evaluative research approach with descriptive research design was used. The sampling technique was convenient sampling used to collect the 60 samples of staff nurses. Data collection was done by administering the self-structured questionnaire. Data was analysed by using descriptive and interferential statistics such as standard deviation and chi- test.

Results: In this study 15% staff nurses were having poor knowledge and 85% staff nurses were having average knowledge.

Conclusion: This study has dealt with the analysis and interpretation of the data collected from 60 staff nurses. Both descriptive and inferential statistics were used to analyse the data. The analysis has been recognized and presented under various demographic variables. In this research study findings show that staff nurses have poor and average knowledge regarding neurorehabilitation.

Keywords: *Assess, knowledge, staff nurses, neuro rehabilitation.*

Introduction

Rehabilitation is an integral part of medical care. Rehabilitation includes all measures aimed at reducing the impact of disabling and conditions causing handicap. It is also aimed at enabling the disabled and the handicapped to be an accepted member of the society. Rehabilitation medicine has merged in recent years as a medical specialty. It involves disciplines such as physical medicine or physiotherapy, occupational therapy, speech therapy, audiology, psychology,

education and training, social work, vocational guidance and vocational services.[1] Rehabilitation, defined as "a set of measures that assist individuals, who experience or are likely to experience disability, to achieve and maintain optimum functioning in interaction with their environments" (WHO, 2011).[2] Preventive medicine is the first phase, where a disease is prevented from occurring by avoiding the interaction between agent, host and environment. Curative medicine is the second phase, focuses on attempting to cure the disease. Most doctors practice curative medicine. However, there are several conditions like rheumatoid arthritis, which has no cure and others like poliomyelitis in which the agent causing the disease has been eliminated from the host, but residual effects like paralysis persist.[3] Therefore there is a need for third phase, namely rehabilitation, which is not only just medical but also a social responsibility. Rehabilitation may be medical or socio-vocational. Medical rehabilitation is the utilization of medical and paramedical skills to help treat the patient. The role of medical rehabilitation is to limit disability. Socio-vocational rehabilitation follows or sometimes is delivered simultaneously along with medical rehabilitation. The role of socio vocational rehabilitation is to limit handicap.[4]

Need for Study

Neurorehabilitation helps people with neurological disorders maximize their quality of life. **Progressive neurological disorders such as dementias, Parkinson's and tumours and isolated neurological events such as traumatic brain injuries and strokes can benefit enormously from Neurorehabilitation.** Once the acute stage of treatment for a brain injury is completed, Neurorehabilitation steps in to help the patient recover, maximise their functional and cognitive abilities and to help them realise their personal goals. The journey to recovery can be a long one and require a lot of decisions to be made, particularly if there is a legal case involved.[5]

Literature Review

Ortelli P et.al (2018) conducted a study on effectiveness of a goal-based intensive rehabilitation in parkinsonian patients in advanced Stages of Disease to understand whether an inpatient, motor-cognitive, multidisciplinary, aerobic, intensive and goal-based rehabilitation treatment(MIRT), 638 Parkinsonian patients, hospitalized to undergo a 4-week MIRT, were retrospectively identified. According to the Hoehn&Yahr (H&Y) scale, 496 were in H&Y stage 3 and 142 in H&Y stage 4-5. Outcome measures included: Unified Parkinson's Disease Rating Scale (UPDRS), Berg Balance Scale (BBS), Timed Up and Go Test (TUG), Six Minute Walk Test, and Parkinson's disease Disability Scale (PDDS). After rehabilitation all outcome measures significantly improved in both groups of patients.[6]

Abbes Met.al (2017) conducted a study on Sub thalamic stimulation and neuropsychiatric symptoms in Parkinson's disease to determine whether a long-term treatment with sub thalamic stimulation induces or reduces impulse control behaviours, neuropsychiatric fluctuations and apathy, 69 patients treated with sub thalamic stimulation are prospectively and retrospectively assessed using Ardouin Scale of Behaviour in Parkinson's Disease before and after 3-10 years of stimulation at a mean follow-up of 6 years, all impulse control disorders and dopaminergic addiction were significantly decreased, apart from eating behaviour and hyper sexuality. Neuropsychiatric fluctuations also significantly improved. Bilateral sub thalamic nucleus stimulation was overall very effective in improving impulse control disorders and neuropsychiatric fluctuations in parkinsonian patients in the long term despite a counteracting frequent apathy.[7]

Material and Method

Research Design: The research design used in this study is Non- Experimental descriptive design.

Research Setting: The study will be conducted in Dhiraj General Hospital, Piparia, Vadodara

Samples: 60 Staff Nurses

Criteria for Selection of Sample

Inclusion Criteria:

- Staff nurses who are working at Dhiraj general hospital, Waghodia, Vadodara.
- The staffs who will willingly participate.
- The staff those who can easily read and understand English are included in this study.

Exclusion Criteria:

- Staff nurses who are post graduated.
- Staff nurses who are not available during the period of data collection

Description of Tools

This consists of two parts:

Section 1: Consists of demographic variables like age, gender, professional qualification, professional experience, previous area of experience, have you under gone any training on neuro rehabilitation?

Section 2: Knowledge Questionnaire will be used to assess the knowledge of staff nurses regarding neurorehabilitation.

Scoring Interpretation:

- Adequate awareness: > 67-90 %
- Moderately adequate awareness: 34-66 %
- Inadequate awareness: <33 %

Reliability of the Tool: The reliability was established by using Spearman Brown Split-Half method and it was found to be r = 0.833, which indicates that the tool was reliable.

Procedure of the Data Collection: Prior permission will be obtained from medical superintendent and concerned will was taken from each respondent who will participate in study.On the day One, the purpose of study was explained to the sample and an informed consent was taken before starting the study. A test was conducted by administering a Structured Knowledge Questionnaire to the selected 60 staff nurses.

Analysis and Interpretation: The process of organizing and synthesizing data to answer research questions and test hypothesis is known as analysis.

Data collected will be analysed by using descriptive and inferential statistics.

Descriptive Statistics: Frequency and percentage distribution will be used to describe the demographic variables. Mean and standard deviation will be used to assess the knowledge.

Inferential Statistics: Chi-square test will be used to associate demographic variables and knowledge regarding neurorehabilitation.

Ethical clearance will be obtained from the Sumandeep Vidyapeeth institution ethical committee and willingness will be obtained from the subjects before data collection.

Findings

Section I: Frequency and percentage distribution of socio demographic variables.

- According to age 97% of respondents belongs to the age group of 23-28 years, 3% staff nurses belongs to the age group of 29-34 years and 0% belongs to 35-40 years.
- According to gender 16 (27%) of the staff nurses were male and 44 (73%) of them were female.
- According to professional qualification 100% staff nurses completed B.Sc. Nursing 0% of them completed P.B. BSc nursing.
- According to professional experience 18(30%) staff nurses have <1 year of experience, 34(57%) staff nurses have 1-3 years of experience, 5(8%) staff nurses have 3-5 years of experience, 3(5%) staff nurse has>5 years of experience.
- According to previous area of experience 43(72%) of staff nurses have previously worked in critical ward, 0(0%) staff nurses worked in intermediate wards, 17(28%) staff nurses have previously worked in general ward, 0(0%) staff nurses have previously worked in other wards.
- According to previous neurorehabilitation training 12(20%) of staff nurses have undergone neurorehabilitation training and 48(80%) staff nurses have not undergone neurorehabilitation training.

Section II: Analysis of knowledge score regarding neurorehabilitation.

Table 1: Distribution of frequency and percentage of staff nurses on the basis of their knowledge level

N=60

Level of Knowledge	Frequency	Percentage
Poor	09	15%
Average	51	85%
Good	00	0%
Total	60	100%

According to knowledge score 09(15%) have poor knowledge, 51(85%) have Average knowledge and 0(0%) have good knowledge regarding neuro rehabilitation.

Section III: To find association between knowledge score with selected demographic variables.

This section deals with the findings of association between various demographic variables with their knowledge regarding neurorehabilitation among staff nurses. To test the association between knowledge and selected demographic variable, following hypothesis was formulated.

H_1: There will be a significant association between the selected demographic variables and knowledge of staff nurses regarding neurorehabilitation.

Table 2: Association between the knowledge score with selected demographic variables

N=60

Sr. No.	Variables	Median and Above	<Median	X^2	Df	T value	Significance
1.	**Age**			0.004	1	3.842	S
	23-28	37	20				
	29-34	2	1				
2.	**Gender**			0.135	1	3.841	S
	Male	11	5				
	Female	28	16				
3.	**Professional Experience**			0.082	3	7.815	S
	<1 year	12	6				
	1-3 years	22	12				
	3-5 years	3	2				
	>5 years	2	1				
4.	**Previous area of experience**			3.140	1	3.841	S
	Critical ward	25	18				
	General ward	14	3				
5.	**Have you under gone any training on Neurorehabilitation?**			0.659	1	3.841	S
	Yes	9	3				
	No	30	18				

Among all the selected demographic variables: age (X^2=0.004), gender (X^2=0.135), professional experience (X^2=0.082), previous area of experience (X^2= 3.14), Have you under gone any training on Neurorehabilitation? (X^2= 0.659)

Hence, Research H_1 is accepted that is significant association between knowledge score and selected demographic variables.

Conclusion

The present study assessed the knowledge regarding neurorehabilitation among the staff nurses working at Dhiraj Hospital, Piparia, Waghodia, Vadodara and found that the majority have average knowledge regarding neurorehabilitation. After the knowledge assessment of staff nurses regarding neurorehabilitation the study concluded that staff nurses have average knowledge.

According to knowledge assessment 15% staff nurses have poor knowledge, 51% have average knowledge regarding neurorehabilitation. Knowledge questionnaires were used to assess the knowledge of staff nurses and it concluded that staff nurses have average knowledge regarding neurorehabilitation.

Recommendations

Based on the findings of the present study recommendation offered for the future study:

- The study can be replied in large sample for better generalization.
- A similar study can be conducted with different teaching strategies like planned teaching program.
- A comparative study can be done between BSc nursing staff nurses and post basic BSc nursing staffs.
- This study will be reference for research scholars.

Conflict of Interest: There is no conflict of interest.

Sources of Funding: Researchers used their own fund for their research

Ethical Clearence: Ethical clearance for this UG research project was obtained from the ethical committee SVIEC of Sumandeep Vidyapeeth deemed to be university.

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