

Protocols Play a Crucial Role in Bio Psychosocial Assessment of Patients by Staff Nurses- A Methodological Explanation

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Abstract

Use of protocols in various nursing care activities do enhance the performance of nurses. This study was conducted with the aim of evaluating the effectiveness of the protocol on bio-psychosocial assessment of patients among the staff nurses in the general wards of a selected hospital. An evaluative approach was used to measure the effectiveness of the protocol on bio-psychosocial assessment of patients among the psychiatric nurses. The study was held among 60 staff nurses chosen by non-probability purposive sampling, who were working in the General ward of Father Muller Medical College hospital, Mangalore, India, on 60 admissions to the same general wards of the same hospital. The results revealed that post –interventional practice has increased from Day1 to Day5. The data demonstrated that there was a significant change in practice day by day. Participants have shown a great improvement in the bio-psychosocial assessment of the patients and 80% of the nurses accepted the procedure.

Keywords: Biopsychosocial assessment, staff nurses, practice, protocol.

Introduction

Developing research based protocols helps in improving quality nursing care. A research based nursing care standard may be written as a protocol that describes and defines how research findings are to be implemented in a specific clinical situation.¹ Protocols have evolved into comprehensive tools to direct the episodic care and management of patient problems and phases of hospitalization.²

The first step in caring for a patient and in soliciting active co-operation is to carefully gather a complete

history of the illness. ³ A thorough clinical assessment consists of objective and subjective data related to the patient's present and past physical and mental health status. Performing assessment in a systematic manner helps to eliminate errors and oversights in data collection.⁴

Relationship of physical health with mental and social dimensions of health as evidenced by the study conducted by Desmond Deidre M, among 130 patients admitted to a community general hospital in Chennai for medical or surgical treatment showed that cognitive decline was diagnosed in 54 subjects (41.5%). On the Global Rating of Memory Decline (GRMD), 71 patients had subjective decline in memory, 62 of them reported that the decline interfered with their daily life. On Global Rating of Intellectual Decline (GRID) scale, subjective decline in intellectual function was found in 91 patients, with 55 reporting that the decline interfered with their daily lives.⁵

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A study conducted by Irish Research Council to investigate the prevalence of symptoms of depression and anxiety in a sample of predominantly elderly males with acquired limb amputations (n=138) and examined the contribution of coping strategies to the prediction of psychosocial adjustment by using a questionnaire. Results showed that the prevalence of significant depressive symptoms was 28.3%. Prevalence of significant anxiety symptoms was 35.5%. Coping styles emerged as important predictors of psychosocial adaptation. In particular, avoidance was strongly associated with psychological distress and pair adjustment.⁶

Simpson Nancy and Black William conducted a study among 25 brain damaged and 25 routine medical patients to assess memory using the Strub–Black Mental Status Examination and Wechsler Memory Scale. Results indicate that significant differences in almost all scores between the brain damaged and normal groups.⁷

Holmes Bentley, Cameron did a study in Chesterfield Royal Hospital to find out the effectiveness of protocol for consultant nurse role in developing mental health liaison. The Prevalence rates of mental health problems among older people in Chesterfield Royal Hospital have been reported up to the following rates: depression 53%, dementia 35% and delirium 61%. Also it is shown that the rates of detection and treatment of these mental health problems are frequently low. Around 20% referrals to old age psychiatric services come from general hospital wards. The majority of older people referred have multiple medical diagnoses with cardiac, cerebrovascular, neurological, endocrine, gastro intestinal and neoplastic disorders prominent.⁸

A descriptive study was conducted in an Irish intensive care unit to examine the experiences of nurses with a protocol on end tracheal tube suctioning. Focus group interview of 17 nurses in six focus groups provided a significant insight into the experiences of these nurses in relation to policies, protocols and guidelines. Analysis of the data afforded some highly relevant findings, including the fact that nurses adapt clinical protocols as they see fit, thus demonstrating the importance that they place on their own professional judgment and autonomy.⁹

Administering a protocol for staff nurses on bio-psychosocial assessment of patients admitted in general wards will facilitate integration of their physical, psychological, social, economic and spiritual care.¹⁰

Aim

To evaluate the effectiveness of the protocol on bio-psychosocial assessment of patients among the staff nurses in the general wards in a selected hospital in South India.

Objectives

1. To assess the practice of the staff nurses related to bio-psychosocial assessment before administering the protocol on bio-psychosocial assessment as measured by the bio-psychosocial assessment check list.
2. To prepare and validate the protocol related to bio psychosocial assessment.
3. To evaluate the effectiveness of the protocol on bio psychosocial assessment related to the practice of the staff nurses as measured by the bio-psychosocial assessment check list.

Materials and Method

Research approach

The evaluative research approach was used to evaluate a problem, treatment, practice or policy.

Research design

Pre-experimental one group pre test, post test design (O₁ X O₂) was adopted for the study.

O₁ - Pre interventional practice assessment.

X - Protocol.

O₂ - Post interventional practice assessment.

Variables in the study

1 Independent variable

Bio psychosocial assessment protocol.

2. Dependent variable

Practice of bio-psychosocial assessment by the staff nurses.

3. Attribute variable

Age of the staff nurses.

Qualification of the staff nurses.

Gender of the staff nurses.

Clinical experience of the staff nurses.

Research setting: Research was conducted in ten general wards of 1000 bedded multispecialty Father Muller Medical College Hospital, Mangalore, India.. Averages of 5 admissions were there to these general wards daily during the time of data collection.

Population: Staff nurses of general wards of selected hospital and admissions taking place to those general wards.

Sample: 60 staff nurses from the general wards of selected hospital and the 60 admissions to the same general wards.

Sampling technique: Purposive sampling technique was used to select samples.

Sampling criteria (staff nurses)

Inclusion criteria

1. Staff nurses working in general wards who have minimum 6 months of experience.
2. Staff nurses who have diploma or baccalaureate degree in nursing.

Exclusion criteria

1. Staff nurses working in specialty areas (OT, psychiatric ward, NICU, de-addiction ward, pediatric ward)
2. Staff nurses who are not willing to participate.

Sampling criteria (admission)

Inclusion criteria

1. Admissions taking place to the general wards.
2. Admissions in which patients are not critically ill.

Exclusion criteria

1. Admissions in which patients and nurses are relatives.
2. Re admissions to the same wards during the time of data collection

Data collection tool

The tool used for this study were: (1) Baseline proforma, (2) Bio-psychosocial assessment checklist (3) Opinionnaire regarding the acceptability of the protocol. The opinionnaire was pre tested by administering to 10 staff nurses. Reliability of opinionnaire was obtained by split half method. Karl Pearson’s coefficient of correlation formula was utilized to find out the reliability of the test. The reliability quotient obtained for the tool was $r=0.78$ that indicated the opinionnaire was reliable.

Data collection process

Protocol and the user guidelines was given after the pre interventional practice assessment. Protocol consists of four parts in which admission / orientation, biological assessment, mental assessment and social assessment were included. Protocol was introduced in all ten general wards after the pre interventional practice assessment was done. Post interventional practice assessment was done on the 8th day with the same checklist. Fifty admissions were observed after the administration of protocol in which admissions were observed for 5 consecutive days in 10 general wards done by the 60 staff nurses. Admissions were observed in the morning as well as in the evening. The presence of ward in charge, the number of staff nurses and student nurses present at the time of admission were also considered during the post interventional practice assessment. After the post interventional practice assessment, the opinionnaire was collected from the 60 staff nurses to know the acceptability and applicability of the protocol.

Results

Evaluation of protocol in terms of practice scores

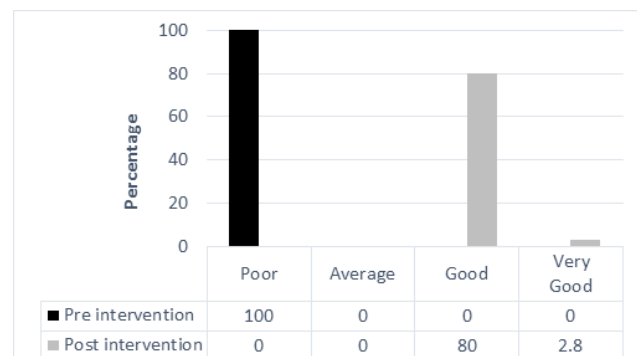


Figure 1: Frequency and Percentage Distribution of Sample According to the Practice Score.

Pre- interventional practice score of nurses among admissions were 100% which indicates nurse were not practicing bio-psychosocial assessment in efficient. However in post interventional assessment 80% of the admissions nurse has shown an improvement in practice of bio-psychosocial

assessment procedure and 20% of them have shown a very good protocol practice. It indicates that there was considerable gain in practice scores on bio-psychosocial assessment procedure in the post interventional practice assessment than the pre interventional practice score.

Table 1: Mean, Mean percentage score and Standard deviation of pre interventional and post interventional (five consecutive days) practice scores of bio-psychosocial assessment

Mean						Mean % score						Standard deviation					
Pre inter-ventional practice		Post interventional practice				Pre inter-ventional practice		Post interventional practice				Pre inter-ventional practice		Post interventional practice			
	D1	D2	D3	D4	D5		D1	D2	D3	D4	D5		D1	D2	D3	D4	D5
28.5	85.9	113.9	117.7	129.2	139.9	16.2	49.0	65.0	67.2	73.8	79.9	3.43	20.5	5.78	7.02	6.17	10.95

The mean practice score and mean percentage practice score were higher in post interventional practice assessment than that of pre interventional assessment. Mean of the pre –interventional practice was 28.5 whereas post –interventional practice has

increased from Day 1(85.9) to Day 5(139). In pre - interventional assessment, the mean percentage of pre-interventional practice score was 16.2% which was escalated from the Day 1(49.0) to Day5 (79.9).

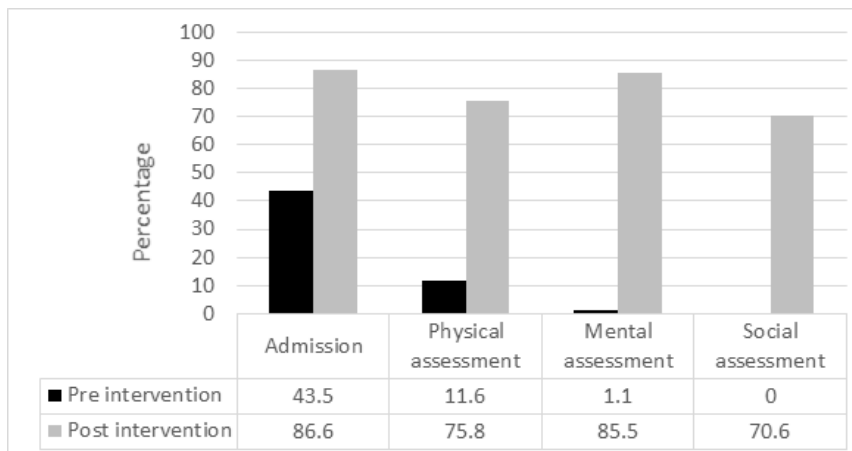


Figure 2: Bar diagram showing area wise distribution of mean percentage score of pre interventional practice and post interventional practice

In the area of admission the mean percentage score was increased to 86.6% from 43.5%. Physical assessment area has shown an improvement in mean percentage score from 11.6% to 75.5%. Mean percentage score of

mental assessment has increased from 1.1% to 85.5%. Mean percentage of the last area has shown an evident improvement in social assessment from 0% to 70.6%.

Table 2: Area wise distribution of Mean ± SD score of pre- interventional practice and post interventional practice n=60

Area	Mean ± SD					
	Pre interventional practice	Post interventional practice				
		D1	D2	D3	D4	D5
Admission/ orientation	20.9±2.07	29.9±3.07	38.1±3.84	39.1±3.63	41.3±2.79	41.6±4.29
Physical assessment	7.2±1.31	23.7±11.6	36.7±3.09	38.6±4.90	39.8±3.01	47.0±3.94
Mental assessment	0.4±0.51	18.5±5.83	24.2±3.58	23.7±3.33	29.6±1.71	30.8±1.31
Social assessment	0.00±0.00	13.8±2.25	14.9±2.23	16.3±1.15	18.5±2.67	20.5±3.53

F (5, 45) = 9.02; (p > 0.05)

A remarkable change is observed from Mean ± SD scores of admission area from 20.9± 2.07 in pre –interventional practice to 29.9±3.07, Physical assessment from 7.2± 1.31 to 23.7± 11.6, Mental assessment from 04 0.51 to 18.5± 5.83 and social

assessment from 0.00± 0.00 to 13.8 2.25.Observed data explained that a significant change was identified among nurse in terms of performing bio-psychosocial assessment of patients by using a protocol.

Table 3: Overall evaluation of the effectiveness of bio-psychosocial assessment protocol

Pre inter-ventional practice	Mean ± SD					Mean % score					F value	
	Post interventional practice					Pre inter-ventional practice	Post interventional practice					
	D1	D2	D3	D4	D5		D1	D2	D3	D4		D5
28.5 ± 3.43	85.9 ± 20.5	113.9 ± 5.78	117.7 ± 7.02	129.2 ± 6.17	139.9 ± 10.95	16.2	49.0	65.0	67.2	73.8	79.9	*179.66

F_(5,45) = 9.02; (p > 0.05)

* significant

Mean post interventional practice score is significantly higher than that of mean pre interventional score in all the five days.

Mean ± SD of pre –interventional practice was 28.5 ± 3.43. Mean ± SD of post –interventional

practice has clearly shown a improvement from day 1 to day 5 as indicated by the Mean ± SD of five days such as Day 1(85.9 ±20.5), Day 2 (113.9 ± 5.78), Day 3(117.7 ± 7.02),Day 4(129.2 ± 6.17) and Day 5(139.9 ±10.95).

Hence the research hypothesis is accepted and null hypothesis is rejected as evidenced by the statistical value $F_{(5, 45)} = 9.02; (p > 0.05)$.

Discussion

Section I: Evaluation of protocol in terms of practice scores

The findings of the present study depicted that poor pre test scores among 100% admissions. However in post test interventional practice most (80%) of the nurses have improved the practice of the bio-psychosocial assessment procedure in the area of admission and 20% of the subjects have shown a very good practice. It indicates a considerable gain in practice scores on the bio-psychosocial assessment procedure in the post test.

The findings of the study is supported by another study conducted among 50 staff nurses in a selected hospital at Mangalore in 2006 to assess the effectiveness of the protocol on the discharge programme of the mentally ill patients. Poor pretest practice was found in all the (100%) of the discharges and in post test very good practice was noticed in almost all the (80%) of the discharges¹¹

We found that the mean percentage score of the all the four areas of bio-psychosocial assessment in the post interventional practice assessment demonstrated a remarkable rise than the pre-interventional practice score as evidenced by admission area the mean percentage score was increased to 86.6% from 43.5%. Physical assessment area has shown an improvement in mean percentage score from 11.6% to 75.5%.

Section II: Evaluation of effectiveness of bio-psychosocial assessment protocol

Study also revealed that the mean of post interventional practice score on 5th day (139.9) was higher than the mean of pre- interventional practice score (16.2). The computed 'F' value for all the areas (admission / orientation = 88.519), (biological assessment = 75.68), (mental assessment = 146.47) and (social assessment = 136.93) was higher than the tabled value $F(5, 45) = 9.02; (p > 0.05)$. This indicated the significant effectiveness of the bio-psychosocial assessment protocol in improving the practice of the staff nurse, which is consistent with the findings of another study conducted in Bangalore in 2016 to assess the effectiveness of the

protocol on the management of women in the 2nd and 3rd stage of labour. The findings revealed that the improvement Mean score of all level of knowledge of staff nurses between pre-test and post-test was 13.75% with 't' test value was 12.88, which was highly significant at $p < 0.05$. Hence, it is inferred that there is significant increase in the knowledge level of the staff nurses regarding maternal and neonatal outcome of induction of labour after used of Self Instructional Module.¹²

Section III: Acceptability of the protocol

We could find that there was a full acceptance of the protocol by a majority of the staff nurses. The staff nurses expressed that protocol is not effective in terms of time available and the present staff strength, which was well established by a study conducted in Mangalore which demonstrated that computed 't' value in all the areas are significantly higher than the tabled value $t_{(58)} = 2.000, p < 0.05$ which showed that the protocol was effective in improving the practice of staff nurses during the discharge of the mentally ill.

Conclusion

Guidelines of practice with rationale were given through the protocol which included step wise procedure during the admission of patients to the general wards helped the staff nurses to gain scientific knowledge and practice in the bio-psychosocial assessment procedure as evidenced by the introduction of the protocol among the staff nurses helped them to learn more about the bio-psychosocial assessment procedure which was evident, in post interventional practice assessment.

Ethical Clearance : Ethical clearance was taken from the Institutional Ethics Committee, Father Muller Medical College Hospital, Mangalore, India.

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Conflict of Interest: None declared.

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