

Impact of Transitional Care Strategies on Physical and Psychological parameters among ICU patients

Dr.Suchana Roy Bhowmik¹, Dr.Prabha Dasila², Dr.Alaka Deshpande³,
Dr.Tapati Bhattacharjee⁴

¹KGMU College of Nursing, King George's Medical University, Lucknow, India

²MGM New Bombay College of Nursing, Kamothe, Navi, India

³Medicine, Grant Medical College, Mumbai, India

⁴NIMS College of Nursing, Rajasthan, India

Corresponding Author:Dr.Suchana Roy Bhowmik

Abstract: The Intensive Care Unit is a specialized unit which provides care to critically ill patients. The stay may have both short and long term effects on recovery of patients. Nurses are at right position to provide appropriate interventions for the overall recovery of ICU patients. The aim of this study was to assess impact of transitional care strategies on physical and psychological parameters of patients admitted to ICU. A quasi-experimental non-equivalent group post-test only design was adopted in this study. Data was collected from 80 admitted ICU patients who were selected by consecutive sampling technique. MICU admitted patients were taken as control group for whom hospital routine were followed and patients admitted in the IRCU were taken as study group on whom Transitional Care Strategies (TCS) was implemented along with hospital routine. After 24 hours of shifting from the ward data collection was done from study and control groups. There was statistically significant impact of Transitional Care Strategies on physical and psychological parameters were found between study and control groups ($p < 0.001$). The study concluded that there is necessity of Transitional Care Strategies in the ICU. Every hospital must follow such strategies to prepare patients for sound recovery and improve outcome.

Key words: Intensive care unit; Transitional Care strategies (TCS); physical parameters; psychological parameters

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I. Introduction

The Intensive Care Unit (ICU) is a specialized inpatient unit for providing care to critically ill patients by specially trained staff. The patients admitted in the ICU may be suffering from life threatening conditions that require constant monitoring and support from special equipments.¹⁻²

In this unit specially trained nurses care for one or two patients at a time. Many patients who experienced treatment in the ICU reported that it was an unknown environment for them. Patients and family members viewed ICU admission as a crisis for both of them because they are not adequately and mentally prepared for such a stressful situation. Meanwhile, nurses who are in constant close contact with patients, are in an ideal position to help family members to meet their needs and deal with the stressful situation.³ Among several health care transitions, transfer from the ICU to an intermediate care unit and to the ward certainly affects patient's health. Each transition signifies unique challenges for patients, their family members, and the healthcare professionals involved in the care.⁴ ICU transitional care ensures minimal disruption and optimum care to the patient which is provided before, during and after transfer of an ICU patient to another care unit.⁵

Need of the study:

Survivors of critical illness face multiple physical and psychological challenges. A study described prevalence and severity of self-reported symptoms in medical ICU survivors during the first four months post-ICU discharge and their associations with family caregiver responses. It has been found that most patients reported symptoms with sleep disturbance, fatigue, weakness, and pain which were most prevalent. Patients' overall symptom burden showed significant correlation with caregivers' depressive symptoms. Researcher concluded that, sleep disturbance, fatigue, weakness, and pain were the four key symptoms during first four months of post-ICU discharge. Researcher suggested that further studies need to focus on these four symptoms to promote quality in post-ICU symptom management.⁶

As patient suffers from physical problems, it has been observed that they even undergo psychological turmoil during transfer from ICU. A study was carried out to quantify the levels of anxiety experienced by

intensive care unit (ICU) patients just before transfer to the ward and then twice after transfer to the ward in order to test the hypothesis that anxiety levels would change over the three data collection periods. A prospective, repeated measure cohort study was adopted. All adult ICU patients who remained in ICU for greater than 24 hours were eligible for the study. Measurements of anxiety were undertaken using self-report on the anxiety subscale of Hospital Anxiety and Depression Scale on three occasions; after patients were told of their immediate transfer to the ward, after 4 hours on the ward and after one night on the ward. Result revealed that the mean anxiety levels remained low at all measurement points and did not change over time. This small study provided a start to the prospective mapping of anxiety levels on time of transfer and shortly after transfer from an ICU to the wards. It also provided information to researchers who want to examine ICU transfer anxiety. By understanding the anxiety experienced by ICU patients, nurses are better able to provide psychological support and thus more holistic care to this group of patients.⁷

It has been discussed earlier that the patients and family members suffer from physical and psychological sequel while transferring from ICU to ward and effective transitional care may be beneficial to them. A study carried out to observe the effects of transitional care on the quality of life of chronic obstructive pulmonary disease patients. Participants were equally divided into an intervention group and control group. Following discharge, patients in the intervention group received three-month intervention while control group patients received regular nursing care only. Result showed that the total score of mental disorders were significantly changed after the intervention. Study concluded that transitional care improved health-related quality of life in COPD patients. Nurses are in the ideal position to provide proper and planned transitional care.⁸⁻⁹

Objectives:

- To compare the impact of Transitional Care Strategies on physical parameters among ICU patients in control and study groups.
- To compare the impact of Transitional Care Strategies on psychological parameters among ICU patients in control and study groups.

Operational definitions:

In this study the following words were operationalized as follows:

Physical parameters: comprised of altered sleep disturbance, altered eating pattern, altered elimination pattern and altered mobility pattern.

Psychological parameters: psychological parameters comprised of anxiety, lack of concentration, mood changes, disorientation, feeling loneliness, nightmares, helplessness, and anger.

Transitional care strategies: Transitional Care Strategies is a group of interventions initiated for patients admitted to the ICU which included building a good rapport, early discharge planning, education about discharge, steps to encourage patient's dependence, direct handover, involve patient's families, and visit by ICU personnel.

Hypotheses:

H₁: There is significant difference in physical parameters of ICU patients in study and control groups after implementation of Transitional Care Strategies.

H₂: There is significant difference in psychological parameters of ICU patients in study and control groups after implementation of Transitional Care Strategies.

Ethical aspect:

Research study had been approved by the Research and Recognition Committee and Ethical committee of MGM Institution of Health Sciences. Ethical clearance from Institutional Ethics Committee has also been taken for data collection. Before initiating the data collection a written permission was obtained from the hospital. The aim, objectives and nature of the study was explained to the participants and an informed consent was obtained.

Methodology: In this study quasi-experimental non-equivalent group post-test only design was used. From medical, and respiratory ICU of a tertiary teaching hospital 80 samples were selected by consecutive sampling technique as per the criteria set. In this study the causal relationship between independent variable (Transitional Care Strategies) and dependent variable (physical and psychological parameters) were observed. The data were collected by using demographic profile, likert scale to assess physical and psychological parameters. Reliability

was calculated by the Cronbach's alpha(α). The reliability score of Likert scale for assessing physical parameter was 0.89 and of Likert scale for assessing psychological parameter was 0.90.

Data collection procedure:

MICU admitted patients were taken as control group and IRCU admitted patients were taken as study group. The researcher met with the participants in the respective ICUs itself, after developing rapport with them, the researcher explained about the nature of the study intended to do. After getting their verbal consent, a written consent was obtained. Researcher met with IRCU nurses as provider for Transitional Care Strategies (TCS) in the IRCU along with researcher. One nurse was trained about Transitional Care Strategies in ICU by the researcher. In control group, researcher met with participants in the ICU and in the ward as they have shifted from ICU to ward. After 24 hours of shifting from the ICU to ward, data collection was done. In study group, researcher met the patients and introduced staff to them and explained how she is going to be related to him/her. The trained nurse along with researcher applied the Transitional Care Strategies on patients who were admitted in the ICU set up. After 24 hours of shifting from the ICU to ward, post intervention data collection was done.

II. Result

Table 1: Comparison of mean score based on physical parameters in control and study groups after the intervention n=80

Overall mean score	Control group		Study group		t-value	p-value
	Mean	SD	Mean	SD		
Physical Parameters	61.80	5.03	50.68	3.42	22.05	P<0.001

Level of significance α : 0.05

Table 1 described the mean of overall score of physical parameters after the intervention. In control group it was 61.80 ± 5.03 and in study group it was 50.68 ± 3.42 . So the difference in overall mean of physical parameters between control and study group was highly significant with p value <0.001 after the intervention.

Table 2: Comparison of intensities of physical effect of transition between the groups after the intervention n=80

Intensity	Groups				Total		χ^2	p-value
	Control (n ₁ =40)		Study (n ₂ =40)		f	%		
	f	%	f	%				
Mild Problem	12	30.0	40	100.0	52	65.0	43.077	<0.001
Moderate Problem	27	67.5	0	0	27	33.8		
Severe Problem	1	2.5	0	0	1	1.3		

Level of significance α : 0.05

Table 2 presented the comparison of intensities of physical effect of transition between the control and study groups after the intervention. The intensities of physical effect of transition was higher in control group where the proportion of moderate problems was 67.5%, whereas in study group the proportion of moderate problems was 0.0%, which was significantly lower than the control group ($p < 0.001$).

As p value is less than 0.05 which rejects null hypothesis and accepting alternative hypothesis that there is significant difference in physical parameters of ICU patients in study and control groups after implementation of Transitional Care Strategies.

Table 3: Comparison of mean scores based on psychological parameters of patients in control and study groups after the interventions n=80

Overall mean score	Control group		Study group		t-value	p-value
	Mean	SD	Mean	SD		
Psychological Parameters	62.63	3.53	41.96	3.30	22.05	P<0.001

Level of significance α : 0.05

Table 3 described the mean of overall score of psychological parameters after the interventions. In control group the mean score was 62.63 ± 3.53 and in study group it was 41.96 ± 3.30 . So the difference in overall mean of psychological parameters between control and study group was highly significant ($p < 0.001$) after the intervention.

Table 4: Comparison of intensities of psychological effect of transition between the control and study groups after the interventionsn=80

Intensity	Groups				Total	χ^2	p-value
	Control (n ₁ =40)		Study (n ₂ =40)				
	f	%	f	%			
No Problem	0	0	10	25.0	10	12.5	<0.001
Mild Problem	7	17.5	30	75.0	37	46.3	
Moderate Problem	33	82.5	0	0	33	41.3	

Level of significance α : 0.05

Table 4 depicted the comparison of intensity of psychological effects of transition among control and study groups after the interventions. The intensity of psychological effect of transition was higher in control group, where the proportion of moderate problems was 82.5%, whereas in study group the proportion of moderate problems was 0.0%, which was significantly lower than the control group with *p value* < 0.001 after the interventions. As *p value* is less than 0.05 which rejects null hypothesis and accepting alternative hypothesis that there is significant difference in psychological parameters of ICU patients in study and control groups after implementation of Transitional Care Strategies.

III. Discussion

The findings have shown that the study intervention i.e. Transitional Care Strategies have shown significant effect on reduction of intensity of physical effect and psychological effect of transition in study group as compared to control group. Many studies have supported that various nursing intervention related to discharge process for the ICU patient have significant effects on reduction of stress and depression¹⁰, anxiety¹¹, PTSD(Post Traumatic Stress Disorders)¹², improving sleeping pattern¹³, reduction of patient discomfort¹⁴, improvement of physical and mental health impairment¹⁵, increased knowledge and satisfaction¹⁶, improved patient outcome,¹⁷ benefitted quality of life and decreased readmission rates¹⁸ and with proper handover improved patient safety.¹⁹

Limitations:

This study has limitations and it could potentially assist future studies on related topics.

- One set up was used for data collection
- There was no control on ICU routines for the admitted patients in the ICU
- Length of stay of patient in ICU varies, so implementation of Transitional Care Strategies varies with individual participant.

IV. Recommendations

A similar study can be replicated on different set up, carried out on relatives of the admitted ICU patients, barriers to implement Transitional Care Strategies including other health professional along with nurses to implement Transitional Care Strategies etc.

V. Conclusion

It is apparent from the findings of the research study that Transitional Care Strategies is beneficiary to admitted ICU patients. It has shown significant difference in reduction of various aspects of physical and psychological parameters. A significant amount of evidence suggested that health professionals believed that there is need of Transitional Care Strategies and having planned discharge policy in ICU benefits the admitted patients in the ICU. Taking everything into consideration, it would seem beneficial for intensive care nurses to extend their role into providing Transitional Care Strategies. The hospital administration also can take initiative to formulate policies in the hospital to implement Transitional Care Strategies.

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