EFFICACY OF PSYCHIATRIC NURSING INTERVENTIONS ON THE OUTCOME OF SELF CARE, DRUG COMPLIANCE, NEGATIVE SYMPTOMS AND PSYCHOLOGICAL WELLBEING OF SCHIZOPHRENIC PATIENTS

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ABSTRACT

Schizophrenia is a complex mental disorder characterized by profound disruption of normal functioning in behavioral, emotional, perceptual, physical and cognitive domain. In contrast to overt disruptive behaviour, some patients show avolition, blunted effect, anhedonia, and alogia which are coined as negative symptoms. Schizophrenia is a widespread major mental illness. In India, severe mental illness accounts for 1-2% of population and minor mental illness around 20%. Approximately 1% of the adult populations have the lifetime risk of developing the disease schizophrenia. It is the 9th leading cause of disability throughout the world. Common disabilities include poor self-care, social withdrawal, poor social role functioning, poor working capacity and low quality of life. Impairment in psychosocial functioning is recognized as a core feature of schizophrenia. Non-Compliance or non-adherence in schizophrenic patients is a challenge in psychiatry.

Psycho-social intervention can improve the course of schizophrenia when integrated with psychopharmacological treatment. In the acute phase, psychosocial interventions, aimed at reducing over stimulating or stressful relationships, and promoting relaxation, communication and imparting education on the nature and management of the disorder tailored to the mental faculty of the patient. Nursing interventions for schizophrenic patients emphasize on activities of daily living, social skill training and compliance with medication. Social skill training imparted to include skills that are essential to functioning in environment like introducing oneself, starting a conversation, ending a conversation, asking for assistance, listening and assertiveness.
NEED FOR THE STUDY

The treatment of schizophrenic patients primarily aims at reducing frequency and severity of psychotic exacerbation and improving functional capacity and quality of life. Treatment includes medication and a range of psychosocial interventions. Antipsychotics are effective in reducing positive symptoms but are only minimally effective for negative and cognitive symptoms that contribute much of the disability associated with schizophrenia. There are plenty of researches showing beneficial effect of psychological and psychosocial intervention in patients with negative symptoms. Nursing intervention integrated with psychopharmacological treatment may have significant impact on reduction or elimination of symptoms; maximizing quality of life and adaptive functioning. Less research, particularly in Indian setting has evaluated the efficacy of nursing intervention.

Nursing interventions comprise with supervised self care and activity scheduling, social skill training, physical exercise, deep breathing relaxation training, and psycho-educative intervention might minimize the associated disability which needs to be validated.

These interventions target enhancement of self-care performance, drug compliance, psychological well being and reduction of negative symptoms in schizophrenic patient. Efficacies of social skill training on improvement of psychosocial functioning are supported by various studies. The efficacy of psychosocially based nursing intervention and structured activity schedule on the variables like self care, drug compliance, negative symptoms and psychological well being need to be tested. Nursing protocols need to be developed keeping in mind the above goals. The need of the study lies on the paucity of efficacy study on nursing intervention for schizophrenic patient. The present study is a step towards development of evidenced based psychiatric nursing intervention for schizophrenic patients in Indian setting.

In view of the above research need, the problem statement stated as ‘Efficacy of psychiatric nursing interventions on the outcome on self care, drug compliance, negative symptoms and psychological wellbeing of schizophrenic patients’.
The objectives of the study were-

1. To determine the pre intervention scores of self care performance, drug compliance, negative symptoms and psychological well being of schizophrenic patients.

2. To design and validate psychiatric nursing interventions for improving self care, drug compliance, negative symptoms and psychological well being.

3. To find out the efficacy of psychiatric Nursing interventions in terms of pre and post intervention scores on self care, drug compliance, negative symptoms and psychological well-being of schizophrenic patients.

4. To determine the association between socio-demographic and study variables under the study.

Based on the review trend for the research problem under the present study, alternative hypotheses have been formulated. All the hypotheses were tested at 0.05 level of significance.

H₁- There will be a significant difference between the pre and posttest mean scores of self care performance in schizophrenic patients of experimental and control group.

H₂- There will be a significant difference between the pre and posttest mean scores of drug compliance in schizophrenic patients of experimental and control group.

H₃- There will be a significant difference between the pre and posttest mean scores of negative symptoms in schizophrenic patients of experimental and control group.

H₄- There will be a significant difference between the pre and posttest mean scores of psychological well being in schizophrenic patients of experimental and control group.

H₅- There will be a significant difference between the posttest mean scores self care performance of schizophrenic patients in control and experimental groups.

H₆- There will be a significant difference between the posttest drug compliance mean scores of schizophrenic patients in control and experimental groups.
H7. There will be a significant difference between the posttest negative symptoms mean scores of schizophrenic patients in control and experimental groups.

H8. There will be a significant difference between the posttest psychological wellbeing mean scores of schizophrenic patients in control and experimental groups.

Conceptual framework of the study has been designed based on the systems model in nursing. The conceptual framework of the study utilizes both the models of Betty Neuman and Imogene King. Input, throughputs and feedback of systems model are altered with assessment, intervention and evaluation in Neuman’s model. Neuman states that nursing is concerned with the total person. Through use of this model nursing can assist individuals to attain and maintain a maximum level of total wellness.

King’s model views goals of nursing as to help individuals to maintain their health so they can function in their roles. For the present study goal attainment reflects the improvement in self care, drug compliance, negative symptoms and overall up-liftment in psychological wellbeing.

The present study utilized an evaluative research approach with a quasi-experimental research design with a pretest posttest control group to determine the efficacy of psychiatric nursing interventions on self care, drug compliance, negative symptoms and psychological wellbeing.

The study was conducted in Lokopriya Gopinath Bordoloi Regional Institute of Mental Health, Tezpur, Assam. It is one of the oldest Mental Hospitals in India.

Study population consisted of entire schizophrenic patients with more than one year of illness, admitted to LGB Regional Institute of Mental Health, Tezpur during the study period. Sample for the study were selected from the following day of admission using purposive sampling technique. A routine Mental Status Examination was done. Following which Positive and Negative Symptom Scale (PANSS) was applied to select the patients with high negative scores (>20) admitted during the week. A total of 100 subjects who showed higher negative symptoms were assigned equally to control and experimental group.
Permission for data collection and conduct of the study was obtained from the Institute authority. Data collection started from May 2010. Tools like Socio demographic data sheet, The Observation Scale on Performance of Self Care, Tool on Drug Compliance and The Scales for the Assessment of Negative Symptoms and The Psychological General Wellbeing Schedule, were applied to the selected schizophrenic patients. After the pretest the control group patients received the routine nursing care for 28 days, and then the same tools were applied for posttest. Experimental group received the routine nursing care plus the intervention as per intervention implementation plan from next day onward after pre test for 28 days.

Psychiatric Nursing Interventions carried out on the nursing problems like Self care, Drug compliance, Negative symptoms and Psychological Wellbeing. Purpose of the interventions were to modify self care deficits, improve drug compliance, reduce negative symptoms like lack of communication, poor socialization, poor attention, dull affect and thereby to improve psychological wellbeing. Interventions were flexible in terms of time spent. While designing the interventions following components were taken care of:

**Self care**: Self care deficit was viewed as impaired ability to perform or complete bathing, dressing/grooming, toilet care, care related to feeding, hair care, and nail care. Interventions were designed to enhance the ability to perform self care. Nursing intervention included are scheduling of daily activities.

**Drug compliance**: Nursing intervention to enhance drug compliance focused on educative sessions on knowledge about the illness, need of medication, side-effect of medications and their management, attitude towards the medication and illness.

**Negative Symptoms**: Interventions focused on the negative component of behavior such as apathy, asociality, alogia, affective flattening or blunting and poor attention.

Interventions to reduce apathy-avolition focused on scheduling of self care activities, engagement in ward activities and pursuing for initiatives in group sessions.

Social skill training such as greeting others, initiating communication, maintaining communication and leading in group sessions were designed to enhance socialization.

During the social skill training sessions prompting at appropriate facial expression, maintenance of eye to eye contact while talking and maintenance of appropriate posture were incorporated to reduce affective flattening or blunting.
Patients’ engagement in ward activities and group activities were planned with the aim of enhancement in attention. Motivational counseling was carried out.

Individual and group counseling sessions were carried out on promotion and sustenance of behavioral skills in the patients.

**Psychological well-being**: It is assumed that reduction in anxiety and depressiveness; enhancement in vitality and self control will bring a feeling of well-being. Deep breathing exercise and educative interventions are presumed to have an effect on anxiety of the patient. Better self worth, decision making ability, better coping and recreational activities will improve the mood and well being of the patient. Nutritional care and self care have a positive effect on general health and vitality. Vitality is also presumed to be influenced by enjoyable activities.

Various techniques used for implementation of interventions were supervision, education, explanation, demonstration, role playing, rehearsal and positive feedback and physical exercise.

Major findings of the study are summarized below:

Majority of the schizophrenic patients in control group (46%) were in age group of 30-39 years whereas maximum in experimental group (44%) were in 20-29 years. There was no significant difference in age of control and experimental groups \( \chi^2 (2) = 1.93, P>0.05 \).

There was no significant difference in gender distribution of the samples \( \chi^2 (1) =0.53, P>0.05 \). Majority of patients under the study were male (76% in control group and 74% in experimental group).

Maximum number of patients in both control and experimental groups were educated up to middle school (38%). The groups did not differ significantly in terms of education \( \chi^2 (4) =1.84, P>0.05 \).

Though majority of the patients in both the group had no specified occupation (control group 48% experimental group 64%), a significant difference was observed in occupational status between the groups \( \chi^2 (4)=10.34, P<0.05 \).

There was no significant difference observed between the groups in terms of religion \( \chi^2 (2) =1.52, P>0.05 \). Majority of the patients in both the groups belonged to Hindu religion (74% in control group and 76% in experimental group).
Majority of the patients in control (54%) and experimental groups (44%) had Assamese mother tongue. No statistically significant difference was observed between the groups in relation to mother tongue ($\chi^2 (3) = 3.32, P>0.05$).

Income of the majority of the patients was below Rs.2000/ (Control group, 54% and experimental group, 46%), both the groups did not differ significantly ($\chi^2 (3) = 5.12, P>0.05$).

Maximum patients in both the control (72%) and experimental groups (66%) were hailing from rural residential background. No statistically significant difference was observed between both the groups ($\chi^2 (2) = 3.87, P>0.05$).

More than 4 years of illness duration was found in maximum patients (control group, 58% and experimental group, 56%). No statistically significant difference had been observed between both the groups in duration of illness ($\chi^2 (3) = 1.24, P>0.05$).

Data showed that majority of the patients under the study were admitted for the first time in both the groups (60% in control group, and 72% in experimental group). No statistically significant difference had been observed between both the groups ($\chi^2 (3) = 1.77, P>0.05$).

There was no statistically significant difference between the control and the experimental groups $\{t (98) = 0.137, p> 0.05\}$ at pretest scores on self care performance.

Both the control and experimental groups did not differ statistically significantly at pretest scores on drug compliance $\{t (98) = 0.82, p> 0.05\}$.

No statistically significant difference between the control and the experimental groups was observed in total Negative Symptoms pretest Scores $\{t (98) = 1.3, p> 0.05\}$. The groups differed significantly in one domain of negative symptom scale i.e. Affective flattening - Inappropriate affect $\{t (98) = 2.69, p< 0.05\}$. In other domains of negative symptom scale, like Alogia, $\{t (98) = .00, p> 0.05\}$, Avolition $\{t (98) = 0.97, p> 0.05\}$, Anhedonia $\{t (98) = 0.86, p> 0.05\}$ and Attention $\{t (98) = 1.6, p> 0.05\}$, no statistically significant difference existed between the control and the experimental groups.

The schizophrenic patients in control and experimental groups had no statistically significant difference in total Psychological wellbeing Scores $\{t (98) = 1.7, p> 0.05\}$. Statistically significant difference was found in Vitality $\{t (98) = 2.4, p< 0.05\}$ between the control and the experimental groups. In other domains of psychological wellbeing, like Anxiety, $\{t (98) = 0.40, p> 0.05\}$, Depression $\{t (98) =$
Positive wellbeing \( t(98) = 1.1, p > 0.05 \), Self control \( t(98) = 1.0, p > 0.05 \) and General health \( t(98) = 0.17, p > 0.05 \), no statistically significant difference between the control and the experimental groups was observed.

Statistically significant difference between pretest and post test Self care scores of the schizophrenic patients in control \( t(49) = 6.3, p < 0.05 \) and experimental \( t(49) = 22.4, p < 0.05 \) group was found. \( H_1 \) was accepted at 0.05 and 0.01 level.

Schizophrenic patients in both the groups showed statistically significant difference between pre and posttest scores on drug compliance (control group \( t(49) = 4.4, p < 0.05 \) and experimental group \( t(49) = 39.4, p < 0.05 \)). \( H_2 \) was accepted.

No statistically significant difference between pretest and post test Negative symptoms scores in the control group \( t(49) = 1.0, p > 0.05 \) was observed whereas the schizophrenic patients in experimental group differ significantly in pre and posttest scores on negative symptoms \( t(49) = 4.71, p > 0.05 \). Hence the \( H_3 \) formulated for the study was rejected partially in relation to control group but later part of the hypothesis concerning to the experimental group was accepted.

Statistically significant difference was observed between pretest and posttest Psychological wellbeing scores in the control group \( t(49) = 7.1, p < 0.05 \) and in the experimental group \( t(49) = 3.70, p < 0.05 \). \( H_4 \) was accepted.

There was statistically significant difference between the posttest self care performance scores of schizophrenic patients in control and the experimental groups \( t(98) = 9.5, p < 0.05 \). This indicated efficacy of psychiatric nursing intervention in improving self care performance of schizophrenic patients, hence \( H_5 \) was accepted.

Schizophrenic patients in both the groups differ significantly in respect to posttest scores on drug compliance \( t(98) = 22.6, p < 0.05 \) indicating the efficacy of psychiatric nursing intervention on drug compliance for schizophrenic patients, hence \( H_6 \) was accepted.

Statistically significant difference between the control and the experimental groups in posttest scores of negative symptom was observed \( t(98) = 2.5, p < 0.05 \). \( H_7 \) formulated for the study was accepted. There was no statistically significant difference in posttest scores of Affective flattening \( t(98) = 0.887, p > 0.05 \), Avolition \( t(98) = 0.94, p > 0.05 \), and Attention \( t(98) = 1.3, p > 0.05 \) between the control and the experimental groups. In other domains, like Alogia, \( t(98) = .3.72, p <
Anhedonia \( t (98) = 3.89, p < 0.05 \) there found statistically significant difference between the control and the experimental groups.

Statistically significant difference was observed between the posttest total Psychological wellbeing Scores of schizophrenic patients in the control and the experimental groups \( t (98) = 4.75, p < 0.05 \). \( H_8 \) formulated for the study was accepted. There was no statistically significant difference in Self control \( t (98) = 1.18, p > 0.05 \) and Vitality \( t (98) = 1.2, p > 0.05 \) between the control and the experimental groups. In other domains, like Anxiety, \( t (98) = 2.73, p < 0.05 \), Depression \( t (98) = 1.9, p < 0.05 \), Positive wellbeing \( t (98) = 3.08, p < 0.05 \), and General health \( t (98) = 2.11, p < 0.05 \), statistically significant difference between the control and the experimental groups was observed.

Psychiatric nurses play a key role in mental health treating team. Findings of the present study on efficacy of psychiatric nursing interventions have implications in the field of nursing education, nursing administration, nursing practice and nursing research.

Nursing education equips nurses with essential knowledge, skills and standard for practicing nursing. Findings of the present study can be incorporated in curriculum of psychiatric nursing education for various groups of nursing students. Interventions tested in the present study can be demonstrated for schizophrenic patients nursing care in teaching learning process to bridge the gap between theory and practice for nursing students.

Current nursing focuses on strengthening of nursing practice through evidenced based findings. Findings of the present study can be utilized to implement the practice guidelines for schizophrenic patients nursing care particularly self care performance, drug compliance, reduction in negative symptoms, and to improve psychological wellbeing.

Present study findings can be implemented by nursing administration through policy decision for implementation of evidence based nursing practices. Standard care protocols for schizophrenic patients in indoor setting may be an outcome from these findings.

Findings of the present study may be utilized as research base to conduct interventional study in psychiatric nursing. Variables of this efficacy study can be related various nursing care outcomes.
From the findings conclusion can be drawn that the schizophrenic patients exhibit poor self care performance, poor drug compliance and more of negative symptoms. It is also concluded that the psychological wellbeing of schizophrenic patients tends to be lower. Though the psychological wellbeing had improved significantly following the psychiatric nursing intervention but still it was lower than expected. On the basis of evidence on outcome of this study, improvement of self care performance, drug compliance, negative symptoms and psychological wellbeing in schizophrenic patients are ensured through inclusion of psychiatric nursing interventions. Result of the study would also guide in constructing need based nursing care plan for schizophrenic patients admitted to psychiatric setup. The routine nursing care is generally restricted to physical care, medication administration and management of psychiatric emergencies. This study made an effort to establish the efficacy of psychosocially oriented psychiatric nursing interventions on the outcome of self care performance, drug compliance, negative symptoms and psychological wellbeing of schizophrenic patients. Inclusion of the psychiatric nursing intervention as a practice guideline in nursing management of schizophrenic patients would contribute in quality mental health nursing service.