



A pre- experimental Study: Assess the impact of a structured teaching programme on caregivers' knowledge of psychiatric emergencies in a hospital setting, Odisha

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Abstract

Background: Psychiatric emergencies are acute disturbances in behavior, thought, or mood that require immediate intervention to prevent harm to the individual or others. Caregivers of persons with mental disorders play a vital role in recognizing early warning signs and initiating timely management during such emergencies.

Aims: To assess the effectiveness of a Structured Teaching Programme (STP) on knowledge regarding selected psychiatric emergencies among caregivers of patients with mental disorders in a mental health institution, Odisha.

Methods: A quantitative research approach with a pre-experimental one-group pretest–posttest design was adopted. The study was conducted among 50 caregivers selected through non-probability convenient sampling. Data were collected using a self-structured knowledge questionnaire consisting of 25 multiple-choice questions. A Structured Teaching Programme on psychiatric emergencies was administered after the pretest, and posttest was conducted after seven days.

Results: The mean pretest knowledge score was 12.40 (SD = 3.10), which increased to 18.90 (SD = 2.80) in the posttest. The calculated paired 't' value ($t = 18.72, p < 0.001$) indicated a statistically significant improvement in knowledge. Significant associations were found between posttest knowledge scores and selected socio-demographic variables such as age, educational status, and relationship with patient, duration of caregiving, and previous exposure to information.

Conclusion: The study concluded that the Structured Teaching Programme was effective in improving caregivers' knowledge regarding psychiatric emergencies. Educational interventions should be integrated into routine mental health services to enhance caregiver preparedness and patient safety.

Keywords: Psychiatric emergencies, structured teaching programme (STP), caregivers, knowledge, mental disorders, mental health nursing

Introduction

In India, the family serves as the primary support system for individuals with mental illness. It has been reported that more than 90% of people with chronic mental disorders live with their families, who take responsibility for meeting their basic needs. With the global movement toward deinstitutionalization and the gradual shift from hospital-based care to community-based services, caregivers are now assuming greater responsibilities in managing patient care [1].

Families usually bring individuals with mental illness for psychiatric treatment and play a vital role in supervising medication, providing financial support, offering companionship, and delivering emotional and psychological care. This strong family involvement significantly contributes to the rehabilitation process and helps patients reintegrate into society. The Indian family support system is considered unique and is regarded as a positive prognostic factor in mental illness. Traditionally, joint family structures have ensured proper care for elderly and sick members. Consequently, families in India continue to shoulder a major portion of mental health care responsibilities compared to governmental services [2].

Psychiatric emergencies can occur unexpectedly at any time in hospital settings. These emergencies may include suicidal behavior, acute situational crises, aggressive behavior, grief reactions, panic attacks, catatonic stupor, sexual assault cases, disaster-related trauma, hysterical episodes, delirium tremens, and acute drug-induced extrapyramidal symptoms (EPS) [3]. Alcohol-related injuries account for a significant proportion of emergency cases, including road traffic violence (24%), accidents (46%), falls (24%), and other causes (6%), many of which require admission to hospital emergency departments. In India, more than one lakh deaths occur annually due to suicide. In 2014, a total of 14,310 suicides were reported. Among the states, the percentage distribution of total suicides was highest in Maharashtra (12.4%), followed by Tamil Nadu (12.2%), west Bengal (10.9%), Karnataka (8.3%), and Telangana (7.3%) [4].

Psychiatric emergencies and their management in general clinical settings remains limited. Therefore, there is a need for structured teaching programs for staff nurses to enhance their knowledge and preparedness. During psychiatric ward clinical postings, it was observed that conducting a research study to assess nurses' knowledge regarding psychiatric emergencies and evaluating the effectiveness of a structured

teaching program would be a valuable approach to improving clinical practice in this area [5].

Therapeutic communication is a purposeful process aimed at promoting the patient's physical and emotional well-being. It is a psychotherapeutic approach that utilizes both verbal and nonverbal techniques, incorporating specific strategies that encourage patients to express their thoughts and feelings while fostering a sense of acceptance and respect [6]. An emergency is a sudden, unexpected, and often dangerous situation that creates an immediate threat to health, life, property, or the environment and demands urgent action. Psychiatric emergencies refer to severe and sudden disturbances in thinking, behavior, mood, or social functioning that require immediate intervention. If left untreated, these conditions may result in harm to the individual or to others around them [7]. Situations that commonly need urgent psychiatric care include suicidal behavior, violent or aggressive acts, delirium tremens, and lithium toxicity. In India, psychiatric emergencies account for approximately 9% of all reported emergency cases. Early recognition and timely management can significantly decrease the risk of death and long-term disability associated with psychiatric crises [8]. Violence is a frequent risk encountered in emergency room settings and represents an extreme form of aggressive behavior. In healthcare environments, particularly in psychiatric units, nurses are among the most common victims of such violence [9].

Students working in any clinical setting should have adequate knowledge of common psychiatric emergencies and their management in order to make appropriate, well-informed decisions regarding treatment and referral. The growing prevalence of alcohol and substance abuse in the country, along with rising suicide rates, has resulted in an increased number of patients seeking care in emergency departments. Therefore, it is essential for all nursing students to be well acquainted with psychiatric emergencies to enhance the quality of care provided to patients [10]. To effectively manage pediatric seizures, nursing students must possess both sound theoretical knowledge and practical skills. They should be able to promptly maintain the child's airway, assess the level of consciousness, identify the type of seizure, monitor vital signs, administer prescribed medications and oxygen, communicate calmly with anxious parents, and inform the physician when required [11].

Methodology

Study Design

This study adopted a quantitative evaluative research approach, Pre-experimental one-group pretest-posttest design.

$(O_1 - X - O_2)$

Study Setting

SCB Medical College & Hospital, Cuttack, Odisha

Study duration

4–6 weeks (including data collection and posttest period).

Sampling Method

In this study non-probability convenient sampling technique is used.

Sample size

The sample size for this descriptive study was estimated using the Yamene's formula:

A total of 50 caregivers of patients with mental disorders were included in this study. According to $n = N / (1 + N e^2)$
Here n = Sample size, N = Population size, e = Percentage of error i.e. 0.05

Inclusion Criteria

Caregivers who:

- Are primary caregivers of persons with mental disorders
- Are available during the data collection period
- Can understand and communicate in Odia or English
- Are willing to participate and give informed consent

Exclusion Criteria

Caregivers who:

- Are healthcare professionals
- Have undergone formal training on psychiatric emergencies
- Are not willing to participate

Details of the research tool

Research data were collected using two tools:

Section A: Socio-demographic Variables (Age, gender, education, occupation, relationship with patient, duration of caregiving, previous exposure to information).

Section B: Structured Knowledge Questionnaire. 25 multiple-choice questions, each correct answer = 1 mark, Maximum score = 25.

Interpretation: 0–8: Inadequate knowledge, 9–16: Moderately adequate knowledge, 17–25: Adequate knowledge

Tool Standardization

The content validity of the tools assessed by five experts (one medical professional and four nursing professionals). Reliability analysis showed strong internal consistency, with Cronbach's α values of 0.8. Pre-testing (tryout) done in hospital for clarity, ambiguity, and timing.

Study variables

Demographic variables: Age, gender, education, occupation, relationship with patient, duration of caregiving, previous exposure.

Independent Variable: Structured Teaching Programme (STP)

Dependent Variable: Knowledge regarding psychiatric emergencies

Data collection procedure

Data collection is the systematic process of gathering relevant information to answer research questions and evaluate study objectives. Formal administrative permission was obtained from the concerned authorities of the SCB Medical College & Hospital, Cuttack, Odisha, prior to the commencement of the study. Ethical clearance was also obtained from the Institutional Ethics Committee of Nursing College. The data collection period extended over weeks (mention duration). The investigator personally visited the selected mental health institution and established rapport with the caregivers of patients with mental disorders. The purpose and objectives of the study were clearly explained to the participants. Written informed consent was obtained from each caregiver before their participation in the study.

A total of 50 caregivers who fulfilled the inclusion criteria were selected using a non-probability convenient sampling technique.

Phase I: Pre-test: On the first day, the pre-test was conducted using a self-structured knowledge questionnaire regarding selected psychiatric emergencies. The questionnaire was administered individually to the caregivers in a quiet and comfortable environment. The average time taken to complete the questionnaire was approximately 20–30 minutes.

Phase II: Administration of Structured Teaching Programme (STP). Immediately after the pre-test, the Structured Teaching Programme was administered to the caregivers. The STP included topics such as: Meaning and types of psychiatric emergencies, early warning signs, immediate management and safety measures, Prevention of complications, role of caregivers during psychiatric emergencies.

The teaching session was conducted using lecture-cum-discussion method with the help of audiovisual aids such as charts and flashcards. Each session lasted approximately 30–45 minutes. Adequate opportunity was provided for clarification of doubts and discussion.

Phase III: Post-test: The post-test was conducted after seven days using the same structured knowledge questionnaire to assess the effectiveness of the Structured Teaching Programme. The procedure followed during the post-test was similar to that of the pre-test.

Ethical considerations

Approval from Institutional Ethics Committee. Formal institutional permission. Written informed consent. Confidentiality maintained. Right to withdraw ensured. No harm to participants.

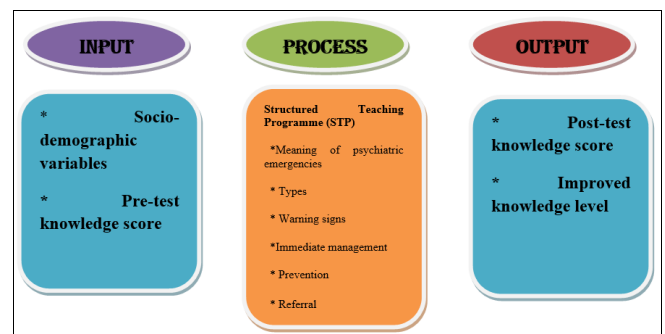
Statistical Analysis

Statistical analysis was performed using SPSS version 21. Demographic data were analyzed using frequencies and percentages, while baseline characteristics were summarized using means and standard deviations. Appropriate description and inferential statistics were applied, and frequency tables were constructed for significant data.

Theoretical framework

The study is based on the General Systems Theory proposed by Ludwig Von Bertalanffy (1968). The General Systems Theory views an individual or group as an open system that continuously interacts with the environment. According to this theory, a system consists of: Input, Throughput (Process), Output, Feedback. The General Systems Theory explains how caregivers (as an open system) receive information (input), process it through a Structured Teaching Programme (throughput), produce improved knowledge (output), and receive evaluation through feedback. The framework supports the assumption that structured educational intervention leads to significant improvement in caregivers’ knowledge regarding psychiatric emergencies.

Conceptual framework- General Systems Model (Three factor model)



Results

Table 1: Distribution of subjects based on sociodemographic variables. (N= 50)

Sl. No	Sociodemographic Variables	Frequency (f)	Percentage (%)
1.	Age in years		
	a. 30- 40 years	14	28
	b. 41- 50 years	16	32
	c. 51- 60 years	12	24
	d. Above 60 years	8	16
2.	Gender		
	a. Male	28	56
	b. Female	21	42
	c. Transgender	1	2
3.	Educational status		
	a. No formal education	9	18
	b. Primary	12	24
	c. Secondary	15	30
	d. Higher secondary	8	16
	e. Graduate & above	6	12
4.	Occupational status of caregivers		
	a. Unemployment	11	22
	b. Private employee	17	34
	c. Govt. employee	7	14
	d. Self- employee	10	20
	e. Others	5	10
5.	Relationship with the patient		
	a. Parent	15	30
	b. Spouse	18	36

	c. Sibling	9	18
	d. Child	5	10
	e. Other	3	6
6.	Duration of care giving		
	a. <1 year	10	20
	b. 1-3 year	16	32
	c. 4- 6 year	14	28
	d. > 6 year	10	20
7.	Previous exposure to information on psychiatric emergencies		
	a. No	32	64
	b. Yes, if yes sources	18	36

The above table-1 revealed that Frequency (F) and percentage (%) distribution of caregivers according to age in years, gender, educational qualification, occupational status

of caregivers, relationship with the patient, duration of care giving, previous exposure to information on psychiatric emergencies.

Table 2: Frequency and percentage distribution to assess knowledge regarding psychiatric emergencies among the caregivers of patient with mental disorder in mental health institution. (N= 50)

Sl. No	Socio demographic Variables	Frequency (f)	Percentage (%)
1.	Psychiatric emergency is defined as: a) A chronic mental illness b) A condition requiring immediate psychiatric intervention c) A mild emotional problem d) A personality disorder	6 28 10 6	12 56 20 12
2.	Psychiatric emergencies mainly require: a) Long-term therapy only b) Immediate attention and intervention c) Home remedies d) Isolation of the patient	7 30 8 5	14 60 16 10
3.	Who is most likely to face psychiatric emergencies? a) Only elderly people b) Only children c) Persons with mental disorders d) Healthy individuals	8 7 25 10	16 14 50 20
4.	The main goal of managing psychiatric emergencies is to: a) Punish the patient b) Control behavior only c) Prevent harm to self or others d) Ignore the symptoms	5 9 28 8	10 18 56 16
5.	Psychiatric emergencies can occur: a) Only in hospitals b) Only at home c) At any place and time d) Only during illness relapse	10 8 24 8	20 16 48 16
6.	Suicidal behavior is considered a psychiatric emergency because it: a) Improves mental health b) Is attention seeking c) Poses a risk to life d) Is harmless	5 9 29 7	10 18 58 14
7.	Aggressive behavior refers to: a) Calm behavior b) Friendly interaction c) Violent or threatening actions d) Social withdrawal	6 8 26 10	12 16 52 20
8.	Acute psychosis is characterized by: a) Clear thinking b) Hallucinations and delusions c) Normal behavior d) Good judgment	7 25 9 9	14 50 18 18
9.	Severe anxiety or panic attack may present with: a) Relaxation b) Chest pain and breathlessness c) Sleepiness only d) Happiness	8 23 10 9	16 46 20 18
10.	Substance withdrawal can lead to: a) Improved functioning	9	18

	b) Psychiatric emergencies	22	44
	c) No symptoms	11	22
	d) Only physical illness	8	16
11.	Warning signs of suicidal behavior include: a) Talking about death b) Giving away possessions c) Expressing hopelessness d) All of the above	9 8 10 23	18 16 20 46
12.	A person with aggressive behavior may show: a) Calmness b) Irritability and threats c) Politeness d) Silence	9 24 8 9	18 48 16 18
13.	Hallucinations mean: a) Normal thoughts b) False sensory perceptions c) Good imagination d) Memory loss	10 24 9 7	20 48 18 14
14.	Delusions are: a) True beliefs b) Fixed false beliefs c) Scientific facts d) Learning difficulties	9 26 7 8	18 52 14 16
15.	Which of the following indicates a psychiatric emergency? a) Mild sadness b) Occasional stress c) Sudden violent behavior d) Normal sleep	11 9 24 6	22 18 48 12
16	The first step in managing psychiatric emergencies is to: a) Argue with the patient b) Ensure safety of patient and others c) Leave the patient alone d) Punish the patient	6 28 9 7	12 56 18 14
17	During aggressive behavior, caregivers should: a) Shout at the patient b) Use physical force c) Remain calm and seek help d) Lock the patient alone	7 9 26 8	14 18 52 16
18	A suicidal person should: a) Be left alone b) Be encouraged to talk and seek help c) Be scolded d) Be ignored	6 29 8 7	12 58 16 14
19	In case of severe panic attack, caregivers should: a) Panic themselves b) Provide reassurance and calm environment c) Scold the patient d) Restrain immediately	8 25 9 8	16 50 18 16
20	When should professional help be sought during psychiatric emergencies? a) After several days b) Immediately c) Only if symptoms worsen d) Never	7 31 8 4	14 62 16 8
21	Early recognition of symptoms helps in: a) Worsening the condition b) Delaying treatment c) Preventing complications d) Ignoring illness	6 8 28 8	12 16 56 16
22	Medication adherence helps in preventing: a) Recovery b) Relapse and emergencies c) Side effects d) Hospital visits	9 27 8 6	18 54 16 12
23	Regular follow-up visits help in: a) Increasing stress b) Monitoring mental health status c) Avoiding treatment d) Causing relapse	7 26 9 8	14 52 18 16
24	Referral during psychiatric emergencies should be made to:		

	a) Friends only	6	12
	b) Traditional healers only	8	16
	c) Mental health professionals	30	60
	d) Neighbours	6	12
25	Caregivers play a vital role in psychiatric emergencies by:		
	a) Ignoring symptoms	5	10
	b) Providing immediate support and seeking help	32	64
	c) Hiding the illness	7	14
	d) Avoiding treatment	6	12

Table 2 shows that most participants had a moderate level of knowledge regarding psychiatric emergencies. More than half correctly defined a psychiatric emergency (56%) and recognized the need for immediate attention (60%). Half identified mentally ill persons as vulnerable (50%), and 48% stated emergencies can occur anytime and anywhere. Suicidal behavior was recognized as life-threatening by 58%, though only 46% identified all warning signs. Around half identified key symptoms such as aggression (52%), psychosis (50%), and panic symptoms (46%), while 44% recognized substance withdrawal as a cause. Regarding management, 56% prioritized safety, 52% advised remaining calm during aggression, and 58% supported encouraging suicidal individuals to seek help; 62% emphasized immediate professional assistance. Preventive measures such as early symptom recognition (56%), medication adherence (54%), and regular follow-up (52%) were acknowledged. Most respondents identified mental health professionals (60%) and caregivers (64%) as crucial in emergency situations.

Table 3: Mean, Standard deviation and 't' value of pretest and posttest level of STP. (N= 50)

Sl. No	Variable	Mean	Mean	Standard	Paired 't' test	P value
		Difference	Deviation			
1	Pre test	12.40		3.10		
			49		18.72	<0.001*
2	Post test	18.90		2.80		

The table-3 revealed that the paired t-test analysis revealed a marked improvement in the post-test scores compared to the pre-test scores. The mean pre-test score was 12.40 with a standard deviation of 3.10, whereas the mean post-test score increased to 18.90 with a standard deviation of 2.80. The mean difference between pre-test and post-test scores was 6.50. The obtained paired t value was 18.72 with 49 degrees of freedom, which was statistically highly significant at $p < 0.001$. This indicates that the structured teaching programme was effective in improving the knowledge level of the participants.

Table 4: Chi square analysis showing the association between levels of knowledge with selected socio demographic variables. (N= 50)

Socio demographic characteristics	Df.	Chi square	p value
Age (in yrs)	6	12.84	0.045*
Gender	2	1.96	0.375
Educational status	8	15.72	0.047*
Occupational status of caregivers	6	7.38	0.286
Relationship with the patient	6	13.10	0.041*
Duration of care giving	4	9.62	0.047*
Previous exposure to information on psychiatric emergencies	2	10.24	0.006*

$p \leq 0.05$ * (Statistically significant)

Table-4 presents that there is a statistical significance in sociodemographic variable like age in years, relationship with the patient, duration of care giving, and previous exposure to information on psychiatric emergencies.

Discussion

In India, families serve as the primary support system for individuals with mental illness, with more than 90% of those with chronic conditions living at home and depending on relatives for daily care. Family members usually seek psychiatric help on behalf of the patient, supervise medications, provide financial assistance, stay with them, and offer emotional support. This strong family involvement, often seen in traditional joint family systems, plays a vital role in rehabilitation and is considered a positive prognostic factor in mental health care^[12].

A pre-experimental study was conducted using a convenient sampling technique. Data were collected through a structured questionnaire and analyzed using descriptive and inferential statistics. Most caregivers (85%) demonstrated adequate knowledge, while 15% showed moderately adequate knowledge after the intervention. The mean difference score was 23.55, and the obtained t-value (2.81, $p < 0.05$) indicated a statistically significant improvement. The structured teaching program was effective in improving caregivers' knowledge regarding the management of violent behavior in mentally ill individuals.

A quantitative, quasi-experimental non-randomized control group design was used. Sixty staff nurses were selected through purposive sampling. Data were collected using a structured questionnaire consisting of demographic details and 20 knowledge-based questions. The reliability of the tool was confirmed using Karl Pearson's correlation ($r = 0.88$). In the control group, knowledge scores showed minimal improvement (mean 11.63 to 13.6). In the experimental group, knowledge significantly increased from a mean of 11.4 (SD 2.52) in the pre-test to 17.5 (SD 0.99) in the post-test ($p < 0.05$), indicating the effectiveness of the STP. Most demographic variables showed no significant association with knowledge, except gender. The structured teaching programme effectively improved staff nurses' knowledge of psychiatric emergency management. Ongoing educational programmes are recommended to strengthen both clinical and theoretical competencies^[13].

Implications of the study

The study highlights the need for educating caregivers regarding psychiatric emergencies. Mental health nurses can conduct regular Structured Teaching Programmes (STP) for caregivers in hospitals and community settings. Improved caregiver knowledge can lead to early identification of warning signs and prompt management of psychiatric emergencies.

Limitation

Conducted in a single institution. Small sample size (N=50). No control group.

Conclusion

The findings showed that caregivers had moderate to inadequate knowledge in the pre-test. Following the Structured Teaching Programme, post-test scores improved significantly, with a highly significant difference between pre-test and post-test results ($p < 0.001$), confirming the effectiveness of the STP. A significant association was also found between post-test knowledge and selected socio-demographic variables such as age, education, relationship with the patient, duration of caregiving, and previous exposure to information. The study concludes that the STP effectively enhanced caregivers' knowledge, supporting better early identification and management of psychiatric emergencies.

Funding

Self

Conflicts of interest

The writer reports no conflicts of interest.

Acknowledgements

The authors extend their sincere gratitude to all participants for their willing involvement and for sharing their valuable and considered responses.

Ethics Approval

Approval from Institutional Ethics Committee. Formal institutional permission. Written informed consent. Confidentiality maintained. Right to withdraw ensured. No harm to participants.

Data Availability

The data is available and can be accessed with a reasonable request.

Abbreviations

STP – Structured Teaching Programme, SD – Standard Deviation, df – Degree of Freedom, OPD – Outpatient Department, IPD – Inpatient Department, IEC – Institutional Ethics Committee, χ^2 – Chi-square test, t – Paired t-test, MHN – Mental Health Nursing

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