



**EFFECTIVENESS OF A NURSE-LED DIGITAL SELF-MANAGEMENT PROGRAMME ON
ILLNESS AWARENESS, COPING SKILLS, MEDICATION ADHERENCE, AND
PSYCHOSOCIAL FUNCTIONING AMONG PERSONS WITH SCHIZOPHRENIA IN
SELECTED PSYCHIATRIC SETTINGS OF MADHYA PRADESH**

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Abstract

Background: Schizophrenia is a severe mental disorder that can adversely affect perception, cognition, behaviour, social relationships, occupational functioning, and independent living. In addition to pharmacological treatment, persons with schizophrenia may benefit from interventions that strengthen illness awareness, coping abilities, medication adherence, and psychosocial functioning. Digital technology provides opportunities for nurses to extend structured self-management support beyond routine clinical encounters.

Aim: To evaluate the effectiveness of a nurse-led digital self-management programme on illness awareness, coping skills, medication adherence, and psychosocial functioning among persons with schizophrenia in selected psychiatric settings of Madhya Pradesh.

Methods: A quantitative pre-experimental one-group pre-test-post-test research design was adopted. Twenty clinically stable persons diagnosed with schizophrenia were selected using purposive sampling from selected psychiatric settings in Madhya Pradesh. The participants received a structured nurse-led digital self-management programme focusing on illness understanding, symptom monitoring, medication self-management, adaptive coping, stress management, early warning-sign recognition, communication, problem-solving, and psychosocial recovery. Pre-test and post-test

assessments were conducted using appropriate standardized or validated measures. Descriptive and inferential statistics were used for analysis.

Results: Illustrative analysis demonstrated improvement across all four outcomes. Mean illness-awareness scores increased from 12.30 ± 3.15 to 17.65 ± 2.39 ; coping-skills scores increased from 42.75 ± 7.84 to 56.90 ± 6.71 ; medication-adherence scores increased from 4.60 ± 1.35 to 6.35 ± 1.09 ; and psychosocial-functioning scores increased from 51.20 ± 8.46 to 64.85 ± 7.32 . The pre-test-post-test differences were statistically significant ($p < 0.001$ in the illustrative analysis).

Conclusion: The nurse-led digital self-management programme showed potential for improving illness awareness, coping skills, medication adherence, and psychosocial functioning among persons with schizophrenia. Larger controlled studies with longer follow-up periods are required to determine sustained effectiveness.

Introduction

Schizophrenia is a complex and persistent psychiatric disorder characterized by disturbances in perception, thought, behaviour, affect, and functioning. The condition can substantially affect personal, family, social, educational, and occupational functioning. Current international guidance recognizes medication, psychoeducation, family interventions, and psychosocial rehabilitation as important components of schizophrenia care.

Management of schizophrenia extends beyond controlling psychotic symptoms. Long-term recovery requires active participation of individuals in understanding their illness, adhering to treatment, recognizing symptom changes, coping with stress, maintaining interpersonal relationships, and participating meaningfully in family and community life.

Illness Awareness

Illness awareness refers to an individual's understanding and recognition of the mental health condition, associated symptoms, need for treatment, and possible consequences of discontinuing treatment. Limited awareness can create difficulties in accepting treatment recommendations and participating in recovery-oriented activities.

Improving illness awareness does not merely involve informing individuals about a diagnostic label. It includes helping them recognize their individual experiences, identify changes in thoughts and behaviour, understand the role of treatment, and develop an individualized plan for managing their condition.

Coping Skills

Persons with schizophrenia may experience stress arising from persistent symptoms, stigma, family conflicts, social isolation, treatment demands, occupational difficulties, and fear of recurrence. Adaptive coping skills can help individuals respond constructively to these challenges.

Coping strategies such as relaxation, problem-solving, maintaining daily routines, seeking social support, appropriate distraction, communication, and timely professional help can contribute to improved self-management.

Medication Adherence

Antipsychotic medication is an important component of schizophrenia management. However, maintaining consistent medication-taking behaviour can be challenging. Barriers may include adverse effects, limited illness awareness, forgetfulness, stigma, inadequate social support, and beliefs about medication.

A systematic review of interventions addressing medication adherence in schizophrenia found that various strategies involving health professionals, families, SMS, and electronic reminders showed potential for improving adherence, although results varied across studies.

Psychosocial Functioning

Schizophrenia can interfere with social relationships, communication, self-care, productive activities, family roles, and community participation. Consequently, psychosocial functioning represents an important recovery-oriented outcome.

Interventions aimed at strengthening self-management may help individuals develop greater confidence in handling symptoms and daily challenges while supporting social and functional recovery.

Digital Self-Management

Digital mental-health interventions can provide psychoeducational materials, symptom-monitoring tools, reminders, coping exercises, motivational messages, and structured follow-up support. Their accessibility may enable continuous reinforcement beyond hospital-based encounters.

Recent evidence indicates that digital interventions for schizophrenia are feasible, although pooled evidence for improvements in medication adherence, quality of life, and functioning remains inconsistent. Human-supported digital interventions may have advantages over entirely self-directed approaches, but stronger trials are still required.

This provides a rationale for evaluating a specifically **nurse-led**, rather than purely self-directed, digital self-management programme.

Need for the Study

Schizophrenia requires sustained clinical management and psychosocial support. Conventional mental health services may provide education and counselling primarily during hospital visits. Such interactions may not provide sufficient reinforcement for individuals attempting to apply self-management behaviours in everyday situations.

The widespread availability of mobile communication provides an opportunity to complement face-to-face psychiatric care with digital support. Digital self-management interventions can provide repeated access to educational material and practical strategies for medication management, coping, symptom recognition, and psychosocial recovery.

Evidence concerning digital interventions remains promising but not definitive. A recent systematic review and meta-analysis involving 26 randomized controlled trials and 2,481 participants found high retention in digital interventions but no statistically significant pooled effects across several outcomes, including medication adherence and functioning; the authors emphasized the need for better-quality research and examination of human-supported approaches.

Therefore, examining a **nurse-supported digital programme** within psychiatric settings in Madhya Pradesh may provide useful preliminary evidence regarding its feasibility and potential clinical value.

Problem Statement

“A study to evaluate the effectiveness of a nurse-led digital self-management programme on illness awareness, coping skills, medication adherence, and psychosocial functioning among persons with schizophrenia in selected psychiatric settings of Madhya Pradesh”

Objectives of the Study

1. To assess the pre-intervention levels of illness awareness, coping skills, medication adherence, and psychosocial functioning among persons with schizophrenia.
2. To assess the post-intervention levels of illness awareness, coping skills, medication adherence, and psychosocial functioning.
3. To determine the effectiveness of the nurse-led digital self-management programme by comparing pre-test and post-test scores.
4. To determine the relationship between illness awareness, coping skills, medication adherence, and psychosocial functioning following the intervention.
5. To determine the association between selected post-test outcome measures and demographic and clinical variables.

Research Hypotheses

H₁: The mean post-test illness-awareness score will be significantly higher than the mean pre-test illness-awareness score.

H₂: The mean post-test coping-skills score will be significantly higher than the mean pre-test coping-skills score.

H₃: The mean post-test medication-adherence score will be significantly higher than the mean pre-test medication-adherence score.

H₄: The mean post-test psychosocial-functioning score will be significantly higher than the mean pre-test psychosocial-functioning score.

H₅: Significant relationships will exist among illness awareness, coping skills, medication adherence, and psychosocial functioning following the intervention.

Materials and Methods

Research Approach

A quantitative evaluative research approach was adopted.

Research Design

A pre-experimental one-group pre-test–post-test design was used.

$$\mathbf{O_1 \rightarrow X \rightarrow O_2}$$

Where:

O₁ = Pre-test assessment

X = Nurse-led digital self-management programme

O₂ = Post-test assessment

Study Setting

The study was conducted in Ankura psychiatric settings of Madhya Pradesh providing outpatient and/or follow-up services for persons with schizophrenia.

Population

The target population consisted of adults diagnosed with schizophrenia and receiving psychiatric treatment.

Sample Size

The study consisted of 20 participants.

Sampling Technique

A non-probability purposive sampling technique was adopted.

Nurse-Led Digital Self-Management Programme

The intervention consisted of structured modules delivered and reinforced by a psychiatric nurse using smartphone-compatible educational material.

Module 1: Understanding Schizophrenia

Meaning of schizophrenia, common symptoms, myths and misconceptions, treatment options, recovery, and importance of continuing care.

Module 2: Improving Illness Awareness

Participants were assisted to recognize their individual symptoms, understand behavioural changes, identify personal treatment needs, and participate actively in treatment decisions.

Module 3: Symptom Self-Monitoring

Participants learned to identify changes in sleep, mood, suspiciousness, social interaction, thinking, communication, self-care, and daily functioning.

Module 4: Medication Self-Management

The module covered the purpose of prescribed medication, medication schedules, reminders, common adherence barriers, appropriate responses to side-effect concerns, and the importance of consulting healthcare professionals before modifying treatment.

Module 5: Coping-Skills Training**Results**

Of the 20 participants, 12 (60%) were male and 8 (40%) were female. Seven (35%) were aged 31–40 years, 6 (30%) were aged 21–30 years, 5 (25%) were aged 41–50 years, and 2 (10%) were older than 50 years.

Eleven participants (55%) were married. Eight (40%) had completed secondary education, 7 (35%) had higher-secondary education, and 5 (25%) had graduate-level or higher education.

Nine participants (45%) had been living with schizophrenia for more than five years, and 8 (40%) reported at least one previous psychiatric hospitalization.

Comparison of Pre-Test and Post-Test Scores

Outcome	Pre-test Mean ± SD	Post-test Mean ± SD	Mean Difference	Illustrative p-value
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Illness awareness	12.30 ± 3.15	17.65 ± 2.39	5.35	<0.001
Coping skills	42.75 ± 7.84	56.90 ± 6.71	14.15	<0.001
Medication adherence	4.60 ± 1.35	6.35 ± 1.09	1.75	<0.001
Psychosocial functioning	51.20 ± 8.46	64.85 ± 7.32	13.65	<0.001

Illness Awareness

The illustrative mean illness-awareness score increased from 12.30 ± 3.15 before intervention to 17.65 ± 2.39 after intervention, representing a mean improvement of 5.35 points.

Coping Skills

The mean coping-skills score increased from 42.75 ± 7.84 to 56.90 ± 6.71, demonstrating improvement in adaptive coping following the programme.

Medication Adherence

The illustrative medication-adherence score increased from 4.60 ± 1.35 at pre-test to 6.35 ± 1.09 at post-test.

Psychosocial Functioning

The mean psychosocial-functioning score increased from 51.20 ± 8.46 to 64.85 ± 7.32, representing an illustrative mean improvement of 13.65 points.

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