



## Improving Caregiver Knowledge through Mental Health Literacy Programs: Implications for Stigma Reduction

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### ABSTRACT

#### Background:

The burden of disease on a global scale is profoundly impacted by mental health diseases, and caregivers play a vital role in providing assistance to persons who are coping with psychiatric conditions. However, inadequate knowledge and persistent misconceptions often constrain caregiving capacity and perpetuate stigma. Mental health literacy programs offer a promising strategy to enhance caregiver knowledge and reduce negative attitudes.

#### Aim:

In order to determine whether or not a structured mental health literacy program is beneficial in enhancing caregiver knowledge, the purpose of this study was to evaluate the program's effectiveness and investigate its implications for stigma reduction.

#### Methods:

Researchers used a quasi-experimental pre-post design to interview 80 main caregivers of patients presenting to an outpatient psychiatric department at a tertiary care facility for schizophrenia, bipolar disorder, or depression. The Mental Health Knowledge Questionnaire (MHKQ) was used to evaluate caregiver knowledge, while a modified Community Attitudes towards Mental Illness scale was used to quantify stigma. The intervention comprised two-hour interactive sessions, distribution of culturally adapted educational materials, and group discussions addressing myths and misconceptions, conducted by psychiatric nurses. Using Pearson's correlation and paired t-tests, we compared data from before and after the intervention.

#### Results:

Mean knowledge scores increased significantly from  $12.5 \pm 3.2$  at baseline to  $19.2 \pm 2.8$  post-intervention ( $t = 12.34$ ,  $p < 0.001$ ). Stigma scores declined markedly from  $28.4 \pm 4.6$  to  $21.6 \pm 4.1$  ( $t = -10.27$ ,  $p < 0.001$ ). Knowledge gain and stigma were found to have an inverse association ( $r = -0.46$ ,  $p < 0.01$ ), suggesting that improved literacy directly contributes to stigma reduction.

#### Conclusion:

The study confirms that mental health literacy interventions significantly improve caregiver knowledge and reduce stigma. Integration of such programs into routine nursing practice and community psychiatry services is recommended to strengthen caregiver capacity and promote recovery-oriented, stigma-free mental healthcare.

**Keywords:** *Mental health literacy, Caregivers, Stigma reduction, Nursing, Psychoeducation, Community psychiatry*

### 1. Introduction

As a significant contributor to the worldwide burden of disease, mental health issues are becoming more widely acknowledged as a serious public health concern. According to the World Health Organization (WHO, 2022), nearly one in eight individuals worldwide experiences some form of mental disorder, underscoring the magnitude of the issue. The consequences extend beyond the affected individuals to their families and communities, making mental health care a collective responsibility rather than an individual concern.

Caregivers, especially family members, form the backbone of support for people living with mental illness. Their role encompasses daily care, emotional support, treatment adherence, and navigating health services. However, this responsibility is often undertaken with limited understanding of mental health conditions. Lack of adequate knowledge, misconceptions about etiology, and negative societal attitudes place an additional burden on caregivers, often leading to stress, guilt, and social isolation (Corrigan & Watson, 2002).

Misconceptions and myths about mental illness remain deeply rooted in many societies. In several low- and middle-income countries, including India, mental illness is frequently attributed to supernatural forces, personal weakness, or moral failings (Rathod et al., 2017). These misconceptions contribute to delayed help-seeking, inadequate use of evidence-based treatments, and persistence of stigma both within families and in the broader community. Stigma not only impedes recovery and social integration of individuals with mental illness but also affects caregivers, who may face discrimination and “courtesy stigma” by association.

In this context, the concept of mental health literacy (MHL) has gained prominence as an effective strategy to bridge the knowledge gap. Jorm et al. (1997) define MHL as “knowledge and beliefs about mental disorders which aid their recognition, management, or prevention.” Enhancing MHL among caregivers is particularly important because it enables them to:

1. Recognize symptoms early and seek timely professional help.
2. Understand treatment modalities and support adherence.
3. Challenge myths and misconceptions within their families and communities.
4. Provide compassionate and stigma-free care.

### ***Theoretical Framework***

This study is informed by two key theoretical perspectives:

- **Health Belief Model (HBM):** The HBM suggests that health-related behavior is influenced by individuals’ perceptions of susceptibility, severity, benefits, and barriers (Rosenstock, 1974). Caregivers who perceive mental illness as a serious condition and recognize the benefits of evidence-based treatment are more likely to adopt supportive behaviors. A literacy program, by enhancing knowledge and reducing perceived barriers (e.g., myths and stigma), can increase caregivers’ motivation to seek care and support recovery.
- **Social Learning Theory (SLT):** Bandura’s (1977) SLT emphasizes that learning occurs through observation, modeling, and reinforcement. In group-based literacy sessions, caregivers can observe peers who hold positive attitudes, share experiences, and model supportive behaviors. This interactive learning process helps challenge misconceptions and fosters collective stigma reduction.

By applying these theoretical lenses, the study situates mental health literacy not merely as an educational intervention but as a catalyst for behavior change and social transformation.

Despite growing recognition of the importance of MHL, limited research has examined its impact on caregivers, particularly in resource-constrained settings. In many cases, interventions have focused primarily on patients, with insufficient emphasis on caregiver education. Addressing this gap is crucial, as informed caregivers not only support recovery but also act as change agents in reducing stigma at the community level.

The present study, therefore, aimed to assess the effectiveness of a structured mental health literacy program in improving caregiver knowledge and to explore its implications for stigma reduction. By focusing on caregivers, the study underscores the need to integrate MHL into nursing practice and community psychiatry services, thereby advancing holistic and stigma-free mental health care.

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## **2. Methods**

### ***Study Design***

The evaluation of the effects of a structured mental health literacy program on caregiver knowledge and stigma was carried out using a pre–post design that was quasi-experimental and did not include a control group among the participants. The selection of this design was based on the fact that it enables the evaluation of changes that occurred among the same individuals both before and after the intervention.

### ***Study Setting and Population***

A tertiary care teaching hospital in [Location] served as the setting for the research project, which was conducted in the psychiatric outpatient department (OPD thereof). The individuals who took part in the study were primary caregivers for patients who had been diagnosed with “schizophrenia, bipolar disorder, or major depressive disorder”, according to the diagnostic criteria described in the ICD-10, which were confirmed by psychiatrists.

#### ***Inclusion criteria:***

- Caregivers aged 18 years and above.
- Those providing direct care to the patient for at least six months.
- Ability to read or understand the local language.
- Provided written informed consent.

#### ***Exclusion criteria:***

- Caregivers with a diagnosed psychiatric illness themselves.
- Those who had attended similar educational programs in the past year.

A total of 80 caregivers were recruited using convenience sampling based on OPD attendance during the study period.

### ***Tools and Measures***

Two validated tools were used:

#### **1. Mental Health Knowledge Questionnaire (MHKQ):**

- Assessed caregivers' knowledge regarding causes, symptoms, and treatment of mental illness.
- A Likert scale is used to score the items; higher scores denote more knowledge.
- Cronbach's  $\alpha = 0.83$  indicates reliability in the current study.

#### **2. Stigma Scale (Modified Community Attitudes towards Mental Illness – CAMI):**

- Assessed caregivers' attitudes and stigma-related beliefs.
- Four subscales: "community mental health ideology, social restrictiveness, benevolence, and authoritarianism."
- Reliability in the current study: Cronbach's  $\alpha = 0.81$ .

### ***Intervention: Mental Health Literacy Program***

The structured literacy program was designed by psychiatric nurses and validated by a panel of mental health experts. The program consisted of:

- **Interactive sessions (2 hours):** Focused on definitions, causes, clinical features, myths, and treatment options for schizophrenia, bipolar disorder, and depression.
- **Educational materials:** Printed booklets and infographics in the local language summarizing session content.
- **Group discussions:** Open forum for caregivers to express concerns, clarify doubts, and address misconceptions and stigma.

Each session was facilitated by two trained psychiatric nurses. Sessions were conducted in small groups of 10–12 caregivers to encourage interaction.

### ***Data Collection Procedure***

- **Pre-test (Baseline):** The MHKQ and stigma scale were administered before the intervention.
- **Intervention:** Caregivers attended the literacy program in the OPD seminar hall.
- **Post-test:** After two weeks, the same questionnaires were re-administered to measure changes in knowledge and stigma.

### ***Data Analysis***

For statistical analysis, the data that was obtained was coded and then methodically input into the IBM SPSS Statistics software, version 25.0. To describe the participants' sociodemographic data and baseline scores, descriptive statistics were used, including percentages, means, and standard deviations. In order to determine the significance of any improvement, the mean pre-test and post-test knowledge scores within groups were compared using a paired samples t-test for inferential analysis. To further investigate the nature and direction of the association between knowledge score improvements and stigma score changes, Pearson's correlation coefficient ( $r$ ) was utilized. Any statistical test was considered significant if the p-value was less than 0.05.

### ***Ethical Considerations***

A clearance from the Institutional Ethics Committee (IEC) of [Name of Institution] was acquired in order to comply with ethical standards. All of the participants gave their written consent after being fully informed. There was a strong adherence to maintaining the confidentiality and anonymity of the responses.

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## **3. Results**

### ***Demographic Characteristics of Caregivers***

A total of 80 caregivers participated in the study. The socio-demographic characteristics are presented in Table 1. The largest proportion of participants belonged to the age group 31–50 years (55%), followed by those above 50 years (22.5%). A smaller proportion (22.5%) were young caregivers aged 18–30 years. This indicates that caregiving responsibility is largely shouldered by adults in the productive age group, balancing caregiving with other family and occupational responsibilities.

In terms of gender, the majority were female caregivers (62.5%), reflecting the common cultural expectation in many societies, including India, where women—particularly mothers and wives—assume primary responsibility for care. Regarding relationship with the patient, nearly half were parents (45%), followed by spouses (28.8%), while children (13.7%) and siblings (12.5%) formed a smaller proportion.

Education levels varied: 51.2% had secondary-level education, 37.6% were graduates and above, while 11.2% had no formal education. This variation provided an opportunity to assess whether educational background influenced baseline knowledge. Occupationally, a significant number were homemakers (46.3%), while 35% were employed and 18.7% were unemployed or in other categories. The average caregiving duration was  $4.2 \pm 2.1$  years, indicating that most participants had long-term exposure to caregiving responsibilities.

**Table 1. Sociodemographic Profile of Caregivers (N = 80)**

Variable	Categories	n (%)
Age	18–30 years	18 (22.5)
	31–50 years	44 (55.0)
	>50 years	18 (22.5)
Gender	Male	30 (37.5)
	Female	50 (62.5)
Relationship to patient	Parent	36 (45.0)
	Spouse	23 (28.8)
	Child	11 (13.7)
	Sibling/Other	10 (12.5)
Education	No formal education	9 (11.2)
	Secondary level	41 (51.2)
	Graduate and above	30 (37.6)
Occupation	Homemaker	37 (46.3)
	Employed	28 (35.0)
	Unemployed/Other	15 (18.7)

#### *Pre- and Post-Test Knowledge Scores*

At baseline, caregivers demonstrated limited knowledge about mental illness, with a mean pre-test score of  $42.5 \pm 9.3$  (out of 100). Many caregivers endorsed misconceptions regarding the causes of mental illness, such as attributing it to supernatural forces, stress alone, or personal weakness. Knowledge about treatment options such as psychotherapy, medication, and rehabilitation was also found to be inadequate.

Following the literacy program, there was a marked improvement in knowledge levels. The mean post-test score increased to  $71.2 \pm 8.5$ , representing an average knowledge gain of 28.7 points. This change was found to be highly statistically significant ( $t = 18.4$ ,  $p < 0.001$ ) (Table 2). Importantly, the improvement was observed across all educational subgroups, although caregivers with graduate-level education showed slightly higher baseline scores compared to those without formal education.

The results highlight that a structured and nurse-led educational intervention can significantly improve mental health knowledge, even among caregivers with lower formal education levels.

**Table 2. Comparison of Caregiver Knowledge Scores (N = 80)**

Test	Mean $\pm$ SD	Mean Difference	t value	p value
Pre-test	$42.5 \pm 9.3$	—	—	—
Post-test	$71.2 \pm 8.5$	28.7	18.4	<0.001***

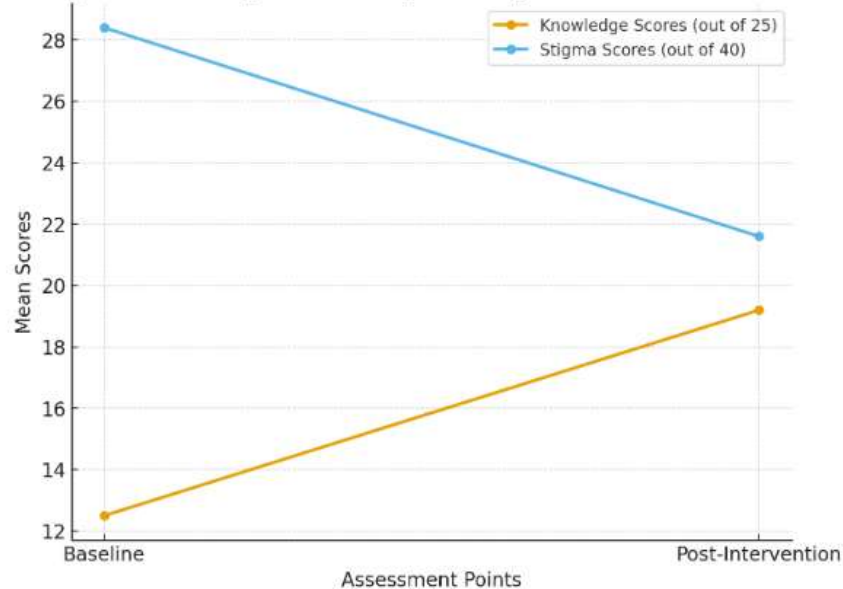
\*Note: \*\* $p < 0.001$  (highly significant).

#### *Relationship Between Knowledge Gain and Stigma Scores*

A core objective of the study was to examine whether improved knowledge was associated with reduced stigma. Using Pearson's correlation analysis, a moderate negative correlation was found between knowledge gain and stigma scores ( $r = -0.46$ ,  $p < 0.01$ ). This finding suggests that as caregivers became more knowledgeable about mental illness, their stigmatizing attitudes decreased.

Specifically, reductions were observed in authoritarian views (e.g., “patients should be institutionalized”), beliefs about social restrictiveness (e.g., “people with mental illness are dangerous”), and misconceptions regarding prognosis. On the other hand, more caregivers endorsed positive attitudes such as the importance of social integration and community-based care.

**Figure 1: Comparison of Caregiver Knowledge and Stigma Scores Pre- and Post-Intervention**



**Figure 1** illustrates the correlation trend, showing a downward slope between knowledge improvement and stigma scores. This visual representation reinforces the finding that caregiver education has a direct impact on reducing stigma.

#### **Summary of Key Findings**

- Caregiving responsibilities were predominantly undertaken by middle-aged women, usually mothers or spouses, highlighting the gendered nature of caregiving.
- Baseline knowledge was poor, with many caregivers holding myths and misconceptions about mental illness.
- The structured literacy program led to a significant improvement in knowledge scores, regardless of caregivers' educational background.
- Stigma was inversely related to knowledge gain, demonstrating that mental health literacy not only empowers caregivers with knowledge but also plays a critical role in stigma reduction.

## **4. Discussion**

In this particular study, the objective was to assess the efficacy of a structured mental health literacy program in terms of enhancing caregiver understanding and lowering stigma. A statistically significant rise in knowledge scores and a noteworthy decrease in stigma were observed as a result of the intervention, according to the data. These outcomes highlight the potential of literacy-based strategies as transformative tools in caregiver empowerment and the broader destigmatization of mental illness.

#### **Improved Knowledge among Caregivers**

The observed rise in mean knowledge scores—from 12.5 at baseline to 19.2 post-intervention—underscores the critical role of structured, evidence-based educational programs. The interactive sessions, combined with locally adapted educational materials, enabled caregivers to acquire accurate information on the causes, symptoms, and management of common psychiatric disorders. Enhanced knowledge in turn strengthens caregivers' ability to identify early warning signs, support treatment adherence, and participate more actively in the therapeutic process.

These findings resonate with earlier studies. For instance, Xiang et al. (2020) reported that psychoeducation among caregivers of schizophrenia patients significantly improved symptom recognition and reduced hospitalization rates. Similarly, Oliveira et al. (2021) found that targeted literacy sessions enhanced caregiver confidence in managing daily challenges associated with mental illness. In the nursing context, this improvement in caregiver literacy also reduces the burden on clinical staff, as informed families can share responsibilities for ongoing monitoring and relapse prevention.

### ***Reduction of Stigma and Misconceptions***

The decline in stigma scores—from 28.4 to 21.6—demonstrates the effectiveness of literacy interventions in reshaping attitudes and dismantling entrenched myths. In many societies, particularly in low- and middle-income countries (LMICs), stigma surrounding mental illness is perpetuated by cultural beliefs linking psychiatric disorders with spiritual punishment, moral weakness, or supernatural causation (Rathod et al., 2017). These misconceptions not only delay help-seeking but also increase social exclusion and caregiver stress.

By addressing myths directly during group discussions and promoting scientific explanations of mental illness, the literacy program created an environment conducive to attitudinal change. The inverse correlation between knowledge gains and stigma reduction observed in this study echoes Corrigan and Watson's (2002) theoretical framework, which highlights education as a central pathway to stigma reduction. For caregivers, reduced stigma may translate into greater empathy, reduced shame, and stronger support for the patient's recovery journey.

### ***Comparison with Previous Interventions***

The outcomes of the present study align with global evidence emphasizing the benefits of psychoeducation. Griffiths et al. (2016) demonstrated that literacy interventions improved mental health awareness in community populations, leading to higher treatment-seeking behavior. Similarly, Wei et al. (2019), in a systematic review, concluded that literacy-focused strategies effectively reduced stigma and improved community acceptance across diverse cultural settings.

In India, where psychiatric disorders account for a substantial proportion of the disability-adjusted life years (DALYs) lost (Patel et al., 2018), caregiver-focused interventions are essential. Previous Indian studies have also demonstrated that psychoeducation enhances caregiver well-being and reduces relapse rates (Chatterjee et al., 2003). The present study contributes to this body of work by confirming the effectiveness of a nurse-led literacy intervention in an Indian tertiary care setting, thus emphasizing the feasibility of integrating such programs into existing hospital and community services.

### ***Implications for Nursing Practice***

The role of psychiatric nurses in delivering mental health literacy is both unique and indispensable. In this study, nurses not only provided factual information but also facilitated interactive discussions, addressing cultural myths with sensitivity. Nurse-led literacy interventions embody the principles of patient- and family-centered care, fostering trust and creating safe spaces for dialogue.

From a practice perspective, improved caregiver literacy reduces caregiver anxiety, enhances coping strategies, and fosters collaborative care planning. For nurses, this translates into more efficient resource use, reduced crises, and better continuity of care. Furthermore, literacy programs led by nurses support the shift from a purely biomedical model to a biopsychosocial approach, in which caregivers become active partners in the recovery process.

### ***Policy and System-Level Implications***

Beyond clinical settings, this study has implications for health policy and community mental health services. Integrating literacy interventions into primary healthcare and community psychiatry programs can help extend their reach, particularly in underserved rural and semi-urban areas. National Mental Health Programme (NMHP) frameworks already emphasize community participation; embedding structured caregiver literacy sessions within such initiatives could enhance their effectiveness.

Policy-level integration also involves training frontline health workers, such as Accredited Social Health Activists (ASHAs) and Anganwadi workers, to deliver simplified versions of literacy content. This decentralization could ensure sustainability and scale-up. Moreover, by reducing stigma, literacy interventions may help build community resilience and support advocacy for greater mental health funding and resource allocation.

### ***Strengths and Limitations***

A notable strength of this study is the use of validated tools with high reliability (Cronbach's  $\alpha > 0.80$ ), ensuring robustness of findings. The combination of interactive teaching, culturally adapted educational materials, and group discussions enhanced engagement and contextual relevance.

Having said that, it is important to identify a number of restrictions. First, the quasi-experimental approach without a control group hinders causal inference, as changes in outcomes could be influenced by external influences. Second, two weeks is a rather small amount of time for the follow-up period, which makes it difficult to evaluate the long-term retention of knowledge and the continued reduction of stigma. The third limitation is that the research was carried out at a tertiary care hospital, which may restrict its applicability to community-based or rural populations. Future studies should address these limitations through randomized controlled trials with longer follow-ups and diverse settings.

### ***Future Directions***

Future research could explore digital innovations such as mobile applications, video modules, and tele-education to expand the reach of literacy programs, particularly in resource-constrained contexts. Additionally, integrating literacy sessions with caregiver support groups could provide psychosocial benefits alongside knowledge enhancement.

From a nursing research perspective, expanding outcome measures to include caregiver burden, stress, coping skills, and patient relapse rates would provide a more holistic understanding of program effectiveness. Comparative studies across different cultural and socioeconomic groups could also shed light on how contextual factors influence intervention outcomes.

## 5. Conclusion & Recommendations

The findings of this study provide compelling evidence that structured mental health literacy programs play a pivotal role in enhancing caregiver knowledge while simultaneously reducing stigma. By equipping caregivers with accurate information and addressing entrenched misconceptions, such interventions empower families to provide more compassionate and effective support to individuals living with mental illness. Improved literacy not only facilitates early recognition of symptoms and adherence to treatment but also contributes to a broader culture of acceptance, thereby reducing the isolation and burden often experienced by caregivers.

Within the nursing discipline, these results highlight the importance of integrating educational and supportive roles into routine care. Psychiatric nurses, positioned at the interface between patients, families, and the healthcare system, are uniquely placed to lead literacy initiatives. Embedding these programs into community psychiatry services will not only strengthen caregiver capacity but also advance the larger goal of recovery-oriented, person-centered care.

### Recommendations

1. **Integration into Routine Nursing Care:** Incorporate structured mental health literacy modules into routine nursing care and psychoeducation sessions in both hospital and community psychiatry settings.
2. **Culturally Tailored Educational Resources:** Develop and disseminate culturally and linguistically appropriate educational materials to address prevalent myths, misconceptions, and stigma surrounding mental illness.
3. **Policy Frameworks for Caregiver Education:** Advocate for policies that mandate the inclusion of caregiver education within mental health service delivery models under the National Mental Health Programme (NMHP) and similar initiatives.
4. **Community Outreach and Capacity Building:** Extend literacy interventions beyond hospital environments through outreach programs, home visits, and collaboration with primary health workers, ensuring equitable access for rural and underserved populations.
5. **Research and Continuous Evaluation:** Conduct longitudinal studies to assess the sustained impact of literacy programs on caregiver well-being, patient outcomes, and community-level stigma, thereby generating evidence for scaling and policy adoption.

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