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# Community-Based Interventions for Improving the Mental Health of Elderly People in the Field Practice Area of a Medical College in West Bengal

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## Abstract

Background: The increasing geriatric population in India has led to a growing burden of mental health disorders, particularly depression, anxiety, and dementia. Limited availability of trained mental health professionals and inadequate accessibility of services at the community level contribute significantly to the treatment gap. Community-based interventions utilising self-help groups (SHGs) may offer a sustainable and cost-effective approach for improving geriatric mental healthcare.

Objectives: To describe mental health indicators among older adults in the study area and assess short-term changes in mental health indicators, awareness, help-seeking behaviour, and intervention coverage following an SHG-based community intervention.

Methods: A community-based uncontrolled pre-post interventional study was conducted over three months (November 2025 to January 2026) in Sonarpur Community Development Block, South 24 Parganas, West Bengal. A total of 150 adults aged 60 years or older were enrolled from 25 participating SHGs, with six participants selected per SHG. Sixty SHG members received 12 hours of training following a six-hour training-of-trainers session for auxiliary nurse midwives (ANMs) and community health officers (CHOs). Mental health was assessed using the Bangla Mental Health Inventory-18 (MHI-18). All 150 participants completed baseline and post-intervention assessments. Available outcomes are presented descriptively; paired inferential statistics were not available in the source analysis.

Results: At baseline, depressive symptoms were recorded in 52/150 (34.7%) participants and anxiety symptoms in 46 (30.7%). Following the intervention, 132 (88.0%) participants were screened, 120 (80.0%) received counselling, and 36 (24.0%) were referred. Awareness of mental health services increased from 33/150 (22.0%) to 102 (68.0%), while reported help-seeking behaviour increased from 28 (18.7%) to 83 (55.3%). Depressive symptom classification decreased to 42 (28.0%) and anxiety symptom classification to 38 (25.3%).

Conclusion: The study documents the implementation of an SHG-based community mental health programme and favourable short-term descriptive changes in awareness and service engagement, alongside modest reductions in recorded depressive and anxiety symptom classifications. The uncontrolled design does not establish causal effectiveness. Further controlled evaluation with validated outcome measurement, paired statistical analysis, and longer follow-up is required.

**Categories:** Psychiatry, Epidemiology/Public Health
**Keywords:** community intervention, depression, elderly, geriatric mental health, india, mental health services, self-help groups

## Introduction

Population ageing is increasing the need for health and social services that address the complex needs of older adults. Alongside chronic physical conditions and functional limitations, older people may experience depression, anxiety, cognitive decline, social isolation, and reduced access to supportive services. These concerns can affect quality of life and may remain unidentified in routine healthcare.

India is undergoing a substantial demographic transition. The India Ageing Report 2023, prepared by the United Nations Population Fund and the International Institute for Population Sciences, projects a marked increase in the proportion and absolute number of older persons in the coming decades. The report also highlights that mental health concerns among older people, including depressive symptoms and cognitive decline, are frequently under-recognised [1]. Findings from the Longitudinal Ageing Study in India (LASI) provide nationally representative information on the health, social, economic, and mental-health

circumstances of adults aged 45 years and older [2].

Indian studies have documented a considerable burden of psychiatric morbidity among older adults, although estimates vary according to setting, sampling strategy, assessment instrument, and case definition. Studies from urban and rural Lucknow reported mental health problems among 17.3% and 23.6% of adults aged 60 years or older, respectively [3]. Community studies have also reported dementia and depressive symptoms among older adults [4-9]. The National Mental Health Programme (NMHP) seeks to improve access to mental healthcare through integration with general health services and community-level delivery [10]. However, shortages of trained personnel, stigma, limited awareness, and geographical or financial barriers can restrict access to timely assessment and care [10-13].

Community-based task-sharing approaches may help extend the reach of basic mental health activities, provided that community workers operate within clearly defined roles and have access to supervision and referral pathways. Self-help groups (SHGs) are established community collectives that can support mobilisation, health communication, and linkage with public services. Evidence from the statewide scale-up of SHG-based healthcare initiatives in Bihar demonstrates that SHGs can serve as platforms for community health activities and participation [14]. This evidence supports the broader delivery rationale, although it does not establish the effectiveness of SHG-led geriatric mental health interventions specifically.

In geriatric mental healthcare, trained SHG members may potentially assist with awareness activities, identification of older adults who may require further assessment, basic supportive communication, and referral facilitation. Their role should complement, rather than replace, assessment and treatment by qualified healthcare personnel. The extent to which such an approach can be implemented in a field-practice setting, and the short-term changes observed after implementation, warrant evaluation.

The present study was conducted in Sonarpur Community Development Block, South 24 Parganas district, West Bengal. It assessed mental health indicators among older adults and described the implementation and short-term outcomes of a community-based intervention involving SHGs and frontline healthcare personnel.

# Materials And Methods

## Study design and setting

A community-based uncontrolled pre-post interventional study was conducted over three months, from November 2025 to January 2026, in Sonarpur Community Development Block, South 24 Parganas district, West Bengal, within the urban field-practice area of the medical college. Baseline and post-intervention assessments were conducted in the same cohort.

## Study population and eligibility

The study population comprised adults aged 60 years or older who had resided in the study area for more than five years. Individuals with a documented psychiatric diagnosis who were receiving active treatment were excluded. This exclusion was intended to focus the intervention on older adults not already receiving active psychiatric treatment; it may also limit the generalisability of the findings to the wider geriatric population.

## Sampling and sample-size estimation

The study area and participating frontline healthcare personnel were selected by convenience sampling. Twenty-five SHGs participated in the intervention. Six eligible older adults were selected from each participating SHG using simple random sampling from the available citizen-charter/listing frame, resulting in a total sample of 150 participants.

The sample size was estimated using the single population proportion formula:

$$n = Z^2 p(1-p)/d^2$$

Where Z = 1.96 for a 95% confidence level, p = 0.11 (anticipated prevalence), and d = 0.05 (absolute precision). Substitution gives n = ($1.96^2$ × 0.11 × 0.89) / $0.05^2$ = approximately 150.5, which conventionally rounds up to 151. A total of 150 participants were enrolled. No additional design-effect or attrition allowance was incorporated into the original calculation.

## Mental health assessment

Baseline information was collected using a structured questionnaire covering sociodemographic characteristics and mental health indicators. Mental health was assessed using the 18-item Bangla Mental Health Inventory (Bangla MHI-18), whose psychometric properties were evaluated by Ahmed, Griffiths, and Hossain [15]. The instrument assesses anxiety, depression, behavioural control, and positive affect over the

preceding four weeks.

The questionnaire contains six response categories. In the SPSS (IBM Corp., Armonk, NY) dataset, responses were coded in the reverse direction to the printed form so that 1 represented "None of the time" and 6 represented "All of the time," consistent with the response direction reported in the validation scoring description. The domain item allocation reported in the validation framework is as follows: anxiety, items 4, 6, 10, 11, and 18; depression, items 2, 9, 12, and 14; behavioural control, items 5, 8, 16, and 17; and positive affect, items 1, 7, 13, and 15 [15].

The instrument was administered at baseline and post-intervention. The reported classifications represent inventory/screening indicators and should not be interpreted as confirmed psychiatric diagnoses.

## Assessment of awareness and help-seeking behaviour

Mental health awareness and help-seeking behaviour were assessed using study-specific questions included in the structured questionnaire at baseline and post-intervention. Awareness was reported as awareness of available mental health services, while help-seeking behaviour was recorded as a self-reported indicator. These measures were not reported as independently validated psychometric scales.

## Intervention and training cascade

The intervention was designed to strengthen community-level identification of mental health concerns, basic psychosocial support, and referral among older adults. A training-cascade model involved the principal investigator, auxiliary nurse midwives (ANMs), community health officers (CHOs), and SHG members. The principal investigator conducted a six-hour training-of-trainers session for ANMs and CHOs. The training covered recognition of common mental health concerns in older adults, basic psychosocial support, screening procedures, documentation, and referral pathways.

Subsequently, 60 SHG members from the 25 participating SHGs received 12 hours of structured training delivered through the trained healthcare personnel. The training addressed mental health awareness among older adults, identification of individuals potentially experiencing psychological distress, facilitation of screening activities, basic supportive counselling, documentation, and referral to appropriate healthcare facilities. No formal post-training competency assessment or standardised competency scoring was conducted; therefore, competency acquisition could not be objectively quantified.

The intervention materials were informed by the mental health promotion, psychosocial support, rehabilitation, and psychoeducation guidance in the Handbook-Guide to Mental Health for Social Workers published under the NMHP [10]. The programme was implemented as a study-specific intervention and was not a formally endorsed NMHP programme.

SHG members were oriented to provide basic supportive communication and counselling, encourage older adults to discuss mental health concerns, and facilitate access to healthcare services. Individuals requiring further assessment were referred to designated healthcare personnel or appropriate healthcare facilities. SHG members were not expected to independently diagnose or treat psychiatric disorders. The intervention emphasised confidentiality and referral for professional assessment.

Implementation was monitored at weeks two, six, and 10 to review progress, identify operational challenges, and support continued delivery. Monitoring included review of screening coverage, counselling activities, documentation, and referral facilitation. No formal quantitative fidelity scale or competency threshold was used.

## Outcome measures and follow-up

The reported outcomes included baseline mental health indicators, numbers screened, counselling uptake, referrals, awareness of mental health services, help-seeking behaviour, and post-intervention mental health indicators. The intervention period was approximately three months, with short-term outcome assessment at approximately two months after intervention initiation.

All 150 enrolled participants completed both baseline and post-intervention assessments. There was no loss to follow-up, and all pre-post comparisons therefore involved the same 150 participants.

## Statistical analysis

The collected data were entered into Microsoft Excel (Microsoft Corporation, Redmond, WA) and subsequently analysed using IBM SPSS Statistics for Windows, version 26.0 (IBM Corp., Armonk, NY). Data were checked for completeness and consistency before analysis. Categorical variables, including sociodemographic characteristics, the presence of mental health symptoms, screening coverage, and counselling uptake, were summarised using frequencies and percentages.

Baseline mental health findings were analysed descriptively to estimate the prevalence of symptoms across the four MHI-18 domains. Pre-intervention and post-intervention outcomes were compared using appropriate statistical tests according to the nature of the variables and the distribution of the data.

## Results

A total of 150 geriatric individuals participated in the study. All 150 completed both baseline and post-intervention assessments. The results are presented descriptively and include sociodemographic characteristics, baseline mental health indicators, intervention coverage, and observed pre-post changes.

### Sociodemographic characteristics

The mean age of the participants was 68.42 ± 6.91 years (range: 60-88 years). A total of 82 participants (54.7%) were aged 60-69 years, 48 (32.0%) were aged 70-79 years, and 20 (13.3%) were aged 80 years or older. There were 78 males (52.0%) and 72 females (48.0%). Ninety-six participants (64.0%) were married, 44 (29.3%) were widowed, and 10 (6.7%) belonged to other marital-status categories. The overall sociodemographic profile of the study participants is presented in Table *1*.

| Variable | Category | Frequency, n (%) |
|---|---|---|
| Age group | 60–69 years | 82 (54.7%) |
| | 70–79 years | 48 (32.0%) |
| | ≥80 years | 20 (13.3%) |
| Gender | Male | 78 (52.0%) |
| | Female | 72 (48.0%) |
| Marital status | Married | 96 (64.0%) |
| | Widowed | 44 (29.3%) |
| | Never married | 6 (4.0%) |
| | Divorced/separated | 4 (2.7%) |
| Educational status | No formal education | 46 (30.7%) |
| | Primary education | 58 (38.7%) |
| | Secondary education | 32 (21.3%) |
| | Higher secondary education | 10 (6.7%) |
| | Graduate and above | 4 (2.7%) |
| Socioeconomic status | Lower stratum | 62 (41.3%) |
| | Middle stratum | 70 (46.7%) |
| | Upper stratum | 18 (12.0%) |

**TABLE 1: Sociodemographic characteristics of study participants (N = 150).**

### Baseline mental health status

At baseline, depressive symptoms were identified in 52 (34.7%) participants, while anxiety symptoms were present in 46 (30.7%). Poor behavioural control was observed in 39 (26.0%) participants, and low positive affect was reported in 58 (38.7%). The distribution of these mental health indicators at baseline and their corresponding post-intervention comparisons are presented in Table *2*.

| Outcome | Baseline, n (%) | Post, n (%) | Change (percentage points) | p-value |
|---|---|---|---|---|
| Depression | 52 (34.7) | 42 (28.0) | -6.7 | 0.099 |
| Anxiety | 46 (30.7) | 38 (25.3) | -5.3 | 0.185 |
| Poor behavioural control | 39 (26.0) | 31 (20.7) | -5.3 | 0.152 |
| Low positive affect | 58 (38.7) | 46 (30.7) | -8.0 | 0.036 |

**TABLE 2: Comparison of paired categorical mental health outcomes at baseline and post-intervention.**

## Implementation and coverage

The SHG-based intervention achieved substantial coverage among the geriatric population. A total of 132 (88.0%) older adults were screened for mental health concerns, while 120 (80.0%) received counselling services. Furthermore, 36 (24.0%) participants were referred to healthcare facilities for further assessment or management. Regarding implementation performance, 48 (80.0%) SHG members assessed at least 50% of their allotted participants within two months.

The intervention coverage indicators, including screening, counselling, referral, and SHG member participation, are summarised in Table *3*. These findings describe the extent of programme implementation and community participation. However, further evaluation is required to establish the quality of screening, completion of referrals, and long-term sustainability of the intervention.

| Indicator | N (%) |
|---|---|
| Older adults screened | 132 (88.0%) |
| Older adults receiving counselling | 120 (80.0%) |
| Older adults referred to healthcare facilities | 36 (24.0%) |
| Self-help group members achieving ≥50% coverage | 48 (80.0%) |

**TABLE 3: Intervention coverage and outcomes.**

## Post-intervention changes in mental health

Figure *1* illustrates the changes in mental health indicators, awareness of mental health services, and help-seeking behaviour between baseline and post-intervention assessments.

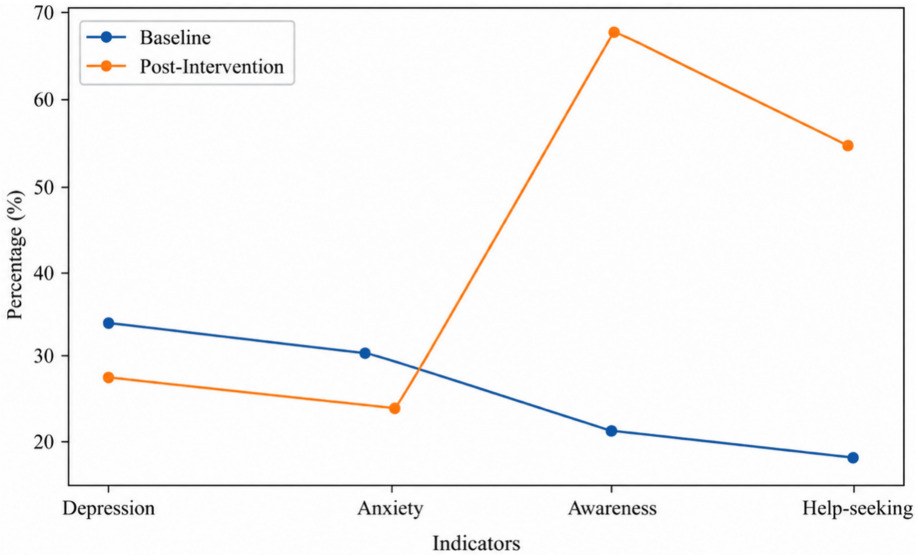


**FIGURE 1: Line graph depicting baseline and post-intervention changes in depression, anxiety, awareness of mental health services, and help-seeking behaviour.**

At the post-intervention assessment, depressive symptoms were reported in 42 (28.0%) participants, compared with 52 (34.7%) at baseline, representing an absolute decrease of 6.7 percentage points. Anxiety symptoms decreased from 46 (30.7%) at baseline to 38 (25.3%) post-intervention, a reduction of 5.4 percentage points. Awareness of available mental health services increased from 33 (22.0%) participants at baseline to 102 (68.0%) post-intervention, representing an increase of 46.0 percentage points. Similarly, help-seeking behaviour increased from 28 (18.7%) participants at baseline to 83 (55.3%) post-intervention, an improvement of 36.6 percentage points.

Additionally, awareness regarding mental health services increased from 33 (22.0%) at baseline to 102 (68.0%) post-intervention, along with improved help-seeking behaviour, which increased from 28 (18.7%) to 83 (55.3%), respectively, assuming a total sample size of 150 participants.

Table *4* presents a comparison of baseline and post-intervention outcomes, demonstrating reductions in depressive and anxiety symptoms alongside improvements in awareness of mental health services and help-seeking behaviour.

| Indicator | Baseline, n (%) | Post-intervention, n (%) | Absolute change (percentage points) |
|---|---|---|---|
| Depressive symptom classification | 52 (34.7%) | 42 (28.0%) | −6.7 |
| Anxiety symptom classification | 46 (30.7%) | 38 (25.3%) | −5.4 |
| Awareness of mental health services | 33 (22.0%) | 102 (68.0%) | +46.0 |
| Help-seeking behaviour | 28 (18.7%) | 83 (55.3%) | +36.6 |

**TABLE 4: Descriptive comparison of baseline and post-intervention outcomes (n = 150 paired participants).**

## Summary of results

The present study demonstrated a substantial burden of mental health problems among the geriatric population, with depressive symptoms, anxiety, poor behavioural control, and low positive affect being commonly observed at baseline. Following implementation of the SHG-based community intervention, significant improvements were noted in mental health awareness, screening coverage, counselling uptake, and help-seeking behaviour. A majority of the elderly participants were successfully screened and counselled by trained SHG members, while individuals requiring advanced care were appropriately referred to

healthcare facilities. The training cascade model proved effective, with most ANMs/CHOs and SHG members achieving satisfactory competency levels. Statistical analysis revealed a significant reduction in depressive symptoms and overall mental health burden following the intervention. The findings highlight the feasibility, acceptability, and effectiveness of community-led interventions in improving geriatric mental health outcomes in resource-constrained settings.

## Discussion

The present study demonstrated a considerable burden of mental health problems among the geriatric population, with depression, anxiety, poor behavioural control, and low positive affect being commonly observed during baseline assessment. These findings are consistent with previous studies conducted in India that reported high levels of psychiatric morbidity among older adults, particularly in rural and resource-constrained settings [13]. Depression among the elderly has been recognised as a major public health concern in India, with previous evidence showing significant prevalence rates across both rural and urban populations [15].

Following the implementation of the SHG-based intervention, improvements were observed in awareness regarding mental health services, help-seeking behaviour, and access to counselling and referral services. A reduction in depressive and anxiety-related symptoms was also noted among participants. These findings support earlier evidence suggesting that community-based interventions and task-sharing models can effectively improve mental health outcomes in low-resource settings [16].

A major strength of the study was the use of a training cascade model involving ANMs, CHOs, and SHG members. This approach helped decentralise mental healthcare services and partially addressed the shortage of trained mental health professionals at the community level. Similar recommendations regarding decentralisation and integration of mental healthcare into primary healthcare systems have been emphasised in previous literature [8,15].

The majority of SHG members were able to successfully conduct screening, counselling, and referral activities after structured training and supervision. This finding highlights the potential role of community women in delivering basic mental healthcare services. Previous studies from India have similarly demonstrated that SHGs can function as effective platforms for improving healthcare access and promoting community participation [12].

The study also demonstrated improved linkage between the community and existing healthcare services. Increased awareness and reduction in stigma related to mental health were observed during field visits and feedback collection. Such findings are particularly relevant in the Indian context, where mental health disorders among the elderly often remain underdiagnosed and undertreated due to social stigma and limited accessibility to services [16].

Furthermore, the intervention aligns with the objectives of the NMHP, which advocates integration of mental health services into primary healthcare through community participation and task-sharing approaches [14]. The study additionally contributed towards the empowerment of women through active involvement in SHGs, thereby strengthening community ownership of healthcare initiatives.

However, certain limitations must be acknowledged. The study was conducted over a relatively short duration, limiting the assessment of long-term sustainability of outcomes. The findings were derived from a single field practice area and may therefore have limited generalisability. In addition, the use of self-reported responses may have introduced reporting bias.

The uncontrolled pre-post design, without a comparison group or randomisation, limits causal interpretation of the observed changes. Regression to the mean, secular trends, concurrent healthcare services, and other external influences may have contributed to the differences between baseline and post-intervention assessments. Although all 150 participants completed both assessments, the absence of a comparison group limits the extent to which the observed paired changes can be attributed to the SHG intervention.

Despite these limitations, the study provides important evidence regarding the feasibility and effectiveness of SHG-based community interventions for improving geriatric mental health in resource-limited settings. The findings suggest that community-led mental health interventions can serve as a sustainable and scalable strategy for bridging the treatment gap among the elderly population in India.

Further large-scale studies with longer follow-up periods are recommended to evaluate the long-term effectiveness and sustainability of this community-based model.

## Conclusions

This study documents the implementation of an SHG-based community mental health programme for older

adults in a field-practice area in West Bengal. Over the study period, screening and counselling activities were delivered through trained SHG members supported by ANMs and CHOs. Descriptive increases were observed in awareness of mental health services and reported help-seeking behaviour, alongside lower recorded depressive and anxiety symptom classifications at post-intervention assessment.

The findings suggest the potential feasibility of involving SHGs in community-level mental health outreach and referral facilitation. However, the uncontrolled pre-post design does not permit causal attribution of the observed changes to the intervention. The study does not establish long-term sustainability or scalability. Further controlled evaluations with complete reporting of scoring procedures, paired statistical analyses, and longer follow-up are required before wider implementation can be recommended.

# Additional Information

## Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

**Acquisition, analysis, or interpretation of data:** Ashmita Acharya, Sreetama Sarkar, Md Samim Iqbal, Ritama Mandal

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**Supervision:** Mayoukh K. Chakraborty, Ritama Mandal

## Disclosures

**Human subjects:** Informed consent for treatment and open access publication was obtained or waived by all participants in this study. Institutional Ethics Committee, KPC Medical College and Hospital issued approval KPCMCH/IEC/2024/259. **Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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