

**Feasibility of a youth friendly Mental Health Intervention to  
reduce common mental disorders and enhance resilience  
among at risk young women in urban slums**

**The MOGGU PROJECT  
(Mental Health of Girls Growing Up)**

Dr. Prabha S. Chandra  
Professor of Psychiatry  
NIMHANS  
Principal Investigator

Funded by

**Department of Health Research (DHR)**  
Ministry of Health and Family Welfare  
Government of India, New Delhi



**NATIONAL INSTITUTE OF MENTAL HEALTH AND NEURO  
SCIENCES, BANGALORE 560 029**

**2012-13**

# Executive Summary

The study entitled “**Feasibility of a youth friendly Mental Health Intervention to reduce common mental disorders and enhance resilience among at risk young women in an urban slum**” aimed at

(1) Developing and testing tools for assessing risk and mental health literacy which included tools to

Assess psychosocial risk among young women;

Assess knowledge about mental health problems in young women and their attitudes to help seeking;

Adaptation and validation of a tool to assess resilience

(2) Developing a module for mental health intervention and a mental health promotion film

(3) Assessing feasibility of using postcards or mobile messages as methods of promoting positive mental health and using Mood Lifting Messages

The project was called the **MOGGU Project**- Mental health Of Girls Growing Up ( *Moggu* means Flower Bud in *Kannada*).

## **1. To achieve the above aims, the first step was to understand mental health concerns of young women living in urban slums using qualitative methods**

Entry into the community was through Community level workers in Primary Health Care Centres and directly by the research team. Key informants in the community were identified and snowballing method was used to identify participants for the focus group discussions to understand the issues and concerns of young women. 23 girls in the age group of 16 to 19 years participated in the Focus Group Discussion (FGDs) conducted in three different urban slums.

Themes that emerged as important issues for the mental health of young girls included -

**1.1 Vulnerability Factors-** Difficulty in continuing and completing education, gender disparity and discrimination in the family, relationship concerns with the opposite gender, family being a source of stress, peer relationships and family violence.

**1.2 Self harm** and suicide being commonly viewed as a coping method for dealing with emotional distress and social problems among young women.

**1.3 Protective factors** - Family support, encouragement for education, religion, ability and opportunity to share feelings and concerns with others, self-confidence, having effective communication and conflict resolution skills.

Based on the FGDs among the two groups (young women and their mothers) it emerged that young women in urban slums were quite vulnerable to mental disorders because of multiple psychosocial risk factors. However, awareness and help seeking for mental health problems was found to be very low.

Both the groups felt that low cost, sustainable mental health interventions were needed. Using technology such as mobile phones and using methods of self help were the preferred methods reported by the young women.

## **2. Assessment of Mental Health Literacy among young women using Mixed Methods**

Help seeking is known to be influenced by Mental Health Literacy, a key concept that is important for recognition of mental disorders and planning intervention. 337 young women between 16-19 years belonging to urban slum settings from 5 colleges selected through convenience sampling formed the sample of the study. Three vignettes, one each for anxiety, depression and self harm were given and open-ended questions were asked related to: a) recognition of the disorder b) help seeking and c) knowledge of treatments available.

Results indicated extremely low levels of labeling of the disorder - 4.5% for anxiety and 8% for depression. Though suicidality was identified correctly by the majority of participants (63%), they were not able to assess the severity of the situation in the vignette as one needing urgent intervention.

Majority of the participants reported they would seek help for a mental health problem from a friend or parent. Mental health professionals as possible sources of help were mentioned by a small proportion (9.7% of the participants for anxiety, 22% for depression and 2.6% for self harm). Stigma and lack of awareness were the frequently cited reasons for not seeking professional help.

There appears to be low mental health literacy regarding common mental disorders and suicidality among young women from low income areas. This highlights the need for interventions targeting mental health literacy to encourage early and appropriate help seeking for mental health problems in this vulnerable population.

### **3. Developing a Tool to Assess Gender related Psychosocial Vulnerability among young women - CAGED (Checklist to Assess Gender Disadvantage)**

Based on the qualitative data, gender disadvantage emerged as one of the main risks for poor mental health among young women living in low income situations. To assess these risk factors, a checklist for assessing gender disadvantage as a vulnerability factor for psychological distress, was developed. The association of these gender disadvantage factors with psychological distress was also studied.

**Development of the Checklist** involved six steps: Step 1- Focus group discussions with young women and their mothers. Step 2- Qualitative Data Analysis of Focus Group Discussion transcripts and refinement of themes. Step 3- Content validation & Expert rating. Step 4- Pre test. Step 5 -Field Trial of the Checklist and Step 6 – Internal Consistency and Test Re test Reliability

The final version of the CAGED checklist had 15 items covering four major domains

- i.** Gender Discrimination
- ii.** Emotional distress related to Gender Disadvantage
- iii.** Violence and Sexual Harassment and
- iv.** Barriers to Personal Growth related to Gender

Cronbach's alpha of the checklist was 0.74 indicating adequate internal consistency. Test re test reliability was conducted on a sample of 60 young women and was 0.84. The three items endorsed the most by the young women we studied were – emotional distress related to gender disadvantage- 322/452 (62 %), financial difficulties being an hindrance to opportunities - 297/452 (58%) and being criticized and ridiculed for gender related issues 267/452 (52%). Sixty four percent (298/452) endorsed at least five gender disadvantage items. The least endorsed item in the checklist was an experience of sexual abuse 36 (7%).

#### **4. The relationship between Psychological Distress and Gender Disadvantage**

Psychological Distress was assessed using the K 10 (Kessler, 2003). 107/452 (23.6%) were found to report moderate to severe distress. Severe distress was seen in 44 women (9.7%). 243/452 (53.7%) women had no psychological distress and 102/452 (22.5%) had mild distress. None of these young women including those with severe distress reported accessing mental health services at any point.

There was a significant relationship between severity of psychological distress based on K- 10 scores and all gender disadvantage domains of CAGED ( $p < 0.001$ ). Higher scores on each of the four CAGED domains and total CAGED scores were associated with higher levels of psychological distress. High levels of emotional distress 322 (62%) and suicidality as well as self harm behaviours (30-32%) were linked to gender disadvantage.

Each of the four domains of GD (Gender Discrimination, Emotional distress related to Gender Disadvantage, Violence and Sexual Harassment and Barriers to Personal Growth related to Gender) assess different aspects of gender disadvantage including its emotional impact.

The significant relationship between all four domains of GD and psychological distress emphasizes the important role of gender inequality in emotional distress among young women. This finding emphasizes the need to systematically assess gender disadvantage as an important social determinant for mental health in studies conducted in young women from LAMI countries and in cultures where gender disparities are marked.

## **5. Translation and Factor analysis of CD RISC- a measure to assess Resilience**

The Connor Davidson Resilience Scale 25 item (CD RISC) (Connor & Davidson, 2003) was translated into Kannada using standard translation procedures. A pilot study was conducted among 10 young girls to check for language and readability and necessary changes were included. The final translated version of CDRISC was administered on 720 young girls in the age group of 16-18 years.

Exploratory factor analysis using the principal components method was computed on data obtained from 606 participants. Orthogonal varimax rotation yielded four stable factors: Factor I=Hardiness (7 items), Factor II=Optimism (5 items), Factor III=Resourcefulness (5 items), and Factor IV=Purpose (3 items). Of the total number of 25 items on the CD-RISC scale, five items namely item 1, 2, 5, 14 and 15 did not load on any of the four factors as they were below the cut off criteria of 0.4. Item 6 loaded on factors 3 and 4 but was retained under factor 4 because of relatively higher factor loading. The factor structure obtained is consistent with other factor analytic studies on CD-RISC and adequately explains the latent construct of resilience.

The mean score of CDRISC in this group was 61.58 (S.D 13.51). Women with moderate to severe psychological distress were found to have lower resilience scores compared to those with no distress (Mild distress [62.59(13.77)] Moderate distress [59.14(13.78)] & Severe distress [57.21(14.95)]).

Compared to resilience scores using CD RISC among young people globally, the resilience scores in our sample of women was comparable to youth from Iran and China. However, it was much lower than the scores derived from western studies. Women with psychological distress had particularly low scores

## **6. Developing Low Cost Interventions for enhancing mental health among young women and Assessing Feasibility and Acceptability**

Three interventions were developed – Mobile messages on positive mental health; a Self Help book based on stories about young women; and a film on mental health of young women facing gender disadvantage

## **6.1 Using `SMS`- Mobile Phone Messages for Mental Health**

Forty girls in the age range of 16-18 years from low income families who were attending colleges located in an urban slum were informed that they would receive a message every alternate day for a month. They could call back, message or give a `missed call` to the same number whenever they felt sad, angry or depressed or when they felt like talking to a counsellor. Two sets of messages were sent on alternate days. One message was a quote on Positive Well-being and the second, a Helpline message. All the received responses in the form of return texts, missed calls and return phone calls were recorded. After a month, feedback about the feasibility acceptability of the mobile messages was collected.

During the one month period 25 out of 40 (62.5%) of the participants called back, asking for mental health services, to confirm who was sending the message and to say they felt good about the messages. 23 out of 40 (57.5%) messaged back regarding their feelings. 23 out of 38 (62 %) of the participants reported that they liked to receive the positive mental health messages and 6 out of 38 (16 %) reported they felt supported.

Most women preferred the helpline messages to the positive mental health messages and found them more useful. Male family members of nearly half of the participants called back to check the authenticity of the source. Most women did not face any problems from their families because of the messages.

This pilot qualitative study indicates that mobile text messages are a feasible and culturally acceptable method for mental health promotion and prevention, among young women from low income urban areas.

**6.2 Using a Self Help Story Book-** A book "*Let the flower buds blossom*" was developed with stories which are set in an urban slum and aimed at improving mental health literacy among young women who often live in very difficult circumstances and challenging situations.

The stories were written hand in hand with the young women who actively participated in the several focus group discussions, along with their mothers, their teachers and key informants from NGOs working in these urban slums. The young women we interviewed were the ones who asked us to write a book. They wanted more information on mental health and also wanted to use self-help techniques for managing their own emotional and mental health issues and those of

their peers. The book was also translated into simple local colloquial local language i.e. Kannada.

The stories in this book encourage self help and peer support. Each story handles a particular theme and tries to weave in some solutions. They are in the form of personal narratives, letters and diary notes and the language has been kept simple to suit low literacy situations.

This book has been divided into 3 sections

- i. My inner world- stories focused on the self/inner development of the girls.
- ii. The world around me- stories focused on dealing with the issues that girls face in the society.
- iii. My relationship with the world- stories focused handling issues in the society.
- iv. At the end of the each story there some simple self help interventions are also given in the box.

While the book mainly serves as a means of self help, it can also be used by teachers or any other facilitator to start a discussion on mental health issues with this group. A note for facilitators and parents was also added at the end of the book.

Feedback regarding the book was obtained from 30 young women, 5 College Teachers and from two NGOs. The young women were able to identify with the characters in the book and their problems. The book was found to be simple and useful. However, basic literacy (at least 8<sup>th</sup> standard) was needed to understand the stories and themes.

**6.3 A film on Mental Health of Young Women** – Based on the findings of the FGDs, and the data from the gender disadvantage and mental health literacy studies, a media college was contacted to develop a short film. The aim of the film was to depict the various factors influencing the mental health of young women in disadvantaged situations and through the depiction enabling a discussion on the topic.

The film was produced by a young woman who then screened it to NGOs, group young women from the urban slums and mental health professionals.

With their feedback and suggestions the film was finalized to suit the adaptability to the target populations.

## **Conclusions:**

1. Mental health concerns among young women living in urban slums are predominantly related to gender disadvantage and an inability to handle difficult emotions such as anger and distress.
2. Mental health literacy is poor and help seeking for mental problems from professionals is very low. This is mainly due to poor awareness and stigma. Help is mainly sought from peers and sometimes from teachers and parents.
3. Gender Disadvantage acts a major risk factor for Psychological Distress and rates of distress and self harm are high in this population.
4. The study was able to develop a methodology to assess mental health literacy and a reliable tool (the CAGED) to assess gender disadvantage for young women living in low income situations.
5. The Connor Davidson Resilience - (2003) was translated into Kannada and factor analysis done.
6. Low cost interventions (using mobile phones for messages and as a helpline; self help story book; film on mental health of young women) that were developed using a participatory method with the community (young women from low income situations) were acceptable and feasible.
7. Future research needs to address the needs of this vulnerable group of young women and
  - a. assess the usefulness and validation of the measures and tools (CAGED and Mental Health Literacy) developed in this study among disadvantaged young women in different parts of India
  - b. study the effectiveness of the interventions developed as part of the study in enhancing mental health literacy, improving mental health and help seeking
  - c. Study the role of resilience in moderating the effects of gender disadvantage on psychological distress in young women living in disadvantaged situations.

## Publications and Presentations

### Journal Articles

1. Chandra PS, Gayatri S, Desai G, Rao G. '*Friends are our best source of psychological help*'- **Mental health literacy among young women in an urban slum setting in India**'. Submitted to Indian Journal of Medical Research (submitted on Feb, 2014- status – under review).
2. Chandra PS, Sharma M, Satyanarayana V, Thennarasu. **Relationship between Gender Disadvantage and Psychological Distress using a Checklist to assess Gender Disadvantage (CAGED)**. Submitted to Social Psychiatry and Psychiatric Epidemiology.
3. Chandra PS, Sowmya HR, Mehrotra S, Duggal M. '**SMS**' **For Mental Health – Feasibility and Acceptability of using text messages for mental health promotion among young women from urban low income settings in India**. Submitted to Asian Journal of Psychiatry.
4. Satyanarayana V , Chandra PS, Thennarasu. **Pathways to psychological distress among young women from urban slums- the role of resilience**. Manuscript under preparation.

### Books:

#### *English*

Chandra P and Satyanarayana V. Let the Flower Buds Blossom. NIMHANS, 2013: ISBN:81-86439-00-90.

#### *Kannada*

Chandra P and Satyanarayana V. Moggina Mannasu Aralalli . NIMHANS,2013: ISBN:81-86440-00-90.

## **Future research planned in this area**

The current study focused on assessing the feasibility and acceptability of certain low cost interventions to improve mental health literacy and mental health among young women from urban slums and living in disadvantaged situations. The study also yielded tools to assess gender disadvantage and mental health literacy and also adapted a Resilience scale to the Indian situation and established its psychometrics.

### **The three main areas of future research would be -**

- a. assess the usefulness and validation of the measures and tools (CAGED and Mental Health Literacy) developed in this study among disadvantaged young women in different parts of India
- b. study the effectiveness of the interventions developed as part of the study in enhancing mental health literacy, improving mental health and help seeking
- c. Study the role of resilience in moderating the effects of gender disadvantage on psychological distress in young women living in disadvantaged situations.