#### RESEARCH

# Attitude and response of a rural population regarding person with mental illness

Poreddi Vijayalakshmi, Ramachandra<sup>1</sup>, Nagarajaiah<sup>2</sup>, Konduru Reddemma<sup>3</sup>, Suresh Bada Math<sup>4</sup>

RN, RM, BSN, MSN, Clinical Instructor, College of Nursing, <sup>1</sup>RN, RM, BSN, MSN, PhD, Associate Professor, <sup>2</sup>RN, RM, BSN, MSN, PhD, Additional professor, <sup>3</sup>RN, RM, BSN, MSN, PhD, Sr Professor & HoD, Department of Nursing, <sup>4</sup>MD, DNB, PGDMLE, Associate Professor, Department of Psychiatry, National Institute of Mental Health and Neuro Sciences, Deemed University, Bangalore, Karnataka, India

#### **Abstract**

**Background**: Research on attitudes towards the mentally ill is necessary to ensure quality of life for persons with mental illness in the community. Little is known about the knowledge and attitudes of rural community towards mental illness in India.

**Aim**: To assess the attitudes of rural population towards persons with mental illness.

**Materials and methods**: This was a cross sectional descriptive study carried out in a rural community. A consecutive (n=102) sample was recruited by house-to-house survey. Data was collected using Community Attitudes toward Mentally III scale. Data was analysed and interpreted by descriptive and inferential statistics.

**Results**: Our findings revealed that participants held more stigmatising attitudes towards person with mental illness. It also revealed that community was more authoritarian (32.3  $\pm$ 3.18) and socially restrictive views (31.9  $\pm$ 3.25). However, they also held relatively more benevolent (29.1 $\pm$ 3.51) and tolerant attitudes towards community (31.8  $\pm$ 2.69) based mental health ideology.

**Conclusion**: The findings of the present study revealed that negative attitudes towards persons with mental illness are widespread and may impair their social reintegration into the community. Hence, there is an urgent need to develop strategies to enlighten the public regarding nature of mental illness to foster acceptance of people with mental illness by the rural community.

Vijayalakshmi P, Ramachandra, Nagarajaiah, Reddemma K, Math SB. Attitude and response of a rural population regarding person with mental illness. Dysphrenia. 2013;4(1):42-8.

Keywords: Knowledge. Authoritarianism. Mental health services.

**Correspondence**: pvijayalakshmireddy@gmail.com, vijayalakshmiporeddy@yahoo.co.in Received on 25 July 2012. Accepted on 1 September 2012

Introduction

Attitudes developed early in childhood, later on in life, society especially through the media, continues to modify them.[1] Attitudes towards patients with mental illness influence the treatment they receive and decisions of policy makers.[2] Unfortunately, persistent negative attitude and social rejection of people with mental illness has prevailed throughout history in every social and religious culture.[3] The prevalence of mental disorders in India is high, as in other parts of the world. At least 58 per 1,000 people have a mental illness and about 10 million suffer from severe mental illness.[4-6] Epidemiological surveys reported that 75% of psychiatric disorders occur in rural India. About 80 to 90 per cent go undiagnosed and untreated.[7,8]. However, the focus of psychiatric care today is on de-institutionalisation, which depends on a number of key conditions such as availability of community mental health services, stigma, tolerance and non-discrimination.[9] Community attitudes influence the help seeking behaviour of mental health sufferers and lack of knowledge in diagnosis and management of mental illness may prevent people with mental disorders from seeking professional help.[10] Further, lack of knowledge in the community can lead to negative attitudes towards people suffering from mental illness.[11] It is further expected that communities are the essential components in giving primary care for people suffering from mental illness,[12] as well members of the community require knowledge and skills to provide support to these people.[13] Nonetheless, studies have shown that poor knowledge about mental illness and negative attitudes towards people with mental illness are widespread in the general public.[14] Inadequate knowledge thus hinders community members to use mental health services in both developing and developed countries.[15] The improvement of community tolerance of people with mental illness is important for their reintegration.[16] Since negative beliefs often lead to

discrimination, there is little wonder that studies have also shown that people with mental health problems living in the community experience rampant harassment.[17,18] Further negative attitudes affect the lives and recovery of people with mental illness,[19] reduce their status and disempower them.[20] Thus, research on attitudes towards the mentally ill is necessary to ensure quality of life for persons with mental illness in the community. Little is known about the knowledge and attitudes of rural community towards mental illness in India. It was therefore expected that this study would lead to policy makers to formulate guidelines that would assist in improving the knowledge and attitudes regarding mental illness of the rural community, which would in turn enhance the health seeking behaviour of this community. Hence, this study was aimed at assessing the knowledge and attitudes of the rural community towards persons with mental illness.

#### Materials and methods

This descriptive study was cross sectional in nature. The study population included adults residing at Hulkasavanahalli, about 17 kilometres (km) from Bangalore city, Karnataka. This typical rural community has around 600 inhabitants. A consecutive sample was recruited from house-to-house survey. All members of each household who were 18 and above received an explanation regarding the purpose of the research and were asked whether they wished to participate. In total, 115 persons were invited to take part. Thirteen of those approached declined to participate in the study due to lack of interest and time. The final population sample consisted of 102 persons (28 men, 74 women). Majority are Hindus preoccupied with farming and petty trading. The village has one primary health centre in five km distance and several traditional healers in nearby villages.

Data collection instruments: This questionnaire consisted of two sections with close-ended questions. Section A collected the sociodemographic information. Section B assessed the attitudes of community members towards mental illness using Community Attitudes toward Mentally III scale (CAMI).[21] This scale includes 40 items to be rated on a five-point Likert scale from one (strongly agree) to five (strongly disagree) and is organised into four a priori subscales of ten items each: authoritarianism (AU), benevolence (BE), social restrictiveness (SR) and community mental health ideology (CMHI). Authoritarianism refers to a view of the mentally ill person as someone who is inferior and requires supervision and coercion. Benevolence corresponds to a humanistic and sympathetic view of mentally ill persons. Social restrictiveness covers the belief that mentally ill patients are a threat to society and should be avoided. Community mental health ideology concerns the acceptance of mental health services and the

integration of mentally ill patients in the community. Taylor and Dear[21] report satisfactory (AU,  $\alpha = 0.68$ ) to good values (BE,  $\alpha = 0.76$ , SR,  $\alpha = 0.80$ , CMHI,  $\alpha = 0.88$ ) for the internal consistency of the subscales.

The interviews were carried out by one of the authors (PV) with the help of five assistants trained for that purpose. The participants were interviewed at their homes after taking a written consent in local language.

**Statistical analysis**: Responses of the negatively worded items were reversed before data analysis. The data were analysed using the Statistical Package for the Social Sciences (SPSS) version 16 and results were presented in narratives and tables. Descriptive (frequency and percentage, mean, standard deviation [SD]) statistics was used to interpret the data. The results were considered significant at p < 0.05. Mean scores were computed for all subscales.

## **Results**

**Sample characteristics** (table 1): Among the 102 respondents, 72.5% (n=74) were female. Age ranged from 19 to 67 years old, with a mean of 39 (SD=13.97). A vast majority (n=98, 96.1%) of the participants were Hindus and 29.4% (n=30) were illiterates, followed by 28.4% (n=29) who had primary education. On the other hand, only 5.9% of the participants had higher education i.e. intermediate (10+2) and above. More number (n=83, 81.4%) of the participants was married and 60.8% (n=62) were earning less than Rs 3000/- per month. Nearly half (49%) of the respondents were based on agriculture and 81.4% of them assented that they didn't have any contact with mentally ill.

Table 2 shows respondents' attitudes to mental illness statements for the Community Attitudes toward Mentally III (CAMI) scale. On the causes and nature of mental illness, a majority of participants (n=61, 59.8%) believed that mental illness was caused by lack of discipline and will power. More than three fourth of the participants opined that adults with mental illness needed same kind of control and discipline as a young children. Almost all the participants (n=101, 99%) felt that persons with signs of mental disturbance to be hospitalised. More number of the participants agreed to the statement "the best way to handle adults with mental illness is to keep them behind locked doors." Although virtually anyone may become ill (n=68, 66.6%), 63.7% (n=65) of the participants believed that it was easy to tell persons with mental illness from 'normal' people. The society ought to adopt a more tolerant attitude (n=60, 58.8%) and although a majority (n=51, 50%) judged that the mentally ill were a burden on society and they were 'too long been the subject of ridicule' (n=49, 48%). The responsibility to provide the best possible care for the mentally ill was widely acknowledged (n= 77, 75.5%) and spending tax money for

Table 1. Characteristics of the respondents

Group	Frequency n=102	Percentage
< 25	17	16.7
26 - 35	36	35.3
36 - 45	19	18.6
46 - 55	10	9.8
> 55	20	19.6
Male	28	27.5
Female	74	72.5
Hindu	98	96.1
Muslim	3	2.9
Christian	1	1
Illiterate	30	29.4
Primary education	29	28.4
	37	36.3
Intermediate and above	6	5.9
Unmarried	18	17.6
Married	83	81.4
Separated/widowed	1	1.0
<3000	62	60.8
3001-6000	38	37.2
6001-9000	2	2.0
>9000	-	-
Government	2	2.0
Private job	12	11.8
Agriculture	50	49.0
Labourer	38	37.2
Vac	10	18.6
No	83	81.4
	< 25 26 - 35 36 - 45 46 - 55 > 55  Male Female  Hindu Muslim Christian  Illiterate Primary education Secondary education Intermediate and above Unmarried Married Separated/widowed <3000 3001-6000 6001-9000 >9000  Government Private job Agriculture Labourer	N=102   17   26 - 35   36   36 - 45   19   46 - 55   10   55   20   Male   28   Female   74   Hindu   98   Muslim   3   Christian   1   Illiterate   Primary education   37   Intermediate and above   Unmarried   18   Married   83   Separated/widowed   1   <3000   301-6000   38   6001-9000   2   >9000   C   Government   2   Private job   Agriculture   50   Labourer   38   Yes   19   Private job   12   Agriculture   50   Labourer   38   Yes   19   Private job   19

that purpose was endorsed by 76.5% (n=78) of the respondents. Regarding the personal distance to persons with mental illness, majority (n=45, 44.1%) expressed to the statement that it was best to avoid persons with mental illness. This negative attitude extended to potential marriage with the majority of the participants 42.1% (n=43) agreeing that it would be foolish for a woman to marry a man who had suffered from mental illness (only 26.5% rejected this view). Although 59.8% (n=61) assented to the statement that no one had the right to exclude the mentally ill from their neighbourhood, 42.1% (n=43) believed that the mentally ill should be isolated from the community and 48.1% (n=49) would not want to live next door to someone who had been mentally ill. While 56.8% (n=58) of the participants claimed that people with mental illness were far less of a danger than most people suppose, more number of the participants concurred that people with mental illness should be excluded from taking public office (n=50, 49%) and not be given any responsibility (n=44, 43.1%). Even though, 77.4% (n=79) thought that the risks of mental patients living within residential neighborhoods were too great, locating mental health services in residential areas was not regarded as dangerous by 65.7% (n=67) of the respondents. In general, the participants felt that mentally ill persons should not be denied their individual rights (n=51, 50%) and most women who were once patients in a mental hospital could be trusted as baby sitters (n=53, 52%).

Table 3 shows the mean scores for all the subscales. The cutoff score was 25  $\pm$ , to all the subscales. The higher the mean score indicate higher disagreement to the authoritarian  $(32.3\pm3.18,$ mean±SD) and social restrictiveness  $(31.9\pm3.25,$ mean±SD) scale items. On contrary participants have positive attitudes as they rated higher in benevolence  $(29.1\pm3.51,$ mean±SD) and community mental health ideology (31.8)mean±SD)  $\pm 2.69$ . subscales.

Gender differences for the subscales were investigated with t tests, revealing no difference for the subscales.

Dividing the participants in two groups, basic (n=59) and secondary education (n=43), on the basis of the education required for their occupation, no differences were found. Similarly, participants were divided into two groups based on their income >3000 (n=62) and <3000 (n=40), small to medium differences were found indicating that economic status intended to influence the attitudes towards persons with mental illness. Participants monthly income lesser than Rs 3000/- were less benevolent (t=2.77, p<0.007) than persons with high income (above Rs 3000/-).

## Discussion

The present study like other studies, showed poor knowledge about mental illness, which may contribute to the high level of stigmatisation observed in the rural community. Very few studies were conducted in India to examine the rural population attitudes towards persons with mental illness. Published literature indicates a more benign attitude among rural populations towards persons with severe mental illness.[22-24] A few studies, however, reported variable findings.[25,26] Furthermore, in a recent study, it was found that there was growing awareness about mental illness in general population and the people were being more receptive of the mentally ill people. However, this study was conducted among general population and merely 31% of the sample came from rural.[27]

Table 2. Respondents' attitudes to mental illness statements for the Community Attitudes toward Mentally Ill (CAMI) scale

Statement	SA/A n (%)	N n (%)	D/SD n (%)	Mean	SD
Authoritarianism	1 XI			32.3	3.18
One of the main causes of mental illness is a lack of self-	61 (59.8)	27	14	3.76	1.12
discipline and will power.	01 (39.6)	(26.5)	(13.7)	3.70	1.12
There is something about adults with mental illness that	65 (63.7)	26	11	3.76	.967
makes it easy to tell them from normal people.		(25.5)	(10.8)	3.00	********
Adults with mental illness need the same kind of control and discipline as a young child.	77 (75.4)	18 (17.6)	7 (6.9)	3.86	.783
As soon as a person shows signs of mental disturbance, he should be hospitalised.	101 (99)	1 (1)	2	4.33	.494
The best way to handle adults with mental illness is to keep them behind locked doors.	48 (47.1)	11 (10.8)	43 (42.2)	3.11	1.40
Mental illness is an illness like any other.	40 (39.2)	24 (23.5)	38 (37.2)	2.87	1.24
Less emphasis should be placed on protecting the public	47 (46)	29	26	2.77	1.29
from adults with mental illness.  Adults with mental illness should not be treated as outcast	50 (49)	(28.4)	(25.5)	2.70	1.18
of society.  Mental hospitals are an outdated means of treating adults	CS-252-81-2-60	(26.5)	(24.5)		50,000
with mental illness.	49 (48.1)	(37.3)	(14.7)	2.59	.937
Virtually anyone can become mentally ill.	68 (66.6)	26 (25.5)	8 (7.9)	2.03	1.00
Benevolence				29.1	3.51
More tax money should be spent on the care and treatment of adults with mental illness.	78 (76.5)	19 (18.6)	5 (4.9)	3.92	.804
Adults with mental illness have for too long been the subject of ridicule.	49 (48)	44 (43.1)	9 (8.8)	3.52	.83
We need to adopt a far more tolerant attitude toward adults with mental illness in our society.	60 (58.8)	29 (28.4)	13 (12.8)	3.55	.86
Our mental hospitals seem more like prisons than like places mental illness can be cared for.	54 (52.9)	26 (25.5)	22 (21.5)	3.36	1.24
We have the responsibility to provide the best possible care	77 (75.5)	16	9 (8.8)	3.90	.89:
for adults with mental illness.  Adults with mental illness are a burden on society.	51 (50)	(15.7) 26	25	2.67	1.08
Increased spending on mental health services is a waste of	35 (34.3)	(25.5) 41	(24.5)	2.90	1.20
tax dollars.  There are sufficient existing services for adults with mental	48 (47.1)	(40.2) 25	(25.5) 29	2.72	1.14
illness.  Adults with mental illness do not deserve our sympathy.		(24.5)	(28.4) 47		50000
It is best to avoid anyone who has mental problems.	35 (34.3)	(19.6) 29	(46.1) 28	3.09	1.25
it is oest to avoid anyone who has mental problems.	45 (44.1)	(28.4)	(27.4)	2.71	1.0
Social restrictiveness				31.9	3.2:
An adult with mental illness should be isolated from the rest of the community.	43 (42.1)	19 (18.6)	40 (39.2)	3.08	1.4
A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.	54 (52.9)	21 (20.6)	27 (26.5)	3.42	.829
I would not want to live next door to someone who has been mentally ill.	49 (48.1)	21 (20.6)	32 (31.4)	3.31	1.2
Anyone with a history of mental illness should be excluded from taking public office.	50 (49)	26 (25.5)	26 (25.5)	3.31	1.14
Adults with mental illness should not be given any responsibility.	44 (43.1)	32 (31.4)	26 (25.4)	3.25	1.0
Adults with mental illness are far less of a danger than most people suppose.	58 (56.8)	23 (22.5)	21 (20.6)	2.46	1.04
No one has the right to exclude adults with mental illness from their neighbourhood.	61 (59.8)	33 (32.4)	8 (7.8)	2.23	.913
Adults with mental illness should be encouraged to assume the responsibilities of normal life.	40 (39.3)	36 (35.3)	26 (25.5)	2.80	1.0
Adults with mental illness should not be denied their individual rights.	51 (50)	12 (11.8)	39 (38.3)	2.78	1.30
		(11.0)	(30.3)		

SA/A=Strongly agree/Agree, N=Neutral, D/SD==Disagree/Strongly disagree, SD=Standard deviation

Statement	SA/A n (%)	N n (%)	D/SD n (%)	Mean	SD
Community mental health ideology				31.8	2.69
The best therapy for many adults with mental illness is to be part of a normal community.	48 (47)	38 (37.3)	16 (15.7)	3.37	.889
As far as possible mental health services should be provided through community based facilities.	81 (79.4)	13 (12.7)	8 (7.8)	3.97	.96
Residents should accept the location of mental health facilities in their neighbour to serve the needs of the local community	59 (57.9)	35 (34.3)	8 (7.9)	3.75	.951
Locating mental health services in residential neighbourhoods does not endanger local residents.	46 (45.1)	31 (30.4)	25 (24.5)	3.35	1.09
Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services.	67 (65.7)	24 (23.5)	11 (10.8)	3.84	.972
Locating mental health facilities in a residential area downgrades the neighbourhood.	41 (40.2)	35 (34.3)	26 (25.5)	2.76	.935
Having adults with mental illness living within residential neighborhoods might be good therapy, but the risks to residents are too great.	79 (77.4)	16 (15.7)	7 (6.9)	2.06	.811
Local residents have good reason to resist the location of mental health services in their neighbourhood.	40 (39.2)	27 (26.5)	35 (34.3)	3.00	1.23
Mental health facilities should be kept out of residential neighbourhoods.	47 (46)	21 (20.6)	34 (33.3)	2.80	1.27
It is frightening to think of people with mental problems living in residential neighbourhoods.	63 (61.8)	23 (22.5)	16 (15.7)	2.43	1.06

SA/A=Strongly agree/Agree, N=Neutral, D/SD==Disagree/Strongly disagree, SD=Standard deviation

Majority of the participants in the present study were Hindus. This goes in parity with the distribution of population of India with respect to religion. Nearly 30% of the participants were illiterates and 28.4% had primary education. Majority of the participants' (60.8%) income was lesser than Rs 3000/- per month. The most probable explanation for these findings can be 75% of the Indian population live in rural areas and about 80% of this population is dependent on agriculture for its livelihood and also majority of them are daily wagers and landless labourers. Although, 80 to 90% of the people with mental illness go undiagnosed and untreated,[7,8] 81.4% of the participants stated that they had no contact with mental illness. This could be because of their inability to identify the persons with minor mental illness.

Negative views were prevailed in the present study, in line with findings in other studies, with respect to the nature and causes of mental illness.[28] Majority of the

participants believed that lack of self-discipline and will power caused mental illness as well as mentally ill needed same kind of control and discipline as young children. Unfortunately, almost all the participants felt that people with mental illness to be hospitalised and to be kept behind the locked doors while half of the participants agreed that adults with mental illness should not be treated as outcast of society. However, two third of the participants (66.6%) assented that virtually anyone could become mentally ill. On the whole, higher the mean score (32.3±3.18, mean±SD) in this subscale indicates the negative attitudes of the rural community. These findings concur with a study conducted in Ghana.[28]

Participants had more benign attitudes towards mentally ill as majority accepted to spend tax money for care and treatment of mentally ill and agreed with the statement 'we need to adopt more tolerant attitude towards people with mental illness.' Nonetheless, half (50%) of the

Table 3. Mean scores of the Community Attitudes toward Mentally Ill (CAMI) subscales

Subscales	Minimum	Maximum	Mean	SD*
Authoritarian -ve attitude	24.00	42.00	32.3	3.18
Benevolence +ve attitude	19.00	36.00	29.1	3.51
Social restrictiveness -ve attitude	22.00	39.00	31.9	3.25
Community mental health ideology +ve attitude	26.00	39.00	31.8	2.69

<sup>\*</sup>SD=Standard deviation

respondents felt that people with mental illness were burden to the society and better to avoid them. However, mean score of this subscale shown positive attitude towards mentally ill (29.1±3.18, mean±SD). Contrary, participants were more restrictive socially. For example, although majority of respondents accepted not to exclude adults with mental illness from their neighbourhood and not to deny their individual rights, they also claimed that adults with mental illness should be isolated from the rest of the community and foolish to marry people who had recovered from mental illness. These findings clearly indicate the lack of mental health knowledge in turn leads to forming negative attitudes towards mentally ill. Previous studies shown that lack of knowledge about mental illness was correlated with attitudes of the participants.[9,29,30] The participants (81%) responded positively to community based rehabilitation services. They felt that residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community (57.9%) and nothing to fear from people coming into their neighbourhood to obtain mental health services (65.7%) while agreeing that having adults with mental illness living within residential neighbourhoods might be good therapy, but the risks to residents are too great (77.4%) and also it was frightening to think of people with mental problems living in residential neighbourhoods (61.8%). However, mean score (31.8±2.69, mean±SD) indicates the responsibility of providing the best possible care was acknowledged by a large majority of the participants. These findings are very much similar to a study conducted in Ghana, as the researchers reported high proportions of assent to items expressing authoritarian and socially restrictive views, coexisting with agreement with more benevolent attitudes.[28]

If one compares the attitudes we observed in India with attitudes among the Ghana population[28] as well as German population,[31] the Indian participants held more authoritarian and socially restrictive views, as well as more benevolent towards persons with mental illness and were more supportive of the community mental health ideology. Gender and education were not related to the attitudes in the current study. These findings were contrary to the previous research[32-34] that shown small to moderate effects between sociodemographic variables and attitudes.

With regard to income we found that participants monthly income lesser than Rs 3000/- were less benevolent (t=2.77, p<0.007) than persons with high income (above Rs 3000/-). Contrary to these findings in a study authoritarian attitudes were expressed by the higher economic group. However these findings were restricted to women.[35]

In interpreting these results, the limitations of the present study should be taken into account. The population data presented based on a small sample recruited in a rural community from India. The views expressed may not be generalised and the study is cross sectional in nature. However, the present study used that standardised questionnaire measures multidimensions. Thus, this multidimensional scale helps us identify both the negative and positive aspects of the attitudes where we can work on to intervene, reinforce and enhance a more positive living community to the persons with mental illness. In the present survey, majority of the respondents were female. This is because during the house-to-house survey only female respondents were available. Majority of the male had gone to earn livelihood.

In a nut shell, in line with other research rural Indians showed a more stigmatising attitudes towards persons with mental illness which is prevailed through more authoritarian and socially restrictive views by the participants. However, they also held relatively more benevolent and had tolerant attitudes towards community based rehabilitation services to the persons with mental illness. The findings of the present study reveal that negative attitudes towards persons with mental illness are widespread and may impair their social reintegration into the community. Hence, there is an urgent need to develop strategies to enlighten the public regarding nature of mental illness to foster acceptance of people with mental illness by the rural community. In addition, large-scale community studies have been lacking in India. Such national surveys are of obvious importance for any policy aimed at promoting better knowledge and tolerance of mental illness by the public.

### References

- 1. McGurine W. Attitudes and attitude change. In: Lindzey G, Aronson E, editors. Handbook of social psychology. 3rd ed. New York: Random House; 1985. p. 233-347.
- 2. Atkinson RL, Atkinson RC, Smith EE, Bem DJ, Nolen-Hoeksema S. Hilgard's introduction to psychology. 13th ed. Fort Worth, TX: Harcourt Brace; 2000.
- 3. Luty J, Okon U, Mohammed S, Arghya S. Effectiveness of changing minds campaign factsheets in reducing stigmatised attitudes towards mental illness. Psychiatr Bull. 2007;31:377-81.
- 4. Raguram R, Weiss MG, Keval H, Channabasavanna SM. Cultural dimensions of clinical depression in Bangalore, India. Anthropol Med. 2001;8:31.
- 5. Math SB, Chandrashekar CR, Bhugra D. Psychiatric epidemiology in India. Indian J Med Res. 2007;126:183-92.
- 6. Khandelwal SK, Jhingan HP, Ramesh S, Gupta RK, Srivastava VK. India mental health country profile. Int Rev Psychiatry. 2004;16:126-41.
- 7. Gupta D. Mind snare. Tehalka Magazine [Internet]. 2010 May 15 [cited 2012 Sep 18];7(19):[5 screens]. Available

from

http://www.tehelka.com/story\_main44.asp?filename=Ne1505 10coverstory.asp

- 8. Mehta P, Josep A, Verghese A. An epidemiologic study of psychiatric disorders in a rural area in Tamil Nadu. Indian J Psychiatry. 1985;27:153-8.
- 9. Hannigan B. Mental health care in the community: an analysis of contemporary public attitudes towards and public representations of mental illness. J Ment Health. 1999;8:431-40.
- 10. Hugo CJ, Boshoff DE, Traut A, Zungu-Dirwayi N, Stein DJ. Community attitudes toward and knowledge of mental illness in South Africa. Soc Psychiatry Psychiatr Epidemiol. 2003;38:715-9.
- 11. Dahlberg KM, Waern M, Runeson B. Mental health literacy and attitudes in a Swedish community sample investigating the role of personal experience of mental health care. BMC Public Health. 2008;8:8.
- 12. Pickett-Schenk SA, Cook JA, Steigman P, Lippincott R, Bennett C, Grey DD. Psychological well-being and relationship outcomes in a randomized study of family-led education. Arch Gen Psychiatry. 2006;63:1043-50.
- 13. Jorm AF, Barney LJ, Christensen H, Highet NJ, Kelly CM, Kitchener BA. Research on mental health literacy: what we know and what we still need to know. Aust N Z J Psychiatry. 2006;40:3-5.
- 14. Nordt C, Rössler W, Lauber C. Attitudes of mental health professionals toward people with schizophrenia and major depression. Schizophr Bull. 2006;32:709-14.
- 15. Muga FA, Jenkins R. Public perceptions, explanatory models and service utilisation regarding mental illness and mental health care in Kenya. Soc Psychiatry Psychiatr Epidemiol. 2008;43:469-76.
- 16. Gureje O, Lasebikan VO, Ephraim-Oluwanuga O, Olley BO, Kola L. Community study of knowledge of and attitude to mental illness in Nigeria. Br J Psychiatry. 2005;186:436-41.
- 17. Kelly LS, McKenna HP. Victimization of people with enduring mental illness in the community. J Psychiatr Ment Health Nurs. 1997;4:185-91.
- 18. Berzins KM, Petch A, Atkinson JM. Prevalence and experience of harassment of people with mental health problems living in the community. Br J Psychiatry. 2003;183:526-33.
- 19. Tsang HWH, Tam PKC. Stigmatizing attitudes towards individuals with mental illness in Hong Kong: implications for their recovery. J Community Psychol. 2003;31:383-96.
- 20. Callaghan P, Shan CS, Yu LS, Ching LW, Kwan TL. Attitudes towards mental illness: testing the contact hypothesis among Chinese student nurses in Hong Kong. J Adv Nurs. 1997;26:33-40.
- 21. Taylor SM, Dear MJ. Scaling community attitudes toward the mentally ill. Schizophr Bull. 1981;7:225-40.

- 22. Waxler-Morrison N. Commentary on Cohen, prognosis for schizophrenia in the third world. Culture Med Psychiatry. 1992;16:77-80.
- 23. Cooper J, Sartorius N. Cultural and temporal variations in schizophrenia: a speculation on the importance of industrialization. Br J Psychiatry. 1977;130:50-5.
- 24. Srinivasa DK, Trivedi S. Knowledge and attitude of mental diseases in a rural community of South India. Soc Sci Med. 1982;16:1635-9.
- 25. Raghuram A, Verma N, Maridass AC. Public attitudes toward mental illness: a review. NIMHANS Journal. 1984;2:1-14.
- 26. Chatterjee S, Chatterjee A, Jain S. Developing community-based services for serious mental illness in a rural setting. In: Patel V, Thara R, editors. Meeting the mental health needs of developing countries: NGO innovations in India. New Delhi: Sage; 2003. p. 115-40.
- 27. Kumar D, Kumar P, Singh AR, Bhandari SS. Knowledge and attitude towards mental illness of key informants and general population: a comparative study. Dysphrenia. 2012;3:57-64.
- 28. Barke A, Nyarko S, Klecha D. The stigma of mental illness in Southern Ghana: attitudes of the urban population and patients' views. Soc Psychiatry Psychiatr Epidemiol. 2011;46:1191-202.
- 29. Yang HY. Attitudes towards psychoses and psychotic patients in Beijing. Int J Soc Psychiatry. 1989;35:181-7.
- 30. Wolff G, Pathare S, Craig T, Leff J. Community attitudes to mental illness. Br J Psychiatry. 1996;168:183-90.
- 31. Angermeyer MC, Heiss S, Kirschenhofer S, Ladinser E, Löffler W, Schulze B, *et al.* Die deutsche Version des Community-Attitudes-toward-the-Mentally-Ill (CAMI)-Inventars [The German version of the Community-Attitudes-Toward-the-Mentally-Ill (CAMI) inventory]. Psychiatr Prax. 2003;30:202-6.
- 32. Angermeyer MC, Dietrich S. Public beliefs about and attitudes towards people with mental illness: a review of population studies. Acta Psychiatr Scand. 2006;113:163-79.
- 33. Deribew A, Tamirat Y. How are mental health problems perceived by a community in Agaro town? Ethiopian Journal of Health Development. 2005;19:153-9.
- 34. Mulatu MS. Perceptions of mental and physical illnesses in north-western Ethiopia: causes, treatments, and attitudes. J Health Psychol. 1999;4:531-49.
- 35. Kshama R, Channabasavanna SM. A study of attitudes of relatives of mentally ill undergoing hospitalization. Indian J Soc Work. 1974;3:21-4.

Conflict of interest: none

Funding agency: none