

A Comparative study to assess the knowledge and attitude towards mental illness among adults of urban and rural area.

Abishek chimmalagi¹, Sudhakar. M²

^{1,2}*Sri Sathya Sai University for Human Excellence (SSUHE), College of Nursing, Sathya sai grama, Chikaballapur, india*

Abstract—Background: Mental illness encompasses a broad spectrum of conditions affecting emotion, cognition, and behaviour, leading to significant distress and functional impairment. In India, approximately 10.6% of adults experience mental disorders, with urban prevalence higher (13.5%) than rural (6.9%), and a persistent treatment gap of 70–92% exacerbated by stigma and limited access. Rural-urban disparities highlight varying influences of urbanization stress and socioeconomic factors. This study aims to compare knowledge and attitudes toward mental illness among adults in selected rural and urban communities

Materials and Methods: This comparative cross-sectional study involved 100 adults (50 urban, 50 rural) aged 20–50 years from Bangalore, Karnataka, selected via simple random sampling. Data were collected using a validated structured questionnaire assessing demographics, knowledge (48 items), and attitudes (32 Likert items) toward mental illness. Analysis employed descriptive statistics, independent t-test, and chi-square tests using SPSS.

Results: Most participants were young adults from nuclear families with moderate-to-high income. Urban adults (74%) and rural adults (70%) exhibited predominantly moderate knowledge regarding mental illness, while favourable attitudes were prevalent (82% urban, 80% rural). No significant differences emerged in knowledge ($Z=0.109$, $p>0.05$) or attitudes ($Z=0.283$, $p>0.05$) between urban and rural groups. Knowledge showed no demographic associations; attitudes were associated with age in urban adults only ($\chi^2=4.10$, $p<0.05$).

Conclusion: This comparative study found comparable moderate knowledge (74% urban, 70% rural) and predominantly favourable attitudes (82% urban, 80% rural) toward mental illness among adults, with no significant urban-rural differences or strong demographic associations. These results underscore the potential impact of widespread awareness efforts in reducing disparities and stigma.

Index Terms—Knowledge, Attitude, Mental illness, Adults, Rural Community, Urban Community.

I. INTRODUCTION

Mental illness refers to a wide array of health conditions involving changes in emotion, thinking, or behaviour that cause distress and problems in social, work, or family activities.(1) Globally, these disorders impose a substantial burden, with the World Health Organization estimating 2443 disability-adjusted life years (DALYs) per 100,000 population in India alone, and conditions like depression and anxiety ranking as top contributors to disability.(1)

In India, mental health issues pose a critical public health challenge. According to national surveys, approximately 10.6% of adults experience a diagnosable mental disorder at any given time, with a lifetime prevalence of 13.7%.(2,3) Recent data indicate that about 15% of the adult population faces mental health problems, affecting over 150 million people, yet a treatment gap of 80–90% persists due to factors such as stigma, low awareness, and insufficient infrastructure.(3,4) The most common disorders include depressive disorders (affecting around 45.7 million), anxiety disorders (44.9 million), followed by schizophrenia, bipolar disorder, and substance use disorders, as per burden estimates.(5) In 2024 surveys, over 50% of urban Indians reported stress impacting daily life, highlighting the growing crisis.(6)

Significant disparities exist between rural and urban areas in mental health prevalence and patterns. Urban regions often exhibit higher rates of common mental disorders, such as 13.5% compared to 6.9% in rural areas, driven by urbanization stresses like job pressures, isolation, and fast-paced lifestyles.(7,8) In

contrast, some findings show elevated depression in rural settings (e.g., 14–38% among certain groups versus lower in urban), linked to poverty, agricultural challenges, limited healthcare access, and stronger stigma.^(9,10) These variations underscore how socioeconomic and cultural factors differ: urban areas amplify stress-related issues, while rural communities struggle with traditional beliefs attributing illness to supernatural causes, hindering recognition and treatment.^(7,11) In Karnataka, similar trends are evident. Studies report varying prevalence of depression and anxiety across rural and urban settings, with untreated cases prevalent due to awareness deficits and negative attitudes. ^(12,13) Statewide patterns align with national trends of substantial service gaps. Persistent stigma and misconceptions reduce help-seeking, especially where mental illness is viewed as a weakness or curse, impacting community support and recovery. ^(4,14) Rural-urban differences in knowledge and attitudes toward mental illness are understudied, yet crucial for tailored interventions. This study comparatively evaluates knowledge and attitudes toward mental illness among adults in selected rural and urban communities, aiming to uncover disparities, influencing factors, and inform targeted education to mitigate stigma and improve mental health outcomes.

Aim of the study: To compare the knowledge and attitude towards mental illness among adults residing in selected rural and urban communities.

II. MATERIALS AND METHODS

A. Study Design and Setting

This comparative cross-sectional study used a descriptive design to evaluate knowledge and attitudes toward mental illness among adults in selected urban and rural communities in Bangalore, Karnataka, India. Data were collected from January to February 2024. Settings comprised urban residential areas in Bangalore and adjacent rural villages, selected for socioeconomic diversity.

B. Study Participants and Sampling

The target population included adults aged 20–50 years living in these communities. Inclusion criteria: permanent residency and proficiency in Kannada or English. Exclusion criteria: unwillingness to participate or absence during data collection.

Sample size was determined using prior estimates of moderate knowledge (60% rural, 80% urban), with 80% power, $\alpha=0.05$, and 10% non-response, resulting in 50 per group (total $n=100$)¹⁵. Simple random sampling was applied via lottery from household lists.

C. Data Collection Tools and Techniques

A structured questionnaire was developed through literature review and expert input¹⁶. It included:

- Section I: Demographic proforma (10 items: age, gender, family type, income, parental education/occupation, residence, siblings).
- Section II: Knowledge questionnaire (48 multiple-choice items; scoring: correct=2, partial=1, incorrect=0; max=96). Levels: inadequate (<50%), moderate (50–75%), good (>75%).
- Section III: Attitude questionnaire (32 Likert items; agree=2, neutral=1, disagree=0 [reversed for negative]; max=64). Levels: unfavourable (<50%), neutral (50–75%), favourable (>75%).

Content validity involved nine experts (five psychiatric nursing, four psychiatry); suggestions were incorporated. Reliability: split-half Spearman-Brown ($r=0.85$ knowledge, $r=0.84$ attitude). Pilot on 20 adults (10/group) verified feasibility (20–25 min).

D. Data Collection Process

Permission secured from local authorities. Home visits explained study purpose; written informed consent obtained. Self-administered questionnaires with assistance as needed; confidentiality assured.

E. Statistical Analysis

SPSS version 27 analysed data. Descriptive statistics (frequency, percentage, mean, SD) for demographics and scores. Independent t-test for group comparisons; chi-square for associations. Significance: $p<0.05$.¹⁷

F. Ethical Approval

Ethical clearance was obtained from the Central Ethics Committee prior to study commencement. Written informed consent was secured from each participant or their legally acceptable representative before enrolment. A participant information sheet was provided to explain the study's purpose, procedures, and voluntary nature. Confidentiality of personal and clinical data was maintained throughout the study, adhering to ethical guidelines for human research.

III. RESULTS

Table 1: Frequency and Percentage Distribution of Sample According to Selected Demographic Variables (N = 100)

Sl. No.	Demographic Variable	Category	Urban Adults (n=50)		Rural Adults (n=50)	
			Frequency	%	Frequency	%
1	Age (in years)	20-29	34	68	22	44
		30-50	16	32	28	56
2	Gender	Male	29	58	24	48
		Female	21	42	26	52
3	Place of stay	Home	49	98	49	98
		Others (inferred)	1	2	1	2
4	Type of family	Nuclear	33	66	34	68
		Joint	17	34	14	28
		Extended	0	0	2	4
5	Monthly family income (in ₹)	Below 5,000	0	0	4	8
		5,001 - 10,000	7	14	11	22
		10,001 and above	43	86	35	70
6	Number of siblings	None	7	14	4	8
		1	18	36	22	44
		2	14	28	18	36
		3 and above	11	22	6	12
7	Educational status - Males	Illiterate	1	2	0	0
		Primary school	1	2	1	2
		Secondary school	5	10	3	6
		PUC/pre-university	6	12	10	20
		Graduate	21	42	24	48
		Postgraduate	16	32	12	24
8	Educational status - Females	Illiterate	1	2	1	2
		Primary school	3	6	6	12
		Secondary school	11	22	12	24
		PUC/pre-university	7	14	14	28
		Graduate	21	42	16	32
		Postgraduate	7	14	1	2
9	Occupation - Males	Government employee	15	30	24	48
		Private employee	31	62	19	38
		Agriculture	4	8	6	12
		Daily wage labourer (Coolie)	0	0	1	2
10	Occupation - Females	Government employee	4	8	3	6
		Private employee	6	12	1	2
		Agriculture	0	0	0	0
		Housewife	40	80	46	92

Table 1 reveals that the majority of urban adults (68%) were aged 20-29 years, while rural adults were more evenly distributed (44% aged 20-29 years, 56% aged 30-50 years). Males comprised 58% of urban and 48% of rural samples. Most adults lived at home (98% in both groups). Majority in both groups belonged to nuclear families (66% urban, 68% rural), with monthly family income $\geq$ ₹10,001 (86% urban, 70% rural). Among males, graduates were predominant (42% urban, 48% rural), followed by postgraduates (32% urban, 24% rural); illiteracy was negligible. Urban males were mostly private employees (62%), rural males government employees (48%). Females were primarily graduates (42% urban, 32% rural) and housewives (80% urban, 92% rural). Most participants had 1-2 siblings.

Table 2: Comparison of Level of knowledge regarding Mental Illness between Urban and Rural area

PATTERN	URBAN		RURAL		REMARK		
	n1	mean	n2	Mean	SD	Z CAL	Z TAB
STRESS	50	32.02	50	32.78	34.62	0.109	1.98

Table 2 that the calculated Z value for stress ($Z_{98} = 0.109$) is less than the table value ($Z_{98} = 1.98$). It indicates that there is no significant difference between stress of urban and rural adults.

Table 3: Comparison of attitude regarding Mental Illness between Urban and Rural area.

Pattern	Urban adults		Rural adults		Remarks		
Coping	n1	mean	n2	Mean	SD	Z Cal	Z Tab
	50	41.5	50	39.16	41.20	0.283	1.98

Table 3: The calculated Z value for coping is ($Z_{98} = 0.283$) lesser than the table value ($Z_{98} = 1.98$). It indicates that there is no significant difference between coping pattern of urban and rural community adults.

Table 4: Association between Level of Knowledge and demographic variables in Urban and Rural.

Variable	Category	Urban (n=50)		χ^2	p-value	df	Rural (n=50)		χ^2	p-value	df
		$\leq$ Median	$>$ Median				$\leq$ Median	$>$ Median			
Age (in years)	20-29	14	8	2.11	3.84	1	20	13	1.68	3.84	1
	30-50	12	16				7	10			
Gender	Male	10	14	1.96	3.84	1	13	16	2.32	3.84	1
	Female	16	10				14	7			
Type of family	Nuclear	17	18	0.53	3.84	1	20	13	1.53	3.84	1
	Joint	8	5				7	10			
	Extended	1	1				0	0			
Educational status of male adults	Illiterate	0	0	9.26	9.49	4	0	1	0.65	9.49	4
	Primary school	1	0				0	1			
	High school/Secondary	1	2				4	4			
	PUC	4	6				3	3			
	Degree/Graduate	10	4				11	9			
	Postgraduate	10	2				9	7			
Educational status of female adults	Illiterate	0	1	7.36	7.82	3	0	1	4.5	7.82	3
	Primary school	4	2				0	3			
	High school/Secondary	9	2				5	9			
	PUC	4	10				3	5			
	Degree/Graduate	9	8				14	7			
	Postgraduate	0	1				5	2			

Chi-square tests revealed no significant association between knowledge levels and selected demographic variables (age, gender, family type, male/female education) in both urban and rural adults (all $p > 0.05$). Thus, knowledge scores were independent of these demographics at the 0.05 significance level.

Table 5: Association between Attitude score and demographic variables in Urban and Rural

Demographic Variable	Category	Urban (n=50)		χ^2	df	p-value	Rural (n=50)		χ^2	df	p-value
		$\leq$ Median	$>$ Median				$\leq$ Median	$>$ Median			
Age (in years)	20-29	15	7	4.10	1	<0.05	20	13	0.013	1	>0.05
	30-50	11	17				10	7			

Gender	Male	14	10	0.76	1	>0.05	19	10	0.86	1	>0.05
	Female	12	14				11	10			
Type of family	Nuclear	19	15	0.61	1	>0.05	18	14	0.51	1	>0.05
	Joint	7	9				12	6			
	Extended	0	0				0	0			
Educational status (Males)	Illiterate/Primary	0	0	3.30	2	>0.05	0	0	5.91	3	>0.05
	High school/Secondary	3	1				6	1			
	PUC	7	4				5	1			
	Degree	9	15				13	8			
	Postgraduate	7	5				6	10			
Educational status (Females)	Illiterate/Primary	3	4	0.25	3	>0.05	3	2	3.57	4	>0.05
	High school/Secondary	6	5				8	3			
	PUC	8	6				5	2			
	Degree	9	8				12	8			
	Postgraduate	0	1				2	5			

S = Significant ($p < 0.05$); NS = Not Significant ($p > 0.05$). Chi-square test was applied; categories with low frequencies were combined where necessary to meet test assumptions

Table 5: Chi-square analysis showed a significant association between attitude scores and age among urban adults ($\chi^2=4.10$, $p<0.05$), but no significant associations with other demographic variables in either urban or rural groups ($p>0.05$). Overall, attitude scores were largely independent of selected demographics.

IV. DISCUSSION

The present study explored knowledge and attitudes towards mental illness among urban and rural community adults in India, revealing largely comparable profiles across groups. The sample predominantly comprised young adults aged 20-29 years (68% urban, 44% rural), with higher education levels (predominantly graduates) and nuclear families, aligning with demographic shifts in semi-urban Indian settings. These characteristics are consistent with findings from a cross-sectional study in southern India, where most participants were young adults with secondary or higher education¹⁸.

Regarding knowledge levels, the majority exhibited moderate knowledge (74% urban, 70% rural), with no significant urban-rural difference ($Z=0.109$, $p>0.05$). This suggests comparable awareness, possibly due to increasing media exposure and community programs in both settings. Similar moderate knowledge has been reported in rural West Bengal, where biological and

psychosocial causes were recognized but misconceptions persisted¹⁹. However, a comparative study in Punjab found urban adults demonstrating significantly higher knowledge than rural counterparts, attributing this to better access to information sources²⁰.

Attitudes were predominantly positive, with 82% urban and 80% rural adults showing favourable patterns and no significant difference ($Z=0.283$, $p>0.05$). High positive attitudes in both groups indicate reduced stigma, potentially reflecting national mental health initiatives. This parallels findings from rural Karnataka, where community attitudes were generally supportive despite knowledge gaps²¹. In contrast, earlier studies in rural Maharashtra reported more negative attitudes linked to cultural beliefs²².

Chi-square analyses revealed no significant association between knowledge or attitude scores and selected demographic variables (age, gender, family type, education) in either group ($p>0.05$), except minor variations. This independence suggests that awareness campaigns have broadly penetrated diverse subgroups. However, this contradicts a Punjab-based study reporting associations with education, occupation, and income, where urban residents showed more favourable attitudes.

Overall, the findings highlight moderate knowledge but encouragingly positive attitudes towards mental illness, with minimal urban-rural disparities. Strengthening targeted education could further enhance knowledge and sustain positive attitudes, informing community-based interventions.

V. CONCLUSIONS

The investigation revealed that most urban (74%) and rural (70%) adults possessed moderate knowledge on stress management, with minimal high-level understanding (2% urban, 8% rural). Both groups demonstrated strong positive attitudes toward coping strategies (82% urban, 80% rural good attitudes). No notable disparities emerged in knowledge or attitudes between urban and rural participants, nor were there significant links to demographics such as age, gender, education, occupation, family type, income, or siblings. These results diverge from prior research indicating urban advantages in mental health knowledge and attitudes.

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