

## A CROSS SECTIONAL STUDY OF DISABILITY IN RELATION TO GENDER IN PATIENTS WITH SCHIZOPHRENIA

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**ABSTRACT: BACKGROUND:** Schizophrenia is a chronic mental illness associated with major disability in several spears of a person's functioning. **AIM:** The study was undertaken to evaluate and correlate gender variable in relation to psychiatric disability in patients with schizophrenia. **MATERIAL & METHODS:** A cross sectional study in a tertiary psychiatric hospital, government hospital for mental care at Vishakhapatnam. Sample consisting of 161 patients with a diagnosis of schizophrenia as per ICD -10 criteria and on antipsychotic medication for the past minimum one year duration were taken. IDEAS rating applied on all the subjects. And the result was analyzed by t-test and ANOVA using SPSS 13.0 version. **RESULTS:** Out of 161 patients, 90 patients were males (56%) and 71 females (44%). The (56%) Males group had mean disability scores of  $7.99 \pm 4.29$  and the (44%) female group had mean disability scores  $8.42 \pm 8.09$ . **CONCLUSIONS:** Males (56%) are more compared to females (44%). Females were found to have marginally higher disability scores compared to males. Disability associated with schizophrenia did not have significant association with sociodemographic variable gender.

**KEYWORDS:** Disability, Gender, Schizophrenia.

**INTRODUCTION:** In Psychiatry diagnostic information can conceptually be separated into two components: Psychiatric symptoms & Functional impairment. Functioning and disability are classified in the International Classification of Functioning, Disability and Health (ICF) (World Health Organization 2001).<sup>1</sup> ICF defines functioning as general aspects of a person's body functions, activities and social participation. Disability indicates problems in any one of these dimensions.

When considering disability one also needs to characterize an individual's background and life situation. These are called "contextual factors" in ICF and include environmental and personal factors that may have an impact on the individual's state of health. International research (Ustun et al. 2001; World Health Organization 2000).<sup>2</sup> suggest that activities of a person can be grouped according to the following categories:

- Understanding and communicating with the world (Cognition).
- Moving and getting around (Mobility).
- Self-care (Attending to one's hygiene, dressing, eating and staying alone).
- Getting along with people (Interpersonal interactions).
- Life activities (Domestic responsibilities, leisure and work).
- Participation in society (Joining in community activities).

Disability is a final common pathway on which multiple influences converge biological factors, individual factors such as co-morbid substance abuse, cognitive impairment, extra individual factors such as social environment, stigma, social support etc. In individuals with schizophrenia, the

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neurobiology manifests in a variety of physical abnormalities (e.g., enlarged ventricles and sulci, neuronal disarray, excess of dopamine, and reduced frontal lobe blood flow) and psychological abnormalities (e.g., hallucinations, delusions, disorganized cognition, and basic cognitive disturbances, including input, memory, and abstraction).

These abnormalities (i.e., impairments) may lead to various difficulties (i.e., activity limitations) for persons with schizophrenia, including the inability to speak in coherent sentences, to concentrate, and to remember and organize details. Without some or all of these abilities, an individual with schizophrenia will have great difficulty meeting certain expectations such as being able to manage finances, establish social relationships, or use public services. Thus he or she may experience participation restriction. Such contextual issues as stigma and impaired social support networks can exacerbate participation restrictions by limiting access to resources and opportunities.

Schizophrenia, like other chronic mental illnesses has been recognized the world over as one of the conditions that causes major disabilities in several spheres of a person's functioning.<sup>3</sup> World Health Organization global burden of disease 2000 reports a point prevalence of 0.4% for schizophrenia, causing high degree of disability. Schizophrenia accounted for 1.1% of the total disability-adjusted life years (DALYs) and 2.8% of years of life lived with disability (YLDs) and it is the seventh leading cause of YLDS in the world.<sup>4</sup> In India disability data states that disability due to mental diseases is 10%.<sup>5,6</sup>

In India persons with Disability Act (1995).<sup>7</sup> recognized disability caused by mental illness and placed it on par with other disabilities. The disabled must be registered to be eligible for protection, support and welfare. Locomotion, and access may be the primary concerns in other disabilities, social and work related functioning are more important in those disabled by mental disorders.<sup>8</sup> It is therefore prudent to select instruments which place more emphasis on these items. A few tools to measure disability of mental disorders have been developed in India; Pershad's Disability Questionnaire, the Schedule for Assessment of Psychiatric Disability and the SCARF Social Functioning Index. In 2001, the Rehabilitation Committee of the Indian Psychiatric Society developed a tool for this purpose known as Indian Disability Evaluation and Assessment Scale (IDEAS).

IDEAS was field tested in 9 centers all over India and has now been gazetted by the Ministry of Human Resources and Empowerment, Government of India as the recommended instrument to measure psychiatric disability.<sup>9</sup> A few states in the country are using it to certify psychiatric disability and accord benefits under the welfare schemes to the disabled. The alpha value was 0.8682, indicating good internal consistency between the items. It has good criterion validity and at face value, the instrument appeared to be measuring the desired qualities.<sup>10</sup>

K. S. Ganesh et al; (2008),<sup>11</sup> study to find prevalence and pattern of disability in rural community of Karnataka, India by applying WHO-DAS, IDEAS, Action Aid India. 40% males and 60% females.

Koksal Alptekin et al; (2005),<sup>12</sup> assessed disability with WHO Brief Disability Questionnaire (BDQ) in patients with schizophrenia and were re-evaluated after 1 year. Total disability scores were significantly decreased at follow-up. Female patients seemed to be more disabled than males. Benjamin G. Druss et al; (2008),<sup>13</sup> studied Community-based cross-sectional in a rural community of Karnataka by making house-to-house visits.

The mental disability was assessed by Indian Disability Evaluation and Assessment Scale (IDEAS). 32% of the disabled were males, 68% were females; and the association was not significant ( $\chi^2 = 2.81$ ;  $P > 0.05$ ). Judith Usall et al; (2007),<sup>14</sup> studied on Schizophrenic patients attending to

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outpatient services were assessed with Positive and Negative Symptom Scale (PANSS), Disability Assessment Scale (DAS), Global Assessment of Functioning scale (GAF), demographic variables and service use, found that the female to male ratio was 1:2. Men had an earlier age at onset. Women were more likely to be married and to live independently; and there were more unemployed men.

Social functioning was slightly better in women (lower DAS scoring). No differences were found in symptomatological variables (Global or separate PANSS scales), nor in type of schizophrenia. Course of illness in the past year appeared to be similar, except for longer hospital stays in men. The study concluded that schizophrenic women had a significantly better social functioning despite the lack of remarkable symptomatic differences between genders. R. K. R. Salokangas (2007),<sup>15</sup> had 227 first-contact schizophrenic patients followed up for 5 years, interviewed patients at entry and at the end of the first, second and fifth years. The social and functional outcome of men living with their parents was better than that of women in the same situation, while among patients living alone or with some other person the gender difference was reversed. Patients living outside families and men in particular are at great risk of poor outcome. Andia et al; (1995),<sup>16</sup> had 53 men and 32 women with schizophrenia were evaluated for illness history, symptom severity, IQ, neurocognitive status, cerebral volume loss, and cortical asymmetry. Social functioning was assessed using marital status, independent living skills and employment status. Significant gender differences were found.

Women also were better educated and more often married, living independently, and employed. No gender differences were found in present age, symptom severity, neurocognitive functioning, or magnetic resonance imaging scan readings. The findings suggest that women may experience less of the adverse interpersonal and psychosocial consequences of schizophrenia than men, even when symptom and neurocognitive status is equivalent between groups. However, more extensive investigations are warranted to better understand the role of pathophysiological or social mechanisms in gender difference.

**AIM:** The study was undertaken to evaluate and correlate gender variables in relation to psychiatric disability in patients with schizophrenia.

**MATERIAL & METHODS:** This is a cross-sectional study, which was undertaken at Government Hospital for Mental care/Andhra Medical College, Visakhapatnam. Patients with a diagnosis of schizophrenia as per ICD -10 criteria and on antipsychotic medication for the past minimum one year duration were taken. Patients were aged 18-65 years. Written informed consent was taken from subjects voluntarily willing to participate in this study. IDEAS rating applied on all the subjects and the result analyzed by t-test and ANOVA using SPSS 13.0 version.

**Inclusion Criteria:**

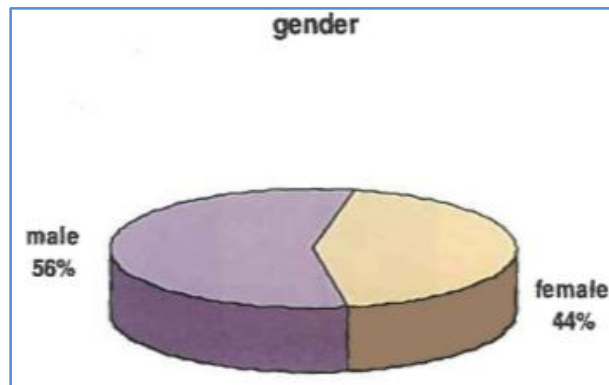
- Schizophrenia diagnosed as per ICD -10 criteria.
- Age group 18-65 years of both genders.
- Patients under remission and on antipsychotic medication treatment for the past minimum one year.

**Exclusion Criteria:**

- Schizoaffective disorder, Mental retardation.
- Any H/o substance abuse, epilepsy, organic brain pathology.
- Other physical disabilities.  
H/o any other chronic diseases.

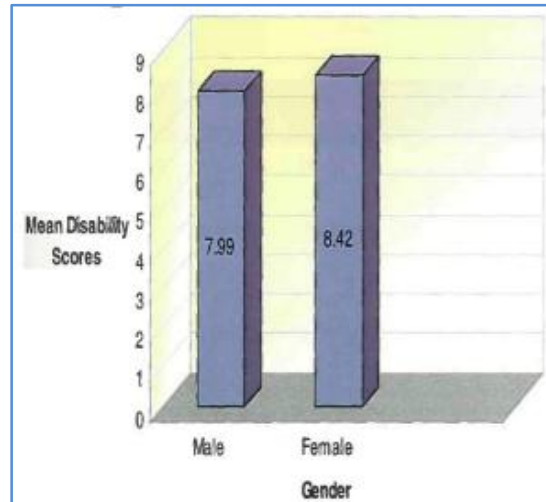
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## RESULTS:



**Graph 1: Depicting Distribution of Male and Female Patients**

Out of 161 Patients 90 Patients (56%) were males and 71 patients (44%) were Females.



**Graph 2: Depicting Disability among Male and Female Groups**

Gender	N	%	Mean illness duration [days]	Mean untreated illness duration [days]	Mean medication duration [days]	Mean IDEAS global scores	SD	t-test	sig
Male	90	56	3147	225.41	2479.04	7.99	4.291		
Female	71	44	2952	427.37	2315.25	8.42	8.092	0.409	0.684

**Table 1: Depicting mean Disability Scores across two Groups**

The (56%) Males group had mean disability scores are  $7.99 \pm 4.29$  and the (44%) female group had mean disability scores  $8.42 \pm 8.09$ . T-test used, t value 0.409, significance 0.684.

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**DISCUSSION:** Disability is associated with schizophrenia more or less throughout its course. The disability in schizophrenia is found to be distinctive characteristic. There are very few Indian studies, which have specifically addressed the disability associated with schizophrenia. There are many studies regarding treatment issues and quality of life in these patients. Disability studies are need and relevant as rehabilitation of these individuals important in the current scenario of deinstitutionalization of patient with mental illness. Majority of these patients are treated and rehabilitated in the community. These studies on disability provide information to plan rehabilitation services.

This is a cross - sectional study in an institutional University hospital setting. Patients diagnosed schizophrenia according to ICD -10 attending for review and under remission with antipsychotic medication minimum for the past 1 year are taken. Disability assessment was done by applying Indian Disability Evaluation and Assessment Scale (IDEAS).

It is 5- Point scale useful to assess disability in patients with schizophrenia. The scale consist 4 items i.e. self-care, interpersonal activities, communication and understanding, work. IDEAS was found effective to pick up even mild disability in schizophrenia patients.

Study by rehabilitation committee Indian Psychiatric Society to evaluate IDEAS scale, other studies Chaudhury Pranit K et al; (2006), Indra Mohan et al; (2005), in schizophrenic patients had male preponderance. Study by Judith Usall et al; (2007) consists of females to male ratio was 2:1. A study by Benjamin G. Druss et al; (2008) which finds that 32% of the disabled were males, 68% were females, and the association was not significant ( $p > 0.05$ ). In the current study 56% were male and 44% were females. Another study by D. Wiersma et al; (2000) reports that gender did not predict the long term outcome of disability.

However, a study by KoksAl Alptekin et al; (2005) showing that female patients seemed to be more disabled than males. In the present study the mean disability score in males is 7.99 and in females the disability scores is 8.42. But the difference in these scores are not statistically significant. Study by Judith Usall et al; (2007) social functioning was slightly better in schizophrenic women (lower DAS scoring). Women has a better social functioning than men, and after adjusting for others predictor variables gender was a significant predictor specially for occupational functioning. Study by Andia et al; (1995) reports that significant gender differences were found. Women also were better educated and more often married, living independently and employed. Women may experience less of the adverse interpersonal and psychological consequences of schizophrenia than men, even when symptom and neurocognitive status is equivalent between groups.

**CONCLUSIONS:** Females are having marginally high disability scores when compared to males. Most of the reports in the literature reveal that women are less disabled than men. The findings of this study, that women are more disabled than men, may be due to the context of the social conditions prevailing in India. Disability associated with schizophrenia is not having statistically significant association with sociodemographic variable gender.

### Limitations:

1. It is a cross sectional study.
2. No control group was taken.
3. Hospital based study.
4. Duration of treatment and type of medication is not taken in to consideration.

## Future Directions:

1. Community based survey should be conducted.
2. All psycho social factors should be assessed.
3. Prospective studies should be conducted.

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