



## Original Article

## Analysis of Community-Based Awareness Regarding Schizophrenia: A Cross-Sectional Study from Pakistan

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## ABSTRACT

Schizophrenia is a serious mental disorder and general public usually show unfavorable attitudes towards the patients. **Objective:** The study assesses the extent of public knowledge about Schizophrenia, a mental illness, among Pakistan's educated population and to recommend ways to create a better society for the patients and caretakers. **Methods:** 500 participants voluntarily took part in the study. A questionnaire was developed and a cross-sectional survey was conducted among the respondents. Participants were asked questions related to general, medical, socioeconomic, and treatment information of schizophrenia. Data analysis was done using SPSS software via T/F tests and Chi-square analysis. **Results:** It was revealed that overall females were more aware of mental illness as compared to males. The age groups of 18-22, 23-27 and 33-37 and participants with graduate and post-graduate degrees were having more knowledge regarding general, medical, socioeconomic, and treatment categories. Upon analysis via chi-square using SPSS, null hypotheses were accepted. **Conclusions:** Despite of the people having knowledge regarding schizophrenia, there is a significant percentage of populace which is not aware. Seminars, workshops, and campaigns must be conducted to enhance the knowledge of the general public to put an end to this stigma from society which will help in giving better care to the patients.

## INTRODUCTION

Schizophrenia is one of the top ten mental illnesses in the world characterized by symptoms like disorganized behavior, hallucinations, delusions, stupor, and disturbances related to perception, feelings, and thinking capabilities [1-2]. It causes a considerable deal of suffering, not only individually, but also emotionally and socioeconomically. Schizophrenia patients live 10-20 years shorter than the normal population [3]. According to World Health Organization (WHO), schizophrenia is affecting 21

million people worldwide occurring in an age range of 15-44 years [4-5]. The awareness of disease dynamics and treatment for schizophrenia is less and is usually labeled as 'poor insight' [6,7] owing to a lack of knowledge. Dearth of understanding has made this disease to be recognized as a major public health concern [8,9] and a weighty problem to be managed by caregivers as it is not well perceived around the world. The occurrence and duration of untreated psychosis are also influenced by cultural structures, socio-

economic conditions, and the education level. Moreover, the caregivers are not comfortable disclosing the patient's situation. A study performed by [10] assessed awareness in caregivers and concluded that there is a dire need to educate the caregivers to educate, develop acceptability, and encourage them to better treatment and care for patients for societal advantages [10]. With the advancements in everyday life, people are getting awareness of psychiatric disorders [11]. Further awareness can be inculcated via seminars, workshops, campaigns, social media, and other platforms [12]. This will enable the sufferer to gain prompt help from professional and relatives to comprehend the illness and provide better care [13]. A study performed by Leiderman, Vazquez shows that patients' relatives were more aware of disorders as compared to the general public which had no interaction with schizophrenic patients [14]. However, there remains a need to educate the general public about the disorder and its consequences [15]. In this current study, we have investigated whether the participants have apt knowledge related to schizophrenia via a cross-sectional survey followed by statistical analysis.

## METHODS

The study was designed at the Institute of Microbiology and Molecular Genetics, University of the Punjab. The study was a cross-sectional survey of 500 participants with demographic characteristics i.e., gender, age groups, and education (independent variables) from major cities of Pakistan aged between 18 years to 42 years. People related to the field of psychology/medical sciences were not included. The study was carried out between September 2021, to December 2021. The data was collected via questionnaires followed by participants' consent. The participants were ensured that their responses will be kept anonymous and confidential. The questionnaire had a total of 24 questions divided into four sub-categories (dependent variables) i.e., general, medical, socio-economic, and treatment. All the questions were closed-ended and responses were recorded in MS Excel. It was hypothesized that: With increasing age, people would have more information regarding schizophrenia, the medical condition of patients, the socio-economic status of the sufferers, and possible treatments. The higher the education, more will be the information regarding medical condition of patients, socio-economic status of the sufferers, and possible treatments.

## RESULTS

A total of 500 participants filled out the questionnaire survey. Table 1 shows the socio-demographic characteristics and their frequencies divided in 3 categories.

Variables	Characteristics	n	Frequency (%)
Gender	Male	209	41.8%
	Female	291	59%
Age Groups	18-22	98	19.6%
	23-27	103	20.6%
	28-32	101	20%
	33-37	108	22%
	38-42	90	18%
Level of Education	Matric	11	2.2%
	Intermediate	66	13.2%
	Graduate	250	50%
	Post-Graduate	145	29%
	Others (Diplomas)	28	5.6%

**Table 1:** Frequency distribution of socio-demographic characteristics of participants (n=500)

### General Information Regarding Schizophrenia

A total of six questions were asked from the participants. **Gender:** 24.8% (n=52) males and 31.6% (n=92) females answered in affirmative while 71% (n=50) male and 66.3% (n=193) did not. 3.3% (n=7) males and 2% (n=6) females selected the option of "don't know". **Age Groups:** 33.6% (n=33) of age group 18-22, 38.8% (n=40) of age group 23-27, 22.7% (n=23) of age group 28-32, 22.2% (n=24) of age group 33-37, and 26.6% (n=24) of age group 38-42 answered "yes" while, 64% (n=63) of age group 18-22, 58.2% (n=60) of age group 23-27, 73.2% (n=74) of age group 28-32, 75.9% (n=82) of age group 33-37, and 71.1% (n=64) of age group 38-42 chose "no". 2%, (n=2) of age group 18-22, 2.9% (n=3) of age group 23-27, 3.9% (n=4) of age group 28-32, 1.8% (n=2) of belonging to the age group of 33-37, and 2.2% (n=2) of age group 38-42 respondents had no idea about schizophrenia and thus chose the option "don't know". **Education:** 63.6% (n=7) with matriculation, 30.3% (n=20) with intermediate degree, 25.2% (n=63) with graduation, 33.1% (n=48) having post-graduation, and 21.4% (n=6) having diplomas opted "yes" while 36.3% (n=4) with matriculation, 69.6% (n=36) with intermediate education, 70.4% (n=176) graduated individuals, 65.5% (n=95) post-graduated, and 78.5% (n=22) having diplomas opted for a "no". 4.4% (n=11) graduated and 1.3% (n=2) post-graduated respondents selected "don't know".

### Medical Information Regarding Schizophrenia

A total of five questions were asked from the respondents. **Gender:** Respondents who answered in affirmative were 29.1% (n=61) males and 32.9% (n=96) females while 64.5% (n=135) males and 61.8% (n=180) females opted for "no". 6.2% (n=13) males and 5.1% (n=15) females chose "don't know". **Age Groups:** 35.7% (n=35) of age group 18-22. 36.8% (n=38) of age group 23-27, 26.7% (n=27) of age group 28-32, 25% (n=27) belonging to the age group of 33-37, and 33.3% (n=30) of age between 38-42 agreed with the questions by selecting a "yes". 58.1% (n=57) of 18-22 age group, 61.1%

(n=63) of age group 23-27, 70.2% (n=71) of age group 28-32, 67.5% (n=73) of age group 33-37, and 56.6% (n=51) of age group 38-42 answered "no" for the solicited questions. 6.1% (n=6), 1.9% (n=2), 2.9% (n=3), 7.4% (n=8), and 10% (n=9) belonging to the age groups 18-22, 23-27, 28-32, 33-37, and 38-42 respectively selected "don't know". **Education:** 27.2% (n=3) with matriculation, 33.3% (n=22) with intermediate degree, 28% (n= 70) were graduated, 37.9% (n=55) were post graduated, and 25% (n=7) diploma holders opted for "yes" regarding medical information about schizophrenia. Those who responded with a "no" were 92.7% (n=8), 62.1% (n=41), 65.6% (n=64), 57.9% (n=84), and 64.2% (n=18) with matriculation, intermediate, graduation, post-graduation, and diplomas respectively. 4.5% (n=3), 6.4% (n=16), 4.1% (n=6), and 10.7% (n=3) were intermediate, graduated, post-graduated, and diploma holders who selected "don't know".

#### **Socio-economic Information Regarding Schizophrenia**

A total of seven questions were asked from the respondents. **Gender:** 15.3% (n=32) males and 20.9% (n=61) females chose "yes" while 82.7% (n=173) males and 77.3% (n=225) females chose "no". 1.9% (n=4) males and 1.7% (n=5) females selected "don't know". **Age Groups:** 18.3% (n=18) of age group 18-22, 19.4% (n=20) of age group 23-27, 17.8% (n=18) of age group 28-32, 17.5% (n=19) belonging to the age group of 33-37, and 20% (n=18) of age between 38-42 answered "yes". 79% (n=78) of 18-22 age group, 79.6% (n=82) of age group 23-27, 78.2% (n=79) of age group 28-32, 81.4% (n=88) of age group 33-37, and 78.8% (n=71) of age group 38-42 answered "no" for the questions. 2% (n=2), 0.9% (n=1), 3.9% (n=4), 0.9% (n=1), and 1.1% (n=1) belonging to the age groups 18-22, 23-27, 28-32, 33-37, and 38-42 respectively opted for "don't know". **Education:** 18.1% (n=2) with matriculation, 19.6% (n=13) with intermediate degree, 15.2% (n= 38) were graduated, 25.5% (n=37) were post graduated, and 10.7% (n=3) diploma holders chose "yes" regarding socio-economic information. Those who selected a "no" were 81.8% (n=9), 80.3% (n=53), 82% (n=205), 73.1% (n=106), and 89.2% (n=25) with matriculation, intermediate, graduation, post-graduation, and diplomas respectively. 2.8% (n=7) graduates and 1.3% (n=2) postgraduates selected "don't know".

#### **Treatment Information Regarding Schizophrenia**

A total of six questions were asked from the participants. **Gender:** 23.9% (n=50) males and 30.2% (n=88) females opted for "yes" while 70.3% (n=147) males and 68% (n=198) females chose a "no". Participants going for "don't know" were 5.7% (n=12) males and 1.7% (n=5) females. **Age Groups:** 26.5% (n=26) of age group 18-22, 30% (n=31) of age group 23-27, 22.7% (n=23) of age group 28-32, 17.527.7% (n=30) belonging to the age group of 33-37, and 31.1% (n=28) of age between 38-42 opted for "yes". 71.4% (n=70) of 18-22 age group, 66% (n=68) of age group 23-27, 72.2% (n=73) of

age group 28-32, 71.2% (n=77) of age group 33-37, and 63.3% (n=57) of age group 38-42 answered "no". 2% (n=2), 3.8% (n=4), 4.9% (n=5), 0.9% (n=1), and 5.5% (n=5) belonging to the age groups 18-22, 23-27, 28-32, 33-37, and 38-42 respectively selected "don't know". **Education:** 36.3% (n=4) with matriculation, 27.2% (n=18) with intermediate degree, 26.8% (n= 67) were graduated, 30.3% (n=44) were post graduated, and 17.8% (n=5) diploma holders chose "yes" while 63.6% (n=7), 72.7% (n=48), 69.2% (n=173), 66.8% (n=97), and 71.4% (n=20) with matriculation, intermediate, graduation, post-graduation, and diplomas respectively chose "no". 4% (n=10) graduates, 2.7% (n=4) postgraduates, and 10.7% (n=3) diploma holders selected "don't know".

#### **Statistical Comparison of General, Medical, Treatment, and Socio-Economic Information Among Socio-Demographic Characteristics:**

##### **T/F-Test Analysis:**

According to the current survey the highest score in general information, medical, and socio-economic category was 1.8 while in the case of treatment information, the highest score of 1.9. Table 2 shows the mean score of all categories. The analyses revealed  $p > 0.05$  which leads to the acceptance of our null hypotheses. The Chi-square test also showed the acceptance of null hypotheses revealing that elder people with higher education are more aware of schizophrenia and related aspects.

Variables	Characteristics	N (%)	General Information Score	Medical Information Score	Socio Economic Information Score	Treatment Information Score
Gender	Male	209(41.8%)	1.8038 ±. 60031	1.7703±.55025	1.8660 ±.39375	1.8182 ±.51465
	Female	291(59%)	1.7045 ±. 50029	1.7216±. 55228	1.8076±. 43638	1.7045± 0.48893
Statistics			t test=.045; p = 0.964	t test=.244; p = 0.808	t test=.359; p = 0.720	t test=.693; p = 0.489
Age	18 - 22	98(19.6%)	1.6837±.50964	1.7041±.57811	1.8367±.42339	1.7551±.47756
	23 - 27	103(20.6%)	1.6796±.74378	1.6505±.51846	1.8155±.41415	1.7379±.52321
	28 - 32	101(20%)	1.8119±.48400	1.7624±.49292	1.8614±.44788	1.8218±.49792
	33 - 37	108(22%)	.48400±.44680	1.8257±.54167	1.8349±.39707	1.7339±.46432
	38 - 42	90(18%)	1.7528±.48338	1.7640±.62199	1.8090±.42309	1.7416±.55449
Statistics			F test=1.323; p = 0.260	F test=.534; p = 0.711	F test=.233; p = 0.233	F test=1.529; p = 0.192
Age	Matric	11(2.2%)	1.3636±.50452	1.7273±.46710	1.8182±.40452	1.6364±.50452
	Intermediate	66(13.2%)	1.6970±.46309	1.7121±.54815	1.8030±.40076	1.7273±.44877
	Graduate	250(50%)	1.8080±.59713	1.7840±.54639	1.8760±.40655	1.7720±.50700
	Post Graduate	145(29%)	1.6828±.49586	1.6621±.55554	1.7586±.46061	1.7241±.50666
	Others	28(5.6%)	1.7857±.41786	1.8571±.59094	1.8929±.31497	1.9286±.53945
Statistics			F test=2.853; p = 0.023	F test=1.323; p = 0.260	F test=2.041; p = 0.088	F test=1.486; p = 0.205

**Table 2:** Socio-demographic variables and their mean score of general, medical, socio-economic, and treatment information of Schizophrenia

## DISCUSSION

The stigma of mental health is a grave problem across the globe which has greatly lessened the chances of the right to treatment and necessary services for the affected populace. In Pakistan, people are highly influenced by false beliefs which led them to suffer in an impoverished socioeconomic setting. Poor literacy rate enhances the graveness of this situation [16]. Therefore, it is crucial to monitor and assess the knowledge regarding schizophrenia in the educated population to come up with revised health policies and campaigns to eliminate the stigma [17,18]. The current study was performed with educated public to evaluate their awareness regarding different aspects of schizophrenia and to evaluate if there has been an increase in schizophrenia-associated knowledge. According to our study, female participants had more knowledge of schizophrenia as compared to males. The T/F and chi-square analysis also showed the same. So, to the best of our knowledge, this study is the first in Pakistan to reveal that females are more aware of schizophrenia as compared to males. This can be supported by the fact that with advancements in daily life, females are working hard to stay up-to-date and connected with the outside world. Naslund, Grande The responses of different age groups were analyzed with each category. This revealed that age groups of 18-22, 23-27, and 33-37 were more aware of schizophrenia and the scores of age groups across the categories and chi-square analysis revealed the same. These results can be supported by the fact that people belonging to the above-mentioned age groups are actively involved in educational activities i.e. through books, internet, online courses, social media,

workshops and seminars etc [19]. There is a study reported by Naslund, Grande that people using social media and other means of communication are more aware of mental disorders like schizophrenia which play a vital role in learning [20]. Based on educational groups, it was observed that graduates followed by postgraduates were most mindful of schizophrenia. Our results were concordant with the study conducted in France by Durand-Zaleski, in which people with tertiary education were having more knowledge regarding the disease. All the scores and chi-square analyses complied with our hypotheses except for education across the category of general information. This contradiction in our results may indicate that graduates and postgraduates are having focused research and working on specific problems instead of trivial matters [21]. Findings of the present study suggest that the general public is aware of the basics of schizophrenia. As a result, it aids in the de-stigmatization of mental diseases in our culture, allowing patients to be accepted. Not only that, but mental health awareness aids in treatment accessibility and early detection of the disease.

## CONCLUSIONS

Schizophrenia is a serious problem that needs attention for its proper management. The study explains that Pakistanis are aware of schizophrenia but those who are not aware are still in higher percentages. Thus, it is high time to educate people about schizophrenia so that the sufferers can lead a life with their basic rights to treatment and care. Such initiatives and studies can help in the elimination of this grave stigma from society. More work or surveys should be conducted to get a clearer picture of society's status and peoples' way of thinking about schizophrenia.

## Conflicts of Interest

The authors declare no conflict of interest.

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