

## An Evaluation of Socio-Demographic Factors Associated with Schizophrenia

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### Abstract

### Original Research Article

**Introduction:** Schizophrenia is a severe mental disorder that affects approximately one percent of the general population worldwide. The pathogenesis of schizophrenia is influenced by many risk factors, both environmental and genetic. The environmental factors include the date of birth, place of birth and seasonal effects, infectious diseases, complications during pregnancy and delivery, substance abuse and stress. At the present time, in addition to environmental factors, genetic factors are assumed to play a role in the development of the schizophrenia. **Objective:** The main objective of this study was to evaluate the socio-demographic factors which are closely associated with schizophrenia. **Methods:** The cross sectional study was conducted at the Department of Mental Health, Sheikh Hasina Medical College, Jamalpur, Bangladesh during the period from January 2018 to December 2018. The data was collected with pre-designed questionnaire by direct interview method. Socio-demographic variables were reported using descriptive statistics and age of onset of first symptom of schizophrenia were compared across gender by Chi-square test. **Results:** The total study population was 86 where the male-female ratio was 1.46:1. In total 37.21% cases were from 26-25 years' age group, 45.35% completed the Secondary Education level, 45.35% respondents were unemployed, 44.19% were unmarried, 45.35% were from middle class family and 31.39% were associated with smoking. **Conclusion:** In this study male were dominating in number. Age, family status, unemployment and life style are some potential factors associated with schizophrenia.

**Keywords:** Schizophrenia, Epidemiology, Risk factors, Family history, Abuse.

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## INTRODUCTION

Over the last decade, we have learned a great deal about the epidemiology of schizophrenia. New data have accumulated, and systematic reviews have enabled us to reevaluate older data. Some of the basic tenets of schizophrenia epidemiology have been questioned. For example, the dogmatic belief that the incidence of schizophrenia varies little between sites has been questioned as has the belief that schizophrenia affects men and women equally [1]. Mental health disorder constitute is a major public health problem which is globally contributed to 13% of the global burden of disease measured as disability adjusted life years. It is a higher burden in low and middle income socioeconomic countries like Bangladesh. Schizophrenia begins in early age of life; causes significant & long lasting impairments; makes heavy demands for hospital care and requires ongoing clinical care, rehabilitation & support services and the financial costs. The burden on

patient's family is heavy & both patient and his or her relatives are often exposed to the stigma associated with illness over generation. So schizophrenia remains major public health problem [2]. Schizophrenia is among the most disabling and economically catastrophic medical disorders, ranked by the World Health Organization as one of the top 10 illnesses contributing to the global burden of disease [3]. Schizophrenia is a clinical syndrome of variable but profoundly disruptive psychopathology, which involves thought, perception, emotion, movement and behavior [4]. The condition as such causes serious distress, suffering, decreases the positive strengths of an individual & affects quality of life. Schizophrenia affects just under 1% of world's population (0.85%). The disease is found in all societies and geographical areas [5]. In year 1990, it was estimated that 3% Disability Adjusted Life Years (DALYs) in 15-44 years age group worldwide were due to schizophrenia. It is estimated that by 2020, 15% of

DALYs lost due to mental and behavioral disorders [6]. From review of 13 different studies, prevalence of schizophrenia identified as 2.5/1000 population, this means that, it is estimated that India has nearly 2.5 million schizophrenics needing care at any point of time [7]. Emerging evidence has an important implication for the role of mental health professionals who need to recognize the bio-psycho-social approach in practice of psychiatry [8]. Our study had an attempt to assess some epidemiological aspects and risk factors in patients with schizophrenia.

## OBJECTIVES

### General Objective

To evaluate the socio-demographic factors which are closely associated with schizophrenia.

### Specific Objective

To know more about schizophrenia in Bangladesh

## METHODS & MATERIALS

This cross sectional study was conducted at a tertiary care hospital at Jamalpur District of Bangladesh during the period from January 2018 to December 2018. According to the inclusion criteria only confirmed cases of schizophrenia visiting in the Department of Mental Health and admitted in psychiatric ward of the hospital during the study period were included as study participants. The total number of participants was 86. The cases were diagnosed by qualified psychiatrist according to WHO ICD -10 classification. The purpose and methodology of study were explained to the psychiatrists for seeking their active cooperation in selection of cases. On the other hand according to the exclusion criteria cases with acute and transient psychotic disorders; persistent delusional disorders; induced delusional disorders; organic psychotic disorders; other non-organic psychotic disorders and seriously ill patients were excluded from study. Using pre-designed questionnaire, data were collected by direct interview of the study subjects who were admitted in psychiatry ward and outpatient Department of Mental Health of the hospital. The questionnaire includes; socio-demographic profile, etiology of disease in terms of agent host environmental factors, age of onset of the disease addictions to the cases of alcohol, tobacco etc. questionnaire related to patients about the symptoms, since how long they are suffering, where they had gone for treatment, taking the treatment regularly or not, improvement in the symptoms following the treatment etc. Clinical profile of all cases recorded which includes history of presenting complaints, general examination, height, weight, pulse, blood pressure, temperature, respiratory rate, any signs of icterus, clubbing, cyanosis, lymphadenopathy, examination of respiratory system, cardio vascular system, central nervous system and per abdominal examination. Drug abuse is defined as self-administration of a drug for nonmedical reasons in

quantities and frequencies which may impair individual's ability to function effectively and which may result in social, physical or emotional harm. Modified BG Prasad classification was used to classify the socio economic status. In family history of disease the first and second degree relatives were considered. Parents, brother, sister were taken as first degree relatives. On the other hand uncles, aunts, grandparents and cousins were taken as second degree relatives.

## RESULT

Among total study population (86) in total 37.21% (32) patients were from 26-35 years' age group. It was the highest proportion and it was followed by 27.91% (24) from 18-25 years' age group, 20.93% (18) from 36-45 years' age group, 9.30% (8) from 46-60 years' age group and 4.65% (4) from  $\geq 60$  years' age group. The male female ratio was 1.46:1. According to educational status of the participants most of them come from Secondary Education completed group, 39 (45.35%). Then 13 (15.12%), 12 (13.95%), 10 (11.63%), 7 (8.14%) and 5 (5.81%) from Primary, Higher Secondary, Bachelor, Illiterate and Masters groups respectively. According to the professional status of the participants the highest number was found in Unemployed group and it was 39 (45.35%). Then 14 (16.28%), 11 (12.79%), 10 (11.63%), 7 (8.14%) and 5 (5.81%) from Dependent, Laborer, Housewife, Business and Employed groups respectively. The highest number of respondents were from unmarried group and it was 38 (44.19%). Then 28 (32.56%), 13 (15.12%), 7 (8.14%) from Married, Separated and Divorced groups respectively. According to the socio-economic class distribution we found maximum 39 (45.35%) patients were from middle class. Then it was followed by Lower class: 31 (36.05%) and Upper class: 16 (18.60%). Some substance abuses are associated with schizophrenia. According to Substance type analysis we found 27 (31.39%), 19 (16.34%), 8 (6.88%), 6 (5.16%) and 5 (4.3%) patients who were in Cigarette, Tobacco (Raw), Alcohol, Tobacco with alcohol and Cannabis with tobacco respectively. According to psycho-social risk factors analysis we found 65 (55.9%) patients engaged in different types of substance abuses. In total 19 (16.34%) participants attempted for suicide at least one time in their life. On the other hand, 33 (28.38%) participants gone with their stressful life for long times.

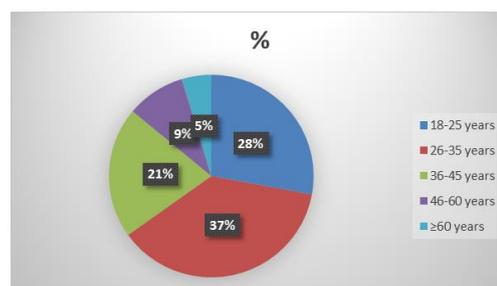


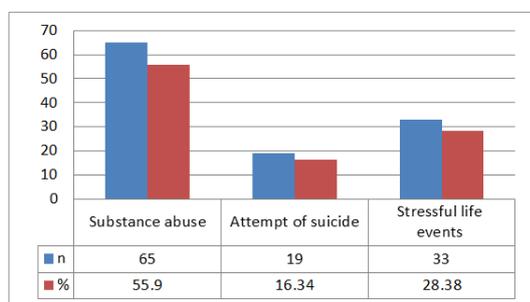
Fig-1: Age distribution of the study participants. (N=86)

**Table-1: Distribution of cases according to socio-demographic profile (N=86)**

Category	n	%
Age		
18-25	24	27.91
26-35	32	37.21
36-45	18	20.93
46-60	8	9.30
≥60	4	4.65
Education		
Illiterate	7	8.14
Primary	13	15.12
Secondary	39	45.35
Higher Secondary	12	13.95
Bachelor	10	11.63
Masters	5	5.81
Occupation		
Employed	5	5.81
Unemployed	39	45.35
Dependent	14	16.28
Housewife	10	11.63
Laborer	11	12.79
Business	7	8.14
Marital Status		
Unmarried	38	44.19
Married	28	32.56
Separated	13	15.12
Divorced	7	8.14
Socio-economic Classes		
Lower	31	36.05
Middle	39	45.35
Upper	16	18.60

**Table-2: Distribution of cases according to the type of substance abuse (N=86)**

Substance Type	n	%
Tobacco (Raw)	19	16.34
Cigarette	27	31.39
Alcohol	8	6.88
Tobacco with alcohol	6	5.16
Cannabis with tobacco	5	4.3



**Fig-2: Distribution of cases according to the psycho-social risk factors (N=86)**

## DISCUSSION

This study was conducted to evaluate the socio-demographic factors which are closely associated with schizophrenia. In a study, Jablensky *et al.*, [9]

studied the incidence of schizophrenia, in WHO DOSMED study, 6 out of 8 sites reported an excess proportion of males over females. Distribution of cases of schizophrenia according to religion shows, 55.55% cases were Hindus. Findings are similar to the study which was conducted by National Institute of Mental Health [10]; prevalence of schizophrenia found at similar rates in all ethnic groups around the world, as in this study population of Hindus is more than other religion. According to the place of residence, 65.27% of cases were from urban area and 34.73% were from rural area; the findings are consistent with McGrath *et al.*, [8]. Marital status of cases shows 44.19% were unmarried. Eaton [10] studied the relation of marital status with schizophrenia, found that marital status has been found to be associated with the risk of schizophrenia; the increased risk of developing schizophrenia for unmarried as compared with married people ranges between 2.6 and 7.2. It has been suggested that marriage exerts a protective effect which delays the onset of illness in women. In our study in occupational status of cases of schizophrenia, 45.35% of cases were unemployed. Carpenter WT *et al.*, [11] studied the epidemiology of schizophrenia; the disease is the fourth leading cause of disability in adults worldwide. In United States, about 80% of persons with schizophrenia are unemployed, a third of homeless persons have schizophrenia. According to the socio-economic status of schizophrenia cases, more than 80% of cases were from middle and lower socio-economic classes. The findings were observed by Clark *et al.*, [12] and Hollinshead and Redlich [13]. In our study we have not consider the family history but that is also a potential factor. Gottles Mann D [14] and Hallmayer J [15], studied the familial risk of developing schizophrenia for people with different degrees of relationship to someone with schizophrenia. Investigator has studied relationship of psycho-social risk factors and schizophrenia, 55.9% were with substance abuse, 16.34% were with attempt of suicide in past, 28.38% had gone through stressful life events. The findings are consistent with studies done by Fenning *et al.*, [16], Cuffe SP *et al.*, [17]. Hafner H *et al.*, [18] studied mean age at different points in the development of schizophrenia for men, and women, Germany, found that the earliest signs of mental disturbance occurred 4.5 years prior to the first admission in males as compared to females. In this study, more than 52% cases showed abuse to tobacco, smoking and/or tobacco and alcohol. Similar findings were observed in Carpenter WT *et al.*, [19], shows 80% of schizophrenics smoke cigarettes and nicotine in patients. Substance abuse does not cause schizophrenia. However, people who have schizophrenia are much more likely to have a substance or alcohol abuse problem than the general population. Addiction to nicotine is the most common form of substance abuse in people with schizophrenia. They are addicted to nicotine at three times the rate of the general population. The relationship between smoking and

schizophrenia is complex. People with schizophrenia seem to be driven to smoke, and researchers are exploring whether there is a biological basis for this need [20].

### Limitations of the Study

There were some limitations in our study. Basically it was a single centered study. The sample size was also smaller. So the findings of this study may not reflect the exact scenario of the whole country.

## CONCLUSION & RECOMMENDATION

The findings will be helpful for farther study and in the treatment procedure of schizophrenia. We would like to recommend for conducting more study related to schizophrenia for getting more clear concepts.

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