



DIFFICULTIES IN THOUGHT, LANGUAGE AND COMMUNICATION: A CROSS-SECTIONAL STUDY OF PSYCHIATRIC PEOPLE IN BANGLADESH

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ABSTRACT

People with Psychiatric disorder (PD) have difficulties in their thought, language and communication skills. In Bangladesh, the frequency of mental disorders is 12.2%, where females are more vulnerable than the male. The main purpose of this study was to find out the thought, language and communication aspects among psychiatric population in Bangladesh. A cross-sectional survey was conducted to meet the study aim, and the data from 70 participants with different types of psychiatric disorder were collected from a specialized mental health hospital in Bangladesh. The participants were between 18 to 65 years old, where the ratio of the male and female was almost equal. A significant (p -value=0.006) relationship was found between language disorder (incoherence) and different types of psychiatric disorder. Professionals, working with psychiatric population need to remain alert to the presence of those issues and refer to appropriate specialists that will increase the wellbeing quality of people with Psychiatric disorder (PD) as well as decrease morbidity.

Contribution/Originality: This study is one of very few studies which have investigated the thought, language and communication aspects among psychiatric population in Bangladesh and significant relationship was found between language disorder (incoherence) and different types of psychiatric disorder.

1. INTRODUCTION

World Health Organization (WHO) defined health is 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' [1] and health promotion is understood as 'actions that support people to adopt and maintain healthy lifestyles and which create supportive living conditions or environments for health' [2] so it is evidently acknowledged that mental health promotion is an integral factor of health promotion. Due to many of the same determinants, there exist some complex interconnections between physical and mental health [3]. The determinants of mental health will positively impact on mental health promotion as well as on the physical health Herman and Jané-Llopis [4]. World Health Organization.. [5] finds out that the mental illness is the disorder of cognition and emotion. More than 450 million people in Asian countries reported to suffer from mental or neurological disorders [1]. Among the adults in Bangladesh, the prevalence of mental disorder (MD) is in 6.5% to 31% and this rate is higher in urban community than rural, and the women are more vulnerable than

men [6]. Mental disorders have greater effects than many other chronic physical illnesses Demyttenaere, et al. [7]. Lack of human resources and inadequate training facilities carriage a serious challenge to mental health care in Bangladesh. Psychiatrists and psychologists occasionally works together but the coordination among the various mental health professionals is challenging due to institutional structures and limitations [8]. In actual fact, mental health promotion is frequently overlooked in health promotion programs in Bangladesh although WHO's definition of health describes that mental health as an integral part of health. More devotion needs to be given for addressing the determinants of mental health in terms of protective and risk factors, particularly in developing countries [9]. Though the management of the people with mental illness is main territory of psychiatrists, other professionals may help in assessment, treatment procedures and intervention. Communication difficulty has identified as the primary symptoms of mental illness among the people where they may exhibit expressive and/or receptive language difficulties and/or the difficulty with voice, articulation or fluency [10]. The frequency of speech and language difficulties in the people who received mental health service was larger than other people Bryan and Roach [11]. Whitehouse, et al. [12] adult mental ill health was highly affected the communication impairments [12]. Children who received psychiatric treatment have demonstrated high prevalence of communication impairment [13]. Different psychiatric disorder hampers the different level of communication skill. When a person's mental health problem is persistent, it hampers the person's daily living activities [14]. Communication disorders are also reported as diagnostic criteria in a range of mental health disorders, for example: autism spectrum disorders, attention deficit disorders, behavioral disorders, developmental language & speech disorders, schizophrenia & psychosis and dementia [15]. In this circumstance, this study was conducted to identify the specific characteristics of Thought, Language & Communication (TLC) among psychiatric people as well as investigate the relationship of TLC with different types of psychiatric disorders.

2. MATERIALS AND METHODS

2.1. Study Population

In this study, every person with PD (Psychiatric disorder) all over the Bangladesh was considered as population. The investigators collected the data from a mental health specialized hospital located in Dhaka, Bangladesh.

2.2. Sample Size Estimation

The researchers determined the sample size for this study using the following equation:

$$n = \frac{z^2 \times p(1 - p)}{d^2}$$

where,

n = required sample size.

z = 1.96 (at 95% CI).

p = prevalence of PD = 0.106

d = precision level = 0.05

$$n = \frac{(1.96)^2 \times 0.106(1 - 0.106)}{(0.05)^2}$$

$$n = \frac{0.364}{0.0025} = 145.6 \cong 146$$

However, the investigators manage to collect data from 70 participants by using convenience sampling method. Because other patients of that hospital were suffering from different types of severe health issues with PDs.

2.3. Ethical Approval and Data Collection

At first, this research proposal was submitted for the ethical committee approval, and they accepted and approved the proposal. And, the investigators took permission from the hospital authority before starting data collection.

Data were gathered by using face to face interview and investigator used a checklist entitled Thought, Language and Communication Scale (TLC) [16]. Following inclusion criteria and exclusion criteria were used during the data collection.

Inclusion criteria: (1) Adult persons with PD who were admitted in National Institute of Mental Health (2) Male and female above 18 years old.

Exclusion criteria: (1) The people with PD who have other health diseases were excluded from the study.

Verbal and written consents were taken from the participants, and they were informed that their participation would be fully voluntary and they had the right to withdraw or discontinue from the research at any time without any hesitation or risk.

2.4. Data Analysis

Data analysis is a crucial part of any research. Descriptive and inferential technique were applied for data analysis. This study uses nonparametric test to determine the significant relationships among thought, language and communication disorder. Statistical Package for Social Sciences (SPSS- version 25) is used for this purpose.

3. RESULT AND DISCUSSION

3.1. Demographic Information

The following bar diagram Figure 1 reveals that among 70 participants who had suffered from different types of PDs, 52.9% participants were below 30 years (where as the lowest age was 18 years) followed by 21.4% were in between 31-40 years old and the lowest participants were in the highest old age group (51-65 years). The average and standard deviation of ages of the participants is 33.41 years and 11.576 years respectively.

The sex ratio is an important issue in the health related research study. Among the 70 participants, 44.3% were female and 55.7% male found in Figure 2.

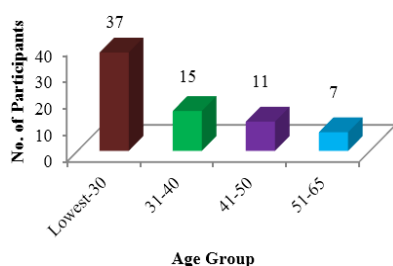


Figure-1. Age Group of the Participants.

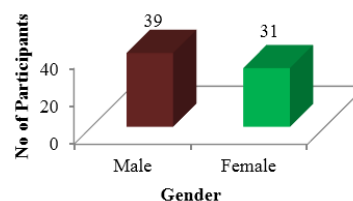


Figure-2. Gender of the Participants.

Figure 3 gives the information about the educational level of the participants. It is clear that most of the participants' educational level is below secondary level where 18.60% were illiterate, 28.60% were primary educated and 30% of them went to secondary school. Only 12.90% have completed higher secondary education, and 10% of them went to university.

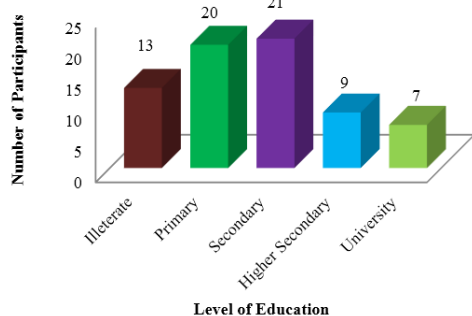


Figure-3. Education Level of the Participants.

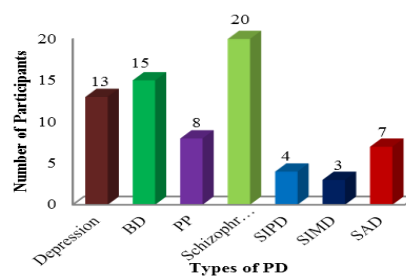


Figure-4. Types of Psychiatric Disorder among the Participants.

The bar chart in Figure 4 shows the percentage of different PDs among the participants. Among the participants, 28.60% of them had Schizophrenia which was the highest of all other disorder followed by Bipolar Disorder (BD) 21.40%, Depression 18.60%, Paranoid Psychosis (PP) 11.40%, Schizoaffective Disorder (SAD) 10%, Substance Induced Persisting Dementia (SIPD) 5.70% and Substance Induced Mood Disorder (SIMD) 4.30%. Findings of the study indicate that people with PDs had different types of difficulties considering components in TLC scale.

3.2. Fisher’s Exact Test for Thought Disorder

From Table 1, the cross-tabulation of the components of thought disorder with the types of PD reveals that the *p-value* for poverty of speech was 0.387 and for illogicality was 0.302 which indicates no significance at 5% level.

Table-1. Fisher’s exact test of thought disorders.

Thought Disorder	Fisher’s Exact Test	p-value
Poverty of Speech	22.481	0.387
Illogicality	24.348	0.302

3.3. Fisher’s Exact Test for Language Disorder

Table 2 shows that the different aspects of communication disorders from mild to extreme level. From the fisher’s exact test, it was observed that the *p-values* for clanging, neologisms and word approximations were greater than 0.05 indicates no significant relationship with types of PD but for incoherence *p-value* was 0.006 which indicates a significant relationship with types of PD at 5% level of significance. Study from all over the world suggests that people with psychiatric disorders has different levels of communication impairment, Elvevåg, et al. [17] mentioned that incoherent discourse, with a disjointed flow of ideas, is a cardinal symptom in several psychiatric and neurological conditions. Speech disorders arise from a variety of causes, organic and psychological. Estimates of the prevalence of speech disorders in the normal population are often based on interpretation of data from small hospital case studies, rather than from screening of populations [18].

Table-2. Fisher’s exact test of language disorders.

Language Disorders	Fisher’s Exact Test	p-value
Incoherence	35.279	0.006
Clanging	17.753	0.797
Neologisms	16.709	0.471
Word Approximations	17.605	0.358

3.4. Fisher's Exact Test for Communication Disorders

Table 3 shows that there is no statistically significant relationship of communication aspects with types of psychiatric disorder. [Andreasen and Grove \[19\]](#) found that 40% of the participants who had paranoid type of PD in their study had poverty of content of speech and [Emerson and Enderby \[20\]](#) found that forty-three percent had problems with spontaneous speech and 59% of those assessed had impaired comprehension.

Table-3. Fisher's exact test of communication disorders.

Communication Disorders	Fisher's Exact Test	p-value
Poverty of Content of Speech	25.831	0.185
Pressure of Speech	23.075	0.405
Distractible Speech	20.879	0.604
Tangentiality	22.593	0.384
Derailment	19.952	0.647
Circumstantiality	15.436	0.560
Loss of Goal	13.736	0.740
Perseveration	10.405	0.950
Echolalia	11.039	0.918
Blocking	20.106	0.204
Stilted Speech	15.945	0.541
Self-Reference	16.725	0.460
Paraphasia, Phonemic	21.158	0.140
Paraphasia, Semantic	21.577	0.509

3.5. Differentials of Psychiatric Disorders

Although there is no significant association found between the types of PD with different factors, the Table 4 represents that the highest percentages of PD was found among the people of 18-30 years whereas the lowest percentages of PD was found in the age group 51-65 years. The ratio of the male and female participants with depression, bipolar disorder and schizophrenia were nearly same. It is also found that the participants with the level of primary and secondary education had highest percentages of PD. The types of PD have no significant association on the participant's age, gender and level of education. Thought, language and communication plays an important role in society for fulfilling a person's daily living activities. A study [Mazumdar, et al. \[21\]](#) found, among schizophrenic patients mentioned that Poverty of speech, tangentially, derailment, loss of goal, perseveration was found to be the commonest thought disorders. Poverty of speech was more pronounced among depressed than schizophrenic subjects [\[22\]](#). They also noted that during their study, poverty of speech increased among schizophrenic subjects, but remained relatively stable or declined among depressed subjects but the processes underlying poverty of speech may differ in schizophrenia and depression.

Table-4. Differentials of psychiatric disorders.

Factors		Types of PD							Percentages	Fisher's Exact Test	p-value
		Depression	BD	PP	Schizophrenia	SIP D	SIMD	SAD			
Age	18-30	3	8	3	13	3	1	6	52.9%	23.018	0.068
	31-40	8	2	0	2	1	1	1	21.4%		
	41-50	1	3	3	3	0	1	0	15.7%		
	51-65	1	2	2	2	0	0	0	10.0%		
Gender	Male	6	8	3	10	3	3	6	55.7%	6.866	0.333
	Female	7	7	5	10	1	0	1	44.3%		
Education	Illiterate	1	3	2	5	0	0	2	18.6%	24.431	0.262
	Primary	3	6	2	7	0	1	1	28.6%		
	Secondary	3	3	3	7	1	2	2	30.0%		
	Higher Secondary	2	3	1	1	2	0	0	12.9%		
	University	4	0	0	0	1	0	2	10.0%		

4. CONCLUSION

Conclusion can be drawn from this study is that even though both speaker and listener know the different meanings of words, which is a necessary condition for sharing a message and a conversation, a breakdown seemed to occur in the communicative competence in patients with PD. Mental health disorders such as depression, anxiety, addiction, schizophrenia and neurosis have a serious impact on the health situation in Bangladesh. At the same time, lack of knowledge, superstitious beliefs and social stigma prevent individuals with mental health conditions from seeking care. People believe that mental disorders are untreatable, or the result of evil influences also plays a role. Women are more vulnerable to experiencing mental disorders and less able to access treatment due to their lower social status. The investigators stress the need for more research to better understand the magnitude of the problem in Bangladesh, better access for patients to qualified mental health professionals as well as speech and language therapy service and mass awareness raising campaigns to reduce misconceptions and stigma about mental health conditions. The findings of the study will help speech & language therapists to work in this area.

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