COGNITIVE DISTORTION AMONG PSYCHIATRIC PATIENTS

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Abstract

The aim of the current study was to identify the level of cognitive distortions among the patients suffering from psychiatric disorder according to age, gender and educational qualification. Cross sectional survey method was followed, using Bangladesh Cognitive Distortion Scale (BCDS, Siddika and Chowdhury, 2013) on 239 patients, suffering from anxiety and depression for assessing cognitive distortion. Among the psychiatric patients 86.2% respondents found to have clinical level of cognitive distortion. Analysis revealed that there is no significant difference in cognitive distortion according to different age groups and gender. But regarding educational qualification, there is significant difference of total score of Bangladesh cognitive distortion scale (p > 0.01) and it is higher among low literate respondents (non institutional to class 5) than high literate.

Introduction

Cognition is thinking or knowledge based on which people perceive themselves, others, and different ongoing situations that leads to develop different feelings. Based on cognition and emotion people behave differently in different situations. Whatever we think is always any kind of automatic thought[1]. When this automatic thought is optimistic and rational, it helps us to adapt to any situation we face every day in our life. But problem arises when our automatic thoughts manifest as cognitive distortions. Cognitive distortions are automatic thoughts that are based on deeply embedded core beliefs, and they are irrational reactions to situations that we face. We often don't even know that we see the world in terms of these cognitive distortions. Just as the name implies, they are based on faulty reasoning[1].

Cognitive distortions are those cognitions which-are logical but irrational, present an unrealistic view of reality, are also maladaptive, because they cause negative mood, impair behavioral functioning, impede productive thinking about the situation and reinforce underlying irrational beliefs and maintain negative thinking and help to maintain negative emotions.[2]

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The cognitive distortions can be defined as a type of reasoning which leads to favor without objective ground. Cognitive distortion is classified in various ways. But most prominent classification of cognitive distortion is following ten types, classified by Burns and Beck[2] and these are - all or nothing/black and white thinking, disqualifying the positive, overgeneralization, labeling mislabeling, mental filtering, jumping to conclusion (Mind reading and fortune teller error), magnification/catastrophizing and minimization, emotional reasoning, should statement and personalization. It may be mentioned that these ten types of cognitive distortions are sometimes very overlapping.[2]

There is empirical support for the association between cognitive distortions and a number of other maladaptive social and clinical conditions, including sexual assault[3], pathological gambling[4], adolescent anxiety and depressive disorders[5], violence and anger in marital relationships[6] and adolescent- and anxiety depression and anxiety[7]. The predominant thinking errors in social phobia are mind reading, catastrophizing and personalization[8]. Among depressive patients in Bangladesh over-generalization and jumping to conclusion was found higher than all other cognitive distortions[9]. Beck reported that GAD patients have different types of cognitive distortion specially catastrophizing, arbitrary inference, personalization, selective abstraction, overgeneralization, dichotomous thinking, and labeling[10].

Some personal characteristics (such as age, gender and educational qualification) may act to influence the rate of cognitive distortions among people[11]. The current study was carried out to investigate the relationship between cognitive distortions among the psychiatric clients and how their personal characteristics such as age, gender, and education influence their cognitive distortions. For this reason, objective of the study was to investigate the cognitive distortions regarding different age groups, gender and educational qualification of the psychiatric patients of Bangladesh. To achieve the objectives researcher investigated the severity level of cognitive distortion by age, gender and educational qualification of psychiatric population and whether cognitive distortion varies among psychiatric population by demographical variables age, gender and educational qualification.

Materials and Methods

Two hundred thirty nine adult psychiatric patients (anxiety, N = 118 and depression, N = 120 and co-morbid, N = 1) participated in the current study. Among the participants 64.3% were male and 34.7% were female and their mean age was 29.23. Respondents were selected through purposive sampling. All respondents were receiving treatment from the outpatient care service of National Institute of Mental Health (NIMH), psychiatric department of Bangabandhu Sheikh Mujib Medical University (BSMMU) and mental health unit of CREA.

Inclusion criteria: Respondent who were diagnosed as anxiety and depressive patient. Exclusion criteria: Patients with substance abuse disorder and psychotic problems.

Following instruments were used in this study.

(i) DSM IV: The criteria of DSM IV (Diagnostic and Statistical Manual for Mental Disorder, 4th edition), for depression and anxiety based disorders was the main assessment tool for assessing the clinical respondents and this assessment was done by psychiatrist and clinical psychologists.

(ii) Demographic variable sheet.

(iii) Bangladesh Cognitive Distortion Scale[12]: This is a 39 item five point likert scale for assessing different types of cognitive distortion. The score ranging from 0 to 156, cutoff point is 56. The norm of the scale for assesing cognitive distortion is mild, moderate, severe and profound when range of the raw score is 56 to 72, 73 to 91, 92 to 109 and 110 to above, respectively. The inter item consistency and test - retest reliability was found to be 0.890 and 0.962, respectively. Concurrent validity is 0.828 and convergent validity is 0.670, area of ROC curve of this scale is 0.949 which indicated excellent performance.

Consent of all respondents was obtained after describing the purpose of the study, confidentiality, freedom of choice and ethical issues. Afterwards the researcher administered the scale along with relevant demographical information. BCDS is a self administered assessment tool for literate respondents, but for illiterate respondents the researcher read aloud the items of the scale and asked them to respond to what they exactly think. Finally, quantitative analysis was done through SPSS 16.

Results and Discussion

In this study researchers predicted that cognitive distortion might be influenced by their demographical variables. From the result, researchers found that 13.8% respondents had cognitive distortion in non clinical level (below cut of point of BCDS) while 86.2% respondents had cognitive distortion in clinical level. The respondent who had clinical level of cognitive distortion, among them 17.6, 22.6, 22.2 and 23.8% had mild, moderate, severe and profound level of cognitive distortion, respectively (Table 2).

Moreover, it was also revealed that, in profound level, the percentage of cognitive distortion of female was more than male; but in moderate level that percentage of male was more than female (Fig. 1). Females have more cognitive, biological, and interpersonal vulnerabilities while facing more stressful events during the transition to adolescence than boys[13]. Hankin and Abramson found that girls tend to demonstrate a more negative style of thinking about the causes of those stressful events, along with more negative thoughts about the self in response to the event.[14] But no significant difference

of cognitive distortion was found in different gender groups (Table 3). This finding is in agreement with Nyarko and Amissah[15] as they also found no significant association between gender and level of cognitive distortions. But it is contradictory to other findings where the researchers revealed that cognitive distortion among the tertiary students in Malaysia significantly lower among males compared to females [15].

Table 1. Demographical description of the respondents.

Demographical variable		Frequency	Percentage
Gender	Male	156	64.3
	Female	83	34.7
Age level	18 to 30	163	68.2
	31 to 40	39	16.3
	Above 41	37	15.5
Educational qualification	Illiterate to class V	38	15.9
	Class VI to SSC	45	18.8
	HSC to Graduate	118	49.4
	Post Graduate and above	38	15.9

The findings are presented below in the following Tables and Figs.

Table 2. Level of cognitive distortion among the respondents.

Level of CD		Percentage (%)	
Non clinical	Below cut of point	13.8	
Clinical	Mild	17.6	
	Moderate	22.6	86.2
	Severe	22.2	
	Profound	23.8	

From Fig. 3, it was found that the respondent who aged above 41, in profound level their cognitive distortion was little bit higher than other age group, it can be because of older adults may be more protected psychologically as well as from social risk due to factors such as socio-emotional selectivity and wisdom, compared to younger adults[16]. But in case of moderate level of cognitive distortion, 30 to 40 age group was higher than other group (Fig. 4). Schaie found that primary mental abilities are relatively stable in mid-life period[17]. But there is no doubt that there are many pressures on middle aged people[18]. In the current study, no significant difference was found in cognitive distortion regarding different age groups (Table 4). This finding was supported by Nyarko and Amissahstudy[15].

The study revealed that, in profound level the cognitions were more distorted among respondents with educational level illiterate to class five, than the respondents with higher educational qualification (Fig. 3). Higher education is associated with less cognitive decline[19]. It was also found that there was significant difference in cognitive
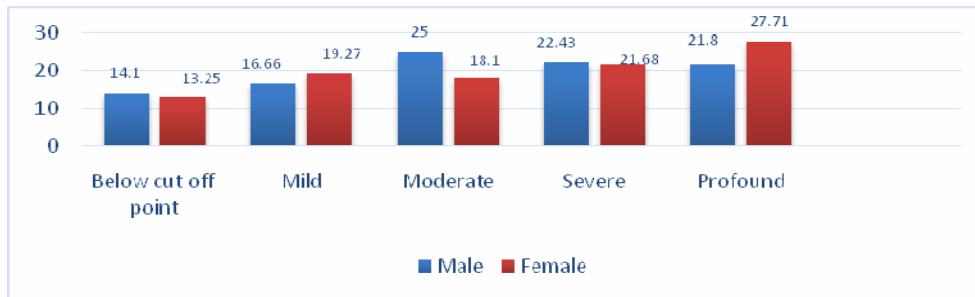

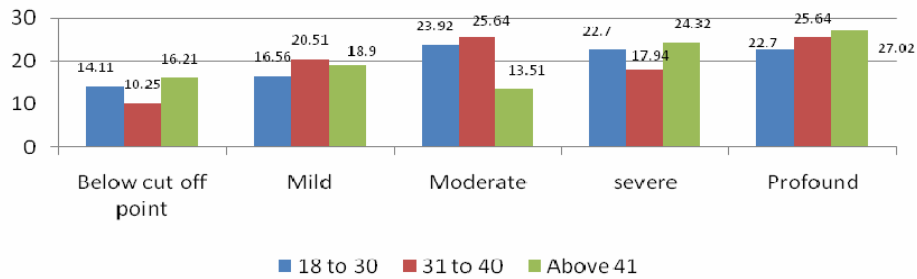Fig. 1. Percentage of the level of cognitive distortion by gender.

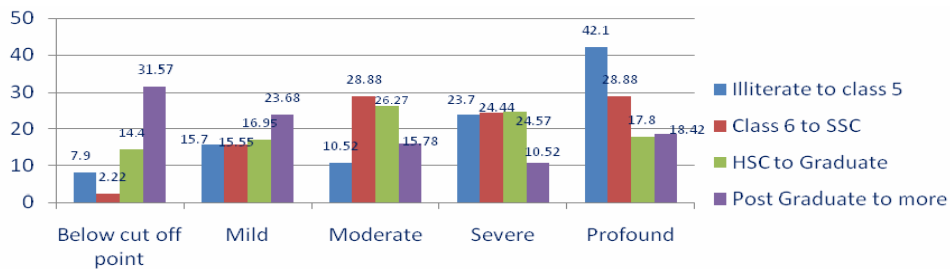Fig. 2. Percentage of the level of cognitive distortion according to age.

Fig. 3. Percentage of the level of cognitive distortion according to educational qualification.

distortion according to educational qualification (Table 5). This findings is not in agreement with Nyarko and Amissah (2014) study as well as Scheider *et al.* (2012) findings where educational level was not associated with change in cognitive performance[20].

The study will therefore not support any attempt to make causal inferences from the findings, especially in the situation where our design had not permitted the researcher to control the possible influence of confounding (different sample size of same variables) variables. Although the study designed with different types of psychiatric population, it has formed interesting findings, but it is essential to indicate some of the limitations that

Table 3. Gender difference in cognitive distortion (One way ANOVA).

Variable		Mean	Sd	F	Sig.
Gender	Male	87.63	27.65	0.123	0.726
	Female	88.98	29.81		

Table 4. Relationship between cognitive distortion and different age level.

Variable		Mean	Sd	F	Sig.
Age level	18 to 30	87.43	27.37		
	31 to 40	89.97	29.41	0.151	0.860
	Above 41	89.08	32.05		

Table 5. Relationship between cognitive distortion and educational qualification.

Variable		Mean	Sd	F	Sig.
Educational qualification	Illiterate to Class V	99.37	40	6.572	0.000
	Class V to SSC	96.32	43		
	HSC to Graduate	85.30	118		
	Post Graduate to above	75.63	38		

the researchers encountered. Firstly, we should design the study with equal sample size in every demographic variable for the purpose of more precise findings. Secondly, findings from specific type of psychiatric population might be more specific for the specific group and finally in order to effectively explore the differences on demographical variable and cognitive distortions, future research should be designed to include non-psychiatric population in the study.

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