

UNDERSTANDING PATTERNS OF COGNITIVE DISTORTIONS

MD. SHAHANUR HOSSAIN



March, 2009



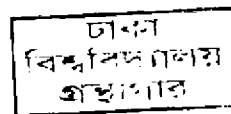
446943

ঢাকা
বিশ্ববিদ্যালয়
গ্রন্থাগার

UNDERSTANDING PATTERNS OF COGNITIVE DISTORTIONS

MD. SHAHANUR HOSSAIN

446943



March, 2009

Subm
partial f

A Dissertation
Department of Clinical Psychology, University of Dhaka, in
fulfillment of the requirements for the degree of Master of Philosophy (M.
Phil.) in Clinical Psychology.

Dhaka University Library



446943

446943



Submitted by

MD. SHAHANUR HOSSAIN

M.Phil. (Part-II)

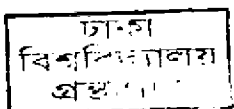
Registration No.: 126/ 2003-2004

Department of Clinical Psychology

University of Dhaka.



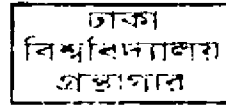
March, 2009



APPROVAL SHEET

This is to certify that I have read the dissertation entitled **UNDERSTANDING PATTERNS OF COGNITIVE DISTORTIONS** submitted by *Md. Shahanur Hossain*, in partial fulfillment for the Degree of **Mater of Philosophy (M. Phil)** in Clinical Psychology, and that this is an original research work carried out by him under my supervision and guidance.

446943

Dated: Dhaka

Roquia Begum
.....
09.03.09

March, 2009**Dr. Roquia Begum**

Professor
Department of Clinical Psychology
University of Dhaka

Dedicated To

My Parents

&

Children having early

Psychological trauma

ABSTRACT

Cognitive Distortion (CD) is the cognition which is logical but not rational that plays a significant role in the development and maintenance of different psychiatric disorders like depression, anxiety etc. Aiming to understand cognitive distortions in Bangladeshi perspective it was designed to explore different patterns of cognitive distortions by thought listing among different psychiatric patients and normal population. Dysfunctional Attitude Scale (DAS Form-A) and General Health Questionnaire (GHQ-28) were also used along with thought listing to understand cognitive distortions comprehensively and its impact on mental health. 10 clinical (mean age=27.3 years, M:F=1:1) and 10 non-clinical (mean age=28 years, M:F=1:1) sample were purposively drawn and they were assessed with qualitative tools along with some quantitative scales. By content analysis it was found that overgeneralization, jumping to conclusion, magnification and minimization, emotional reasoning and labeling-mislabeling types of cognitive distortions were present among most (80-90%) of the clinical sample. On the other hand should statement, emotional reasoning and jumping to conclusion were found among most (40-50%) of the non-clinical sample but the rate was significantly lower than clinical sample. The intensity of magnification and minimization was greater than all other CDs among clinical sample but should statement was most intensive among non-clinical sample. It was also found that all clinical samples had significantly higher rates of cognitive distortion than non-clinical sample and depressive patients among clinical sample had the highest rate of cognitive distortion than all other disorders. It was also found among all clinical and half of the non-clinical samples that CDs had a negative impact on mental health and negatively or positively punishing life experiences contribute a lot to develop the distorted perception pattern. By quantitative analysis it was seen that 100% of clinical and 90% of non-clinical sample had clinical level of dysfunctional attitude that indicates the presence of clinical level of cognitive distortion among both group of sample but there was a significant difference in mean DAS score of the two groups. By relational analysis it was seen that the frequency of cognitive distortion, the DAS score and GHQ total score as well as subscale score were higher among clinical sample than non-clinical sample that indicates an underlying relationship among cognitive distortion, Dysfunctional attitude and General mental health status. The present study concluded that different patterns of cognitive distortions are intensively common among psychiatric clients which influence to deteriorate the psychological quality of life. To prevent and treat those problems and to ensure healthy development of mind Cognitive Behavior Therapy should be available for all.

I would like to show my feeling of respect to my thesis supervisor **Dr. Roquia Begum**, Professor, Dept. of Clinical Psychology, University of Dhaka. She helped me a lot to mature the research idea and methods to pursue the research objectives. I am also very happy to share that my supervisor has contributed a lot to sustain my enthusiasms and motivation to finish this hard job. Her encouraging comments, scientific feedback and guidelines were positively reinforcing to me which were essential factors to generate and sustain my psychic energy. I am heartily grateful to my professor for offering her supervision.

I am also grateful to Professor Mahmudur Rahman, Dept. of Clinical Psychology, University of Dhaka for his friendly support and creative idea. He made me linked with a study circle run by Professor Liakot Ali, Director, Research & education, BIRDEM. The study circle helped me a lot to understand the scientific knowledge and methodology conceptually and operationally for which I am grateful to Prof. Ali too.

I would like to express my gratitude to Dr. Anisur Rahman, Professor, Dept. of Clinical Psychology for his thoughtful suggestion to enrich my study. I am specially grateful to him because this area of research triggered within me by one of his speech.

I would like to offer my special thanks and gratitude to my honorable teachers Kamal Uddin Ahmed Chowdhury, Farah Deeba & Kamruzzaman Mozumder. All of them are very friendly, loving and caring which helped me to finish my research. Discussion with them made me more clear and confident about the phenomena and methodology. They also specially helped me to develop the research instruments.

I am also offering my gratitude to Md. Zahir Uddin, Asst. Professor of Psychotherapy, NIMH, Dhaka; Salma Parvin, Senior Clinical Psychologist, ASF, Dhaka; Selina Fatema Binte Shahid, Asst. Professor of Psychotherapy, Dept. of Psychiatry, BSMMU for their help to develop the research instrument.

I am specially grateful to my friends and all colleagues of our department for inspiring me to finish this work successfully.

Finally I would like to express my all positive feelings towards my parents and family members who have helped and supported me in every respect.

Dated: Dhaka

March, 2009



Md. Shahanur Hossain

CONTENTS

	Page
Approval Sheet	III
Abstract	V
Acknowledgement	VI
List of Tables	X
List of Figures	XI
List of Appendices	XIII
 INTRODUCTION	
1.1 What is cognition?	3
1.1.1 How does cognition develop?	4
1.2 Epistemology or criteria of truth.	6
1.3 What is Cognitive Distortion?	7
1.3.1 Types of Cognitive Distortion	9
1.3.1.1 ALL-OR-NOTHING THINKING	10
1.3.1.2: OVERGENERALIZATION	12
1.3.1.3: MENTAL FILTER	13
1.3.1.4: DISQUALIFYING THE POSITIVE	14
1.3.1.5: JUMPING TO CONCLUSIONS	15
1.3.1.6: MAGNIFICATION (CATASTROPHIZING) OR MINIMIZATION	17
1.3.1.7: EMOTIONAL REASONING	17
1.3.1.8: SHOULD STATEMENTS	18
1.3.1.9: LABELING AND MISLABELING	19
1.3.1.10: PERSONALIZATION	19

	Page
1.3.2 Impact of Cognitive Distortion on Psychopathology	20
1.3.2.1: Impact of cognitive distortion on depression	21
1.3.2.2: Impact of cognitive distortion on panic disorder	21
1.3.2.3: Impact of cognitive distortion on generalized anxiety disorder	22
1.3.2.4: Impact of cognitive distortion on obsessive compulsive disorder	22
1.3.2.5: Impact of cognitive distortion on somatoform disorder	22
1.3.2.6: Impact of cognitive distortion on drug dependency	23
1.3.2.7: Impact of cognitive distortion on Quality of life	23
1.3.3 Development of Cognitive Distortion	24
1.4 Rationale of the study	24
1.5 Objectives of the study	26
 METHODOLOGY	
2.1 Participants	27
2.2 Sample size	27
2.3 Sample selection	28
2.4 Instrument	30
2.4.1 Demographic questionnaire	31
2.4.2 Topic guide	31
2.4.3 Thought listing	31
2.4.4 Thought diary	31
2.4.5 Dysfunctional Attitude Scale (DAS-Form-A)	31
2.4.6 General Health Questionnaire (GHQ-28)	33
2.4.7 Anxiety Scale	33
2.4.8 Depression Scale	34

	Page
2.5 Procedure	34
2.6 Data processing and analysis	38
2.7 Ethical issues	40
 RESULT	
3.1 Different patterns of cognitive distortions	41
3.2 Impact of CD on general mental health	47
3.3 Relationship among CD, DAS and GHQ	49
3.4 Development of Cognitive Distortion	52
3.5 Case Report	54
 DISCUSSION	
	77
 LIMITATIONS OF THIS RESEARCH	
	85
 RECOMMENDATIONS	
	86
 REFERENCES	
	87
 APPENDICES	
	98

LIST OF TABLES

Table No.		Page
Table 1	No. of sample according to different disorders.	27
Table 2	Demographic and some clinical features of clinical sample.	29
Table 3	Demographic and some clinical features of non-clinical sample	30
Table 4	Some clinical features and frequency distribution of cognitive distortion among the sample.	42
Table 5	Hierarchy of patterns of cognitive distortion among different disorder.	45
Table 6	CD score assessed by DAS among clinical and non-clinical sample	46
Table 7	Stress scores assessed by GHQ among clinical and non-clinical sample.	47
Table 8	Stress scores on the sub-scale of GHQ	48
Table 9	GHQ and DAS scores along with total frequency of cognitive distortion among clinical and non-clinical sample.	49

LIST OF FIGURES

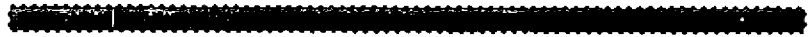
Figure No.		Page
Figure 1	The optimal system of taxa.	9
Figure 2	All or Nothing	10
Figure 3	Mental filter	13
Figure 4	Disqualification of one of the poles.	14
Figure 5	Mind reading.	15
Figure 6	Magnification and minimization.	17
Figure 7	Flow chart of procedure for clinical sample.	37
Figure 8.	Flow chart of procedure for non-clinical sample	38
Figure 9.	Flow chart of data processing and analysis.	39
Figure 10.	Bar of different types of total CD among clinical and non-clinical sample.	43
Figure 11.	Bar of total frequency of CD among each sample	43

Figure 12.	Bar of average CD among clinical and non-clinical sample	44
Figure 13	Bar of most intensive cognitive distortion among clinical and non-clinical sample	44
Figure 14	Bar of average DAS score among the sample	46
Figure 15	Bar of stress score above the cut off point	48
Figure 16	Bar of stress score on sub-scale	49
Figure 17	Line of CD, DAS and GHQ among the sample	50
Figure 18	Mean of CD, DAS and QHQ scores of Clinical and Non-clinical sample	51
Figure 19	Bar of average GHQ sub-scale score among clinical and non-clinical sample	51
Figure 20	Fig-20: Bar of mean score of demographic and clinical data	52
Figure 21	Flow chart of developing cognitive distortion	53

LIST OF APPENDICES

Appendix No.		Page No.
Appendix-I	Guide line to assess CD	98
Appendix-II	list of problem scenarios and CD	99
Appendix-III	Dysfunctional Attitude Scale (DAS-Form-A.	126
Appendix-IV	General Health Questionnaire (GHQ-28) translated version of MOCI along with instructions for the participants.	128
Appendix-V	Data collection format.	130
Appendix-VI	Consent form for clinical sample	133
Appendix-VII	Consent form for non-clinical sample.	134
Appendix-VIII	List of research assistant.	135
Appendix-IX	Permission letter.	136

CHAPTER 1



INTRODUCTION

INTRODUCTION

World Health Organization (WHO) stated that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." These three components of health interact with each other. Due to the development of science and technology physical component of health is under control at a great deal and many life threatening disease like cancer is preventable and effectively treatable. But the prevalence of psychological health problem like depression and anxiety is increasing day by day and it has been predicted by WHO that by 2020 depression will be the leading cause of death (WHO, 2006). In a study of WHO World Mental Health Survey Consortium the prevalence of mental disorders ranged from 4.3% in Shanghai to 26.3% in the United States and it was also found that mild disorders were the most prevalent (prevalence range: 33.1% to 80.9%); (Demyttenaere et al.,2004). Now, if we want to treat effectively as well as to prevent the mental health problem we have to know the causes of mental problems thoroughly. There are different theoretical perspectives like psychoanalysis, behaviorism etc to explain mental health problems. Newly emerging and one of the very dominant perspectives is cognitive behavioral perspective that emphasizes the role of maladaptive thinking behind the mental health problems. So, the current research is an initiative to understand the feature, nature development and role of maladaptive thinking in Bangladeshi perspective.

Psychiatric problem in Bangladesh is very common. Moreover, due to the impact of changing society, people are facing different stressful situation which are also contributing and exaggerating health related problems day by day. Bangladesh is a developing country where unemployment, economic and political instability are very common which are also closely related to mental health (Fuller et al., 1996). Overall multiple contributing factors are available in Bangladeshi culture for which mental health related problems are very common. In a survey of National Mental Health Institute with the assistance of World Health Organization, it was found that 16.1% people of Bangladesh are suffering from different psychiatric disorders which is alarming and threatening to the national development (Firoz et al., 2007). But the mental health service is very poor in Bangladesh and only a few number of

psychiatrists and clinical psychologists are providing clinical services. Research is an essential part for the development of any discipline. Mental health related different studies have been conducting by psychologist since 1950s. Cognitive psychology related research is very few but now a day, this school of psychology is very dominant in the world. Cognitive Behavior Therapy which is an essential part of cognitive psychology is practicing in Bangladesh by Clinical Psychologist since 1997. Cognitive-Behavior Therapy is an action-oriented form of psychotherapy that assumes that maladaptive or faulty thinking patterns cause maladaptive behavior and "negative" emotions. The treatment focuses on changing an individual's inappropriate or irrational thinking patterns, called cognitive distortion. In order to change his or her behavior and emotion cognitive distortion is the prime focus to change in this therapy. Due to cognitive distortion an individual perceives the situation unrealistically which leads to develop an unrealistic and negative view point of the person. Beck (1967) has argued that cognitive distortion, that is, the tendency to misconstrue or distort the significance of events in a way that constitute a negative view of the self, the environment, and the future, plays a central role in the development and maintenance of depression.

So cognitive therapists attempt to make their patients aware of these distorted thinking patterns, or cognitive distortions, and change them by a process termed cognitive restructuring. As Cognitive Behavior Therapy is practicing by mental health professionals in Bangladesh but there is a lack of scientific investigation about cognitive distortion among Bangladeshi clients. Therefore, the current research is designed to understand the pattern of cognitive distortion among different psychiatric patients as well as normal population of Bangladesh.

According to the Oxford English Dictionary (2008) understanding a phenomena means to have a clear knowledge about that phenomena, knowing or comprehending a phenomena. In the current research understanding the phenomena, cognitive distortion was designed to know what cognitive distortion is, what types of cognitive distortions are available among common psychiatric patients as well as among normal population of Bangladesh, how those distorted cognitions are developed among them and how cognitive distortions contribute to develop psychiatric disorders. Conceptually Cognitive Distortion is the cognition which is logical but

not rational (Beck, 1979; Burn & Beck, 1978). Here the difference between logical and rational thinking is very important, debating and critical issue as well. Before that it is important to define cognition and its development clearly.

1.1: What is cognition?

Cognition can be defined as high level CNS (Central Nervous System) functions like learning, memory, thinking, perception etc. Moczynski (2005) said that cognition can be defined as perception, memory, attention, reasoning, problem-solving. Cognition is verbal or pectoral events in a stream of consciousness usually based on attitude or assumptions (schema) developed from early experience (Beck, 1979). A cognition refers to the way we look at things - what we say about something or someone to ourselves." (Burns, 1980). Cognition describes the acquisition, storage, transformation and use of knowledge (Margaret Matlin, 2002). Cognition is mental process like perception, memory, imagery, language, problem solving, reasoning and decision making (Margaret Matlin, 2002)

The way we look at different phenomena is our cognitive process about those phenomena. But this cognitive process depends on the prior knowledge and experience about that phenomena. In this sense our cognition is very close to our knowledge of different phenomena because in different situation what will we think, how will we solve problem, how will we perceive it etc. are greatly influenced by our knowledge. *So, in conclusion it might be said that cognition is an ability to observe the world, to understand different phenomena which leads to exhibit different behavior.* People exhibit different behavior in same situation because they observe and perceive the situation differently which leads to develop different feelings and behavior. These different observation, perception, feeling etc. vary due to different echo-bio-psycho-social factors. Among psychological factors our personality, intelligence, mental state etc. are predominant influencing factors. As different variables influence our perception so we experience situations differently. Among these factors cognitive distortion is one of the most influencing variable which causes to develop and maintain different psychopathology such as depression, anxiety etc. due to long term faulty perception. Development of cognitions is a life long process and there are different theoretical perspectives for cognitive development.

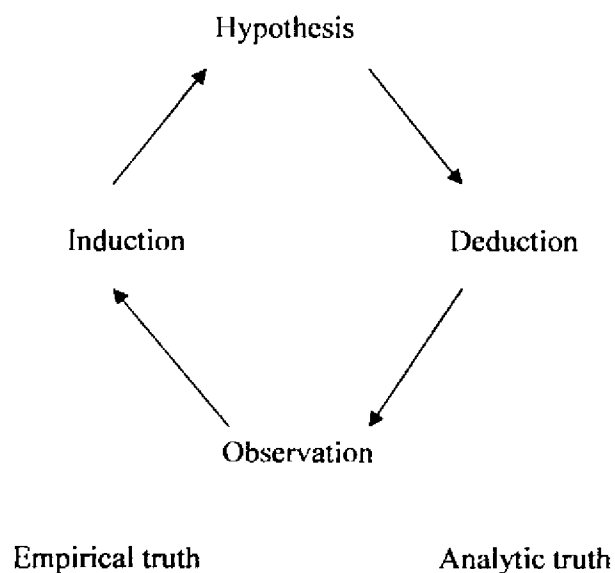
1.1.1: How does cognition develop?

Cognition develops through an interactive process between individual and environment. A child is born with some reflex actions but gradually develops knowledge about different phenomena of the world such as, food, mother, father etc. There are different philosophical view points on cognitive development which are as follows:-

- **Constructivism:** Constructivism holds the belief that cognitive construct develops through self-motivated action in the world.
- **Nativism:** According to this theory cognitive ability is innate rather than acquired and cognitive development is the unfolding of innate knowledge and abilities.
- **Empiricism:** Empiricist view of cognitive development holds the idea that cognition develops by gradual acquisition of knowledge through experience.

Jean Piaget, a Swiss psychologist (1896–1980) was one of the most prominent scientist who formulated a theory of cognitive development based on constructive view. According to this theory people achieve cognitive abilities through self motivated action in the world. Piaget called this cognitive construct as schemata by which people perceive their world. He divided the period of cognitive development into four stages such as Sensorimotor period (years 0-2), Preoperational period (years 2-7), Concrete operational period (years 7-11) and Formal operational period (years 11-adulthood). Through these stages people gradually acquire sophisticated knowledge. In sensorimotor stage children experience the world through movement and senses (use five senses to explore the world). During the sensorimotor stage children are extremely egocentric and cannot perceive the world from others viewpoints. Preoperational stage is dominant with magical thinking which are mostly not logical. Egocentrism begins strongly and then weakens in this stage. During concrete operational stage children begin to think logically but they are very concrete in their own thinking. Children can now conserve and think logically but only with practical aids. They are no longer egocentric in in this stage. Development of abstract reasoning are achieved during formal operational stage. In this stage children develop abstract thought and can easily conserve and think logically in their mind.

Another psychologist George Kelly (1905-1966), in his personal construct theory mentioned that there is no universal fact about different phenomena. A phenomenon is what people think about the phenomenon or how they explain and perceive it. Every person has their own construct about the world by which they construe their surroundings. Kelly (1955) added that every man or woman is a scientist and they develop their construct about the world like a scientist as for example people experience events, perceive similarities and differences among those events and formulate concepts or constructs to order phenomena. And on the basis of these constructs people anticipate events. Some people are capable of viewing life in many different ways, whereas others become dependent on a set interpretation which is rigid also. It is a challenging issue for people to view life from multiple perspectives like scientist as follows:



This model indicates that by observation and inductive method people find empirical truth and knowledge and by hypothesis testing and deductive method people find analytic truth and knowledge. Become fixated in any one method make people rigid that may lead to develop dysfunctional attitude, feelings and behavior.

Kelly (1955) concluded that every people attributes and perceives different phenomena according to their own cognitive constructs which are true to them. And cognitive therapy indicates that individual's positive, negative feeling and action in different situations are determined by their cognitive processes. So to lead a harmonious, productive and happy life the cognitive construct and knowledge system have to be developed on the basis of criteria of fact that will make people logically and empirically sound to ensure better mental health. For this reason people have to consider the epistemology or criteria of truth which are as follows

1.2: Epistemology or criteria of truth:

Hamlyn, (1970) stated the following four basic epistemology or theory of knowledge to evaluate any knowledge.

- Correspondence theory: A belief is true if it matches reality.
- Coherence theory: Something is true if it is internally consistent.
- Pragmatist criterion: A belief is true if it is useful or produces practical benefit.
- Consensus criterion: Truth is inter-subjective and is shared and uphold by a group of people.

If people can think based on the above criteria then their thinking will be empirically and analytically sound which will promote positive living. Our limbic system of the brain controls our thinking which is automatic. So all thinking is automatic but the problem occurs when it becomes negative automatic thinking as for example, I am low intellect Person- is negative because this type of automatic thinking makes our self-esteem low which produces negative emotion such as depression, anxiety etc. And this type of negative emotion leads to develop negative behavior pattern. Now the question is how that individual knows, "he is low intellect". It might be that he failed to achieve a certain goal which was important to the individual. From that experience the person may believe that he is low intellect. But he might have other experiences of previous success which are not coherent and correspondent to his

cognition. Moreover, this type of cognition produces shame, low self-esteem, fear of being failure etc. which are not practically beneficiary because this type of feelings are negatively correlated with positive performances. According to consensus theory, a belief is true if a significant number of people or evidence support that. But in the above example, this rule is violated. So considering the above perspective the person's cognition "I am low intellect" is not true or rational for that individual. Therefore if people want to lead a positive and productive life they have to have control over their negative automatic thinking or cognitive distortion.

1.3: What is Cognitive Distortion?

The term cognitive distortion was firstly introduced by Albert Ellis (1962) in his rational emotive therapy. Afterwards, Aaron T. Beck (1963, 1964) also used the term in his cognitive therapy which is now the prime focus in cognitive behavior therapy also. The term is traditionally defined as fallacious reasoning that plays a crucial role in the emergence of certain mental disorders like depression, anxiety etc.

David Burns and Aaron T. Beck (1978) defined the cognitive distortion as logical but not rational thinking.

The cognitive distortions can be defined as a type of reasoning which leads to favour without objective grounds (Paul Franceschi, 2005).

Cognitive distortion is systematic error in reasoning, often stemming from early childhood errors in reasoning; an indication of inaccurate or ineffective information processing.

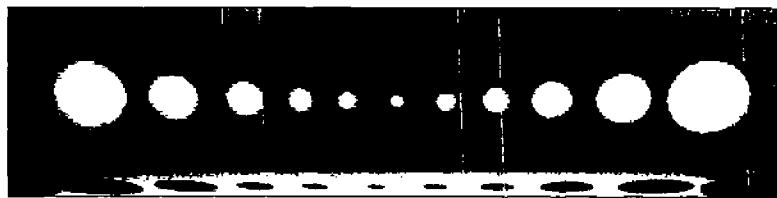
Everything we think is an automatic thought. A problem arises when our automatic thoughts manifest as cognitive distortions. Cognitive distortions are automatic thoughts that are based on deeply ingrained core beliefs, and they are irrational reactions to situations that we face. We often don't even know that we see the world in terms of these cognitive distortions. Just as the name implies, they are based on faulty reasoning (Carleson, 2008).

Cognition is thinking or knowledge based on which people perceive themselves, others, and different ongoing situations that leads to develop different feelings. And based on cognition and feeling people behave differently in different situations. Cognitive distortion is a cognitive process which produces negative cognitions that may or may not have contextual basis or explanation but produces negative feelings within mind and body of an individual. In Cognitive Behavior Therapy it is believed that perception of different situations plays an important role in developing and maintaining different psychiatric disorder. Among the perceptual process cognitive distortion plays an important role for which people suffer from various emotional and behavioral problems.

According to Beck, 1979; Beck et al.,1979; Burns, 1980 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
- also maintain negative thinking and help to maintain negative emotions

Cognitive Distortion usually distorts the reality because it creates unrealistic view of perception. Therefore people with cognitive distortion could not see the real picture of the reality. The following figure-1 indicates that an event has both positive and negative side but there is a continuum between positive and negative side. To perceive according to this continuum is normal perception which maximize the reality perception.



-1, -.80, -.60, -.40, -.20, 0, +.20, +.40, +.60, +.80, +1

Fig.1. the optimal system of taxa

For the current research cognitive distortion was operationally defined as cognitions which are not epistemologically sound and lead to negative as well as maladaptive feeling and action. Here epistemologically not sound means when a cognition is not correspondent to reality or not internally consistent or not consensus or has lack of practical benefit. According to cognitive behavior therapy all of our behavior is mediated by our cognition. When we are preoccupied with positive thinking we feel better and behave accordingly. Similarly our negative thinking leads negative feeling and negative behavior. According to Kelly's theory of personality people think about different situations according to their own personal construct and logic. If every people think and act in a completely different manner everywhere of our life will be chaotic. So, for all of our own interest we develop and practice some knowledge which is correspondent with reality, internally consistent, practically beneficiary and shared by most of the people of that culture. But sometime people develop cognition from their life experience which leads them to perceive different life situation maladaptively and distortedly.

1.3.1: Types of cognitive distortion:

Cognitive Distortions were originally defined by Beck (1967) as the result of processing information in ways that predictably resulted in identifiable errors in thinking. In his work with depressed patients Beck defined six systematic errors in thinking: Arbitrary inference; Selective abstraction; Overgeneralization; Magnification and minimization; Personalization; and Dichotomous thinking. Years later Burns and Beck (1980) extended and specified ten common cognitive distortions among different client's groups (Freeman et al., 2005). These are as follows

- All or nothing (dichotomous reasoning)
- Overgeneralization
- Mental filter (selective abstraction)
- Disqualifying the positive
- Jumping to conclusion / arbitrary inference (mind reading, fortune telling)
- Magnification-minimization (CATASTROPHIZING)
- Emotional reasoning
- Should statement
- Labeling mislabeling
- Personalization

1.3.1.1: ALL-OR-NOTHING THINKING: All or Nothing, or Black and White thinking is the thought pattern that allows us to see things completely good or bad, perfect or awful, black or white categories, ignoring completely the presence of degrees or of intermediate steps. Due to this cognitive distortion events seem to be wonderful or disastrous; feeling like a genius or an idiot; nothing is just okay or average. *As for example if I am not totally successful, I am a failure.*



Fig. 2. All or Nothing

But the reality does not support this type of dichotomous thinking because most life events are not 'completely disastrous' or 'absolutely wonderful' but contain elements of both good and bad. Therefore All or Nothing thinking distorts reality and it is also emotionally arousing

which causes over-dreaming and maintains depression. The more we polarize our thinking the more likely we have to be depressed because extreme type of thinking stimulates the emotions much more. Statements like "I'm a terrible person!" or "She's perfect; she's a saint!" or "I'm just a failure!" oversimplify life and cause massive emotional swings. Few marriages, holidays or jobs are 'completely disasters or 100% perfect' but has different elements within them. A child failing a math exam could say to themselves: 'I'm just plain stupid!' or they could say: 'I'm bad at math but I'm pretty good at English' or sport, art etc. The first statement is Black or White while the second focuses on lots of different elements and is not indicative of depressive thinking. The later thinking pattern also matches with reality and produces helpful feelings which will help the child to be confident to do better in math in the following exam. But people become habituated on thinking and talking in an 'All or Nothing' way because it is much more emotionally exciting, and so may be difficult to give up. However, we all talk like this at times, particularly when excited or angry and usually use the following words.

Always	Never	Perfect
Impossible	Awful	Terrible
Ruined	Disastrous	Furious

Though everybody may use these extreme words in their life but pervasive use may leads to develop psychopathology because in daily life people has to face different situations where using these words is not practical and rational. As for example if we consider the following question based on the above words then the life will be much more difficult.

Can I be basically an intelligent person and still do something stupid?

Can I love my children and still get angry with them sometimes?

Can my partner love me but sometimes be insensitive?

Can one part of my life be difficult and other parts be easier and more

enjoyable?

Can a part of my life be difficult now but in the future get easier?

Can some parts of an experience (such as a social engagement or vacation) be awful and other parts of it be OK?

Becoming less rigid in our thinking allows us to avoid using All or Nothing statements that depress ourselves without examining their validity.

1.3.1.2: **OVERGENERALIZATION:** Building up one thing about oneself or one's circumstances and ending up thinking that it represents the whole situation. For example: "Everything is going wrong, because of this mistake" or "believing that something which has happened once or twice is happening all the time, or that it will be a never-ending pattern", "I will always be a failure", "No-one will ever want to love me" and the like.

As we go through life, we learn from our experiences. It is a natural process of trial and error. Problems arise when we lump all similar experiences together and decide that all experiences of a certain nature will always turn out the same way.

Probably the most common mistake we make in our automatic thinking is overgeneralization. Because we all think about new experiences in terms of old experiences. We recognize most easily those qualities in a person or thing which we have seen before. The baby just learning to talk may call all men "Da-Da". But the baby will quickly learn to see the differences between different men. Generalization as a stage we go through in learning is not only acceptable; it is necessary. Until we recognize Bessie as a cow, we'll never be able to attend to the special characteristics-the clipped ear, the long tail-that make Bessie different from the other cows. We get into trouble when we stop at the generalization stage ignoring the continuous learning. Continuous learning is important because it makes us more flexible to cope with different life situations.

Because our automatic thoughts are based on our memories of past experiences, we might expect that many of those thoughts will tend to be generalizations that distort our perception of what we see. But because our automatic thoughts are automatic, it's very easy for us to stop with the generalizations, to accept them without examining them further. The strength of this cognitive distortion accounts for the prevalence of stereotyping in much of our thinking about other people. If we accept our automatic thoughts as reliable, we will probably conclude that all Blacks, or all Whites, or all Chicanos, or all Scandinavians are alike. And the less we actually know about a certain group of people, the stronger and clearer will be our stereotype.

The kind of overgeneralization that gives us the most trouble is the kind we make about our own performances and capabilities. If we've done poorly on essay exams in the past, when we find out that we have to take an essay exam our automatic thought may be, "I do poorly on essay exams." I am generalizing from one or two experiences of a certain kind to all experiences of a certain kind. But this makes no sense at all until I have examined the differences, as well as the similarities, between the present task and the past one

1.3.1.3: MENTAL FILTER: Picking out a single negative detail and dwell on it exclusively so that the vision of all reality become darkened like the drop of ink that discolors the entire beaker of water. It is also called selective abstraction as for example *because I got one low rating on my evaluation which also contained several high ratings; it means I'm doing a lousy job.*

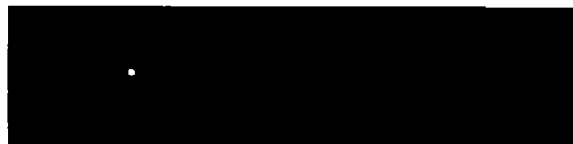


Fig-3: Mental filter

In this cognitive distortion, we concentrate so strongly on one aspect of a task or a situation that we can't even see the rest. In those situations all our automatic thoughts deal with this one concern, for example, if we ran out of time on a previous test, we may find ourselves so preoccupied with the time limit that we have trouble concentrating on the questions during current test. Five minutes into an hour-long test, we find ourselves glancing at the clock. The

automatic thought that keeps coming up is, "I'm going to run out of time." It may also be true that we can work faster on this test because we know the material better, but the cognitive distortion filters out that fact, and all the others that might help us. If we concentrate on a negative comment and filter out all the positive ones, we will nearly always be disappointed with our performance, even when we ought to be proud of it.

1.3.1.4: DISQUALIFYING THE POSITIVE: Rejecting positive experiences by insisting for some reason or other which is contradictory with everyday experiences such as "*I did that project well, but that does not mean I am competent, I just got lucky*".



Fig-4: Disqualification of one of the poles

This is an extreme form of all-or-nothing thinking in which we filter out all the positive evidence about our performance, and only attend to the negative. It is all-or-nothing thinking, without the "all"! This cognitive distortion produces automatic thoughts that reinforce negative feelings and explain away positive ones. If we have ever tried to argue someone out of a bad mood, we have probably seen this cognitive distortion from the outside. If we have ever been in a bad mood ourselves, we may have seen it from the inside. Usually people who are caught up in this cognitive distortion are genuinely depressed about something, but it may be something that has no obvious connection with the topic at hand. Someone who is disqualifying the positive can't discuss a subject rationally because he is using a double standard. He always counts negative evidence, no matter how weak or irrelevant that is. On the other hand positive evidence, no matter how strong or persuasive, can be explained away. The "logic" behind it goes something like this: Things are bad, so why not make them worse?

1.3.1.5: JUMPING TO CONCLUSIONS: To make a negative interpretation even though there are no definite facts that convincingly supports the conclusion. This cognitive distortion consists of going beyond the evidence we actually have and reaching a conclusion that makes things look worse than they are. There are two subtypes of this cognitive distortion as below:

a) *Mind reading*. Assuming the intentions of others and believing that we know what others are thinking without checking it out, as for example *he is thinking that I don't know the first thing about this project*.

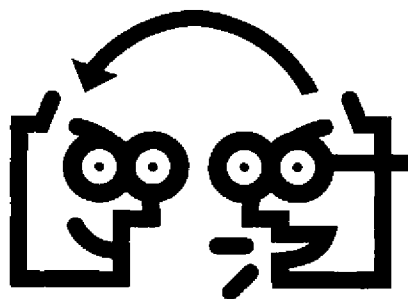


Fig-5: Mind reading

Often we assume that we know what people are thinking about us, even if their actions are neutral or indicate the contrary. This is referred to as mind reading. Everybody knows that we can't really read minds. If we're having a conversation with somebody and they correct us about something, we are likely to automatically think, "Oh, no, they think I'm an idiot!" This is probably not true; we are much more critical of ourselves than others are of us. In fact, they probably didn't even think anything at all about our mistake. But mind reading may affect our behavior for the rest of our conversation with that person, and this might make for some negative outcomes.

In mind reading, our automatic thoughts assume the worst about what other people think about us and our work. It is often combined with other cognitive distortions. We may use a mental filter to exclude other people's positive reactions to us and then read a whole set of negative reactions into what's left.

It is assumed that Mind reading is one of the cognitive distortions that can directly affect our writing also. If we assume that our readers already have made up their minds about the topic we are writing, then our writing becomes a rather silly academic exercise, trivial and pointless. Many students often say "it's worthless to write more clearly using more interesting examples because I'm not going to change anybody's mind." Interestingly enough, this claim is hardly ever based on any evidence such as asking them about what they really do think. It is a feat of mind reading.

b) *The Fortune Teller Error*. Anticipate that things will turn out badly, and feel convinced that one's prediction is an already-established fact. When we assume that we know what will happen in the future, we are fortune telling. Roni is looking for a job. But whenever he wants to forward his resumes, he thinks, "I have no possibilities to be considered for these jobs." However he sends out the resumes, but never follows up with a phone call. As he has automatically assumed that he won't get the jobs, he doesn't try very hard to be better than the other applicants. He has convinced that they are better than him. His fortune telling in this situation prevents him from putting forth any effort. Not surprisingly, he doesn't get the jobs, but it is because his negative fortune telling is controlling his behavior. Often we try to predict the future situations without any evidence to support our claim, and sometimes we even try to predict an outcome when there is evidence to the contrary. Negative fortune telling without proper objective evidence sets us up for failure.

In this form of jumping to conclusions, we assume what is going to happen in the future before it happens as for example a woman go to the therapist about two-thirds of the way through the semester and said she wanted to drop the class. Her logic was "I took this class before and failed the examination, and I think I'm just going to fail it again.". Moreover people often think "My essay is going to be too short." "I know the teacher is going to hate my report." (This last one combines mind reading with fortune telling. Fortune telling can be an especially dangerous cognitive distortion because our negative automatic thought about a future event can easily become a self- fulfilling prophecy: Because I expect to do poorly, I don't try very hard. Fortune telling is a process of setting negative goals for and then living down to them.

1.3.1.6: **MAGNIFICATION (CATASTROPHIZING) OR MINIMIZATION:** Exaggerating the importance of things (such as our failure or someone else's achievement), or inappropriately shrinking things until they appear tiny (our own desirable qualities or the other fellow's imperfections). This is also called the "binocular trick."

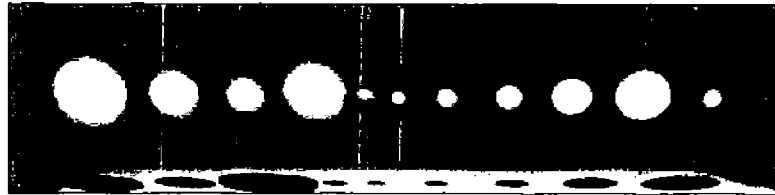


Fig-6: Magnification and minimization

This cognitive distortion consists of seeing the positive results of our actions as smaller and the negative results as bigger than they really are. It is sometimes called "catastrophizing" or, more informally, "making a mountain out of a molehill." Like all-or-nothing thinking, it is a favorite cognitive distortion of perfectionists. People who apologize for good work are almost always magnifying and minimizing. They see six comma splices as more important than five pages of clear argument and sound evidence. They look at their errors through binoculars, but when they look at their virtues, they turn the binoculars around and look through the big end. In the same way due to magnification people evaluate the danger as more disastrous than the danger really is. This type of catastrophic perception exaggerates the feeling of worries as well as the somatic complains.

1.3.1.7: **EMOTIONAL REASONING:** Making decisions and arguments based on how we feel rather than objective reality. Often we assume that our emotions necessarily reflect the way things really are: "I feel it, therefore it must be true." As we've seen, sometimes our automatic thoughts are based on irrational assumptions. If we stop and think about them rationally, breaking them down based on solid evidence, then we see them as irrational and replace them with new, more rational viewpoints. If we analyze them with emotional reasoning, we feed them and come to faulty conclusions. Basically, in emotional reasoning our thoughts and beliefs come from our feelings. If we are getting ready to give a speech in a meeting and feel nervous, we might think, "Obviously I am not very well prepared. Otherwise

I wouldn't be so nervous. I'm going to prove myself as a fool!" Even though we spent several hours the day before preparing materials and information for this presentation, we are discounting this fact because we are nervous about speaking in front of our boss and co-workers. Nervousness is a normal emotional reaction to the situation, but it doesn't mean that we don't know the material. This reasoning doesn't work because the only evidence used is the way we feel in a certain situation, and it doesn't take into account all the other factors operating at the time.

1.3.1.8: SHOULD STATEMENTS: Concentrating on what we think "should" or ought to be rather than the actual situation we face. Applying the rigid rules which we think should, ignoring the circumstances, also indicates cognitive distortion because this type of thinking distort the reality. The emotional consequence of should statement towards self is guilt and shame. When we direct should statements toward others, we feel anger, frustration, and resentment. As for example when an emergency caused a therapist to be five minutes late for the first therapy session, the new patient thought, "He *shouldn't* be so self-centered and thoughtless. He *ought to be* prompt." This thought caused her to feel sour and resentful. Should statements generate a lot of unnecessary emotional turmoil in our daily life. When the reality of our own behavior falls short of our standards, our shoulds and shouldn'ts creat self-loathing, shame, and guilt. Many times performance of other people does not satisfy our expectation and should statement towards others will make us feel bitter and anger.

Many authors stated that shoulding is criticizing ourselves by concentrating on all the things we should do instead of whatever we are doing at the time. Suppose, I am watching a movie and thinking that "I should be studying. This thinking will diminish the possible enjoyment we could be getting out of watching the movie. We also make it much less likely that we will actually do all those things we "should" be doing. By simply saying, "I should be studying," we make it into a chore completely devoid of any benefit, and we won't want to do it. If instead we think, "If I study now, I will have more time tomorrow to hang out with my friends, and I'd rather hang out with them tomorrow than watch this movie right now," then we are weighing our options and making a decision to study that will yield a positive result. Some shoulds are even more harmful such as "I should be reading a classic novel by Dickens rather than this science fiction because I need to get smarter," is worse because it is based on

the idea that we should spend even our free time doing what other people expect of us rather than what we enjoy or think is right. A great example is people who go to college because they think that they “should.” Though evaluating all the options they decide that college is not the best option for them. So should statement can lead us to make major life decisions that are not necessarily the actual best choices.

1.3.1.9: LABELING AND MISLABELING: This is an extreme form of overgeneralization. Instead of describing our error, we attach a negative label to ourselves: when the performance in our job goes down instead of up, we might think, *"I'm a failure" instead of "I made a mistake."* when someone else's behavior misguides us into a wrong way, we attach a negative label to him: "He's an evil." Mislabeled involves describing an event with language that is highly colored and emotionally loaded.

Labeling is similar to overgeneralization. It can take the form of making sweeping overgeneralizations about a group of people based on the actions of only a few of them. It can also manifest as self-labeling. Self-labeling can have extremely negative effects. If a student gets a bad grade on a math test and automatically says, “I’m a bad math student,” he won’t take the steps necessary to improve his math skills. “Bad math student” is a label that he has applied to himself, and it most likely is not true. With further study, this student would be able to figure out what he did wrong and how to do it right. Instead, by labeling himself as a “bad math student,” he doesn’t have to take responsibility for doing the work to learn about math. These labels are self-defeating and irrational also.

1.3.1.10: PERSONALIZATION: This distortion is the mother of guilt! We assume responsibility for a negative even when there is no basis for doing so. We arbitrarily conclude that what happened was our fault or reflects inadequacy, even when we were not responsible for it. For example, when a patient didn't do a self-help assignment a therapist had suggested, he felt guilty because of his thought, "I must be a lousy therapist. It's my fault that she isn't working harder to help herself. It's my responsibility to make sure she gets well." When a mother saw her child's report card, there was a note from the teacher indicating the child was not working well. She immediately decided, "I must be a bad mother. This shows how I've failed."

Personalization causes one to feel crippling or disabling guilt. We suffer from a paralyzing and burdensome sense of responsibility that forces us to carry the whole world on our shoulders. We have confused *influence* with *control* over others. In our role as a teacher, counselor, parent, physician, salesman, executive, we will certainly influence the people we interact with, but no one could reasonably expect us to control them. What the other person does is ultimately his or her responsibility, not ours.

These types of cognitive bias or problems are usually found among anxious and depressed clients. Anxiety based disorder vary based on cognitive distortions. According Rational Emotive Behavior Therapy it is believed that one or more core irrational beliefs are specific to and at the root of most psychological maladjustment. As for example believing that one should be loved by everyone for every thing one does may leads to develop depression because in reality it is not possible that everyone will love any body for everything.

1.3.2: Impact of cognitive distortion on psychopathology:

Cognitive therapy was developed by Aron T.Beck at the University of Pennsylvania in the early 1960s at a structured, short-term, present-oriented psychotherapy for depression. It focuses in solving current problems and modifying dysfunctional thinking and behavior (Beck, 1964). Different adaptations have been made in cognitive therapy but the theoretical assumption remains constant. In a nutshell, the cognitive model proposes that distorted or dysfunctional thinking (which influences the patient's mood and behavior) is common to all psychological disturbances.

We all experience cognitive distortions to some extent but people with **anxiety** and **depression** tend to experience greater and more frequent distortions. A few of the most common ones are catastrophising, black and white thinking, and minimization(Sykes, 2008). According to cognitive-behavioral model of psychological disorder it claims that disorders result from learning maladaptive ways of thinking and behaving. Maladaptive thinking is characterized by distorted thinking or thinking error or biased perception or cognitive bias or dysfunctional assumption which leads to maladaptive feelings and behavior. Different types of cognitive distortions predominantly influence different types of disorder. As for example the predominant thinking errors in social phobia are mind reading, catastrophising and personalization (Wells, 2004).

1.3.2.1: Impact of cognitive distortion on depression:

Research shows clearly that people who experience extreme emotions ('positive as well as 'negative') are much more prone to depression. Depression is characterized by pessimism, low self-worth and self-confidence, and having difficulty in making decisions and problem-solving (e.g., Donaldson & Lam, 2004; Lewinsohn, 1992). Cognitive theories of depression have long held that the tendency to systematically appraise stressful events in an irrational or distorted manner predisposes an individual to experience dysphoric emotions (Haaga, Dyck, & Ernst, 1991). Depressed patients have consistently displayed greater cognitive distortion than non-depressed individuals (Barnett and Gotlib-1988; Dobson and Shaw-1986; Marton et al., 1993). Cognitive distortion was associated with more severe symptoms of depression, lack of social self confidence and greater introversion (Marton & Kutcher, 1994). The etiological role of cognitive distortion in depression is far from certain (Barnett and Gotlib 1988; Coyne and Gotlib, 1983).

1.3.2.2: Impact of cognitive distortion on panic disorder:

People feel anxiety when they perceive threat to themselves from external or internal events, and this occurs if they perceive their reality distortedly. As for example a client with panic disorder catastrophe his/her bodily symptoms and overgeneralize that he is going to die. They also have the tendency of mental filtering for their symptom. Cognitive model of panic disorder have proposed that panic attacks result from the catastrophic misinterpretation of certain bodily sensations, (Noda et al., 2007). Cognitive models of panic disorder have emphasized the role of cognitive distortions in the maintenance of this disorder (Silvia et al., 2008). However, in panic disorder, cognitively based research to date has largely focused on catastrophic misinterpretation of bodily sensations (Casey et al., 2004). In case of panic disorder, anxiety elicited by bodily sensations influenced catastrophic beliefs which, in turn increased avoidance and avoidance increased the anxiety, elicited by bodily sensations (Hoffart et al., 2008).

1.3.2.3: Impact of cognitive distortion on generalized anxiety disorder:

People with generalized anxiety disorder have pervasive fear of danger with every thing. When they face different life situations they perceive distortedly and their anxiety increased. Cognitive Behavior Therapy for GAD emphasizes to change the attribution GAD patients usually give to the different situations. *Arbitrary inference and catastrophizing* are found to apply in the cognitive therapy of generalized anxiety disorder (Paul Franceschi, 2008). Meek (2009) reported that GAD patients have different types of cognitive distortion especially Catastrophizing, Arbitrary Inference, Personalization, Selective Abstraction, Overgeneralization, Dichotomous Thinking and Labeling.

1.3.2.4: Impact of cognitive distortion on obsessive compulsive disorder:

Patients with Obsessive Compulsive Disorder typically avoid different situations that trigger their obsessional thinking. Basically they distortedly perceive different situation that maintain a vicious cycle and their problem. Gorbis (2008) reported in her "intensive OCD program article" that there are several cognitive distortions occur in the minds of OCD patients. Usually the misrepresentation involves "*all or nothing*" thinking, interpreting a thought as an experience, or feeling that failure to perform a ritual perfectly will result in disastrous consequences. Along with experiencing a thought as reality, (as has been found by Foa & Kozak, 1986), people with OCD have a tendency, not only to overvalue the dangerousness of the situation, but also to think that, despite hundreds of positive experiences, in this circumstance there will be disastrous consequences if the ritual is not performed.

1.3.2.5: Impact of cognitive distortion on somatoform disorder:

People suffering from different types of somatoform disorder usually have more somatic or bodily complain that are developed mostly for psychological stress. Psychological stress is greatly influenced by an individual's perception of different life situation. Selective abstraction (Mental filter) is found to apply in the cognitive therapy of body dysmorphic disorder (Neziroglu and Yaryura-Tobias, 1993; Veale and Riley, 2001; Veale, 2004). Another research shows that common errors occur in health anxiety are: catastrophising, dichotomous thinking and selective abstraction (Wells, 2004).

1.3.2.6: Impact of cognitive distortion on drug dependency:

Drug dependency is a complex problem that gradually decreases level of self control over drug abusing behavior. Most of the cases in primary level of drug dependency people hold the distorted belief that they can drive the drug out any time easily. But in reality they can not do. Moreover it is common to develop or have different co-morbid mental health problem among drug dependent people. Research stated that a very high proportion of drug abusers have psychiatric problems, with depressive symptoms particularly common. Levels of cognitive distortion among drug user is comparable with depressed people (Chabon & Robins, 1986). It was also found that cognitive distortion mediated marijuana use and substance use disorder (Kirisci et al., 2003).

1.3.2.7: Impact of cognitive distortion on Quality of life:

Quality of life is considered as an important variable within this research. To see the impact of cognitive distortion on quality of life GHQ was used to measure the life stress of different psychiatric patients. According to the literature the concept 'quality of life' comprises several dimensions (Spilker, 1990; Krol et al., 1993; Doeglas, 2000). The most commonly evaluated are the physical, the psychological and the social dimensions of quality of life. The physical dimension refers to the patient's physical condition as a consequence of the disease or the treatment. The social aspect reflects the patient's satisfaction with participation in social roles and social activities. The psychological aspect refers to the emotional evaluation of a particular situation and is frequently operationalized as anxiety and depression (Blalock et al., 1989, Pincus and Callahan, 1993; Krol et al., 1993). Lack of anxiety and depression are the indicators of quality of mental health but these feelings are greatly influenced by cognitive processing that an individual habituated. Therefore, if a person does not practice rational thinking (operating in one's own best interest, which will be deduced through a process of logic (Conover, 2008) he/she will feel more stressed and their quality of mental health will be hampered. Moreover the most important assumption of the cognitive theory of depression is that dysfunctional cognitive processes are a primary source of unhappiness.

A considerable amount of research suggests that dysfunctional thought processes lead to depression or unhappiness (Kuiper et al., 1987; Olinger, Kuiper, & Shaw, 1987; Wierzbicki &

Rexford, 1989; Wise & Barnes, 1986). Because these thought processes reflect negative views and methods of thinking that are unhealthy, unhappiness or depression often results. For example, holding oneself to a perfect standard, believing that all mistakes impeach one's character, and sacrificing one's self-fulfillment for others are all unhealthy attitudes that may manifest themselves personal worthlessness (Beck, 1967).

1.3.3: Development of cognitive distortions: According to definition, cognitive distortion is an illogical and maladaptive response to early negative life events that leads to feelings of incompetence and unworthiness that are reactivated whenever a new situation arises that resembles the original events. But how does the cognitive distortion develop? If we focus on human nature according to the psychoanalytic theory of Freud we see that every human being wants satisfaction in their early life when they are driven by ID (primary driving force of human personality). People seek satisfaction but they often experience positive and negative punishment either from others or themselves. These punishments in early life lead to develop negative viewpoint about the self and the world. These viewpoints may be called as SPECTACLES of human mind through which they perceive their internal and external world. If the spectacles of a man are transparent then he will perceive the reality without distortion but if there are different colors in their spectacles he or she will perceive the reality distortedly. If we want to perceive reality with out distortion then we have to know about the color of our spectacles of mind so that we can calculate our bias and if we want to perceive the reality as helpful and productive and adaptive we have to practice thinking epistemologically that is considering the correspondent, consistent, consensus and utilitarian perspective.

1.4: Rationale of the study:

Cognitive distortions are a central focus of cognitive-behavioral therapies (CBT), (Najavits et al., 2004). Many patients and clinicians can identify the now-common distortions of “shoulds,” “mind reading, and “all or none thinking” identified in Burns’ 1980 bestselling depression self-help book, *Feeling Good* (Burns, 1980). Lists of cognitive distortions can help to identify themes to be addressed in treatment. Many CBT treatment manuals include such lists, which may be general distortions or specific to a disorder. For example, specific distortions have been identified for depression (Burns, 1980), pathological gamblers (e.g.,

“illusion of control over luck” and “reframed losses”;Toneatto, 1999), incarcerated teenagers (e.g., “self-serving” and “selfdebasement” distortions; Barriga, Landau, Stinson, Liao, & Gibbs, 2000), and posttraumatic stress disorder (e.g., “preoccupied with danger” and “self-blame”; Briere, 2001; Briere et al., 1993). In contrast to this widespread clinical application, there has been relatively less empirical attention to cognitive distortions. In a literature search using the term “cognitive distortion” for the years 1984 through 2002, selecting only journal papers written in English, 195 entries appeared. (Najavits et al., 2004).

In Bangladesh, this field is very new and a number of clinical psychologists are practicing CBT. Though cognitive distortion is a burning issue in the world of clinical and other psychology and psychiatry because it plays an important role in developing and maintaining psychopathology but there is only one specific research found on this issue in Bangladesh. The present study is the first empirical study on cognitive distortion in Bangladesh. It should also be mentioned that cultural difference is a vital issue in helping patients by cognitive behavior therapy. Without knowing different cultural phenomena it is useless to try to help an individual by cognitive behavior therapy. So it is essential to study every psychological phenomenon in the respective culture if we want to apply cognitive behavior therapy effectively. In this study, the nature and defining feature of cognitive distortion among clients with psychiatric disorder in Bangladesh will be studied to make a clear picture of the phenomena in this cultural perspective.

Moreover there is little knowledge about the CD among different psychiatric patients but it is essential element to develop an effective treatment plan. If clinicians want to make an effective treatment plan for a patients like panic disorder and they have the cognitive profile of that patients in their hand, it will help them to develop effective formulation for cognitive behavior therapy.

Psychometric tools to measure different phenomena is also an essential element to develop and expand the related knowledge. But in Bangladesh no psychometric instrument is available to measure the CD. To design quantitative study is not feasible without the background and qualitative study of a phenomena. So the current study was designed qualitatively to understand CD in details.

1.5: Objectives of the Study:

For understanding patterns of cognitive distortions the following objectives were set for the current research.

General objective

- To understand and to explore patterns of cognitive distortion among the clients with different psychiatric disorders and to compare their pattern of cognitive distortion with normal population.

Specific objectives

- *To understand the phenomena of cognitive distortion.*
- *To explore cognitions and different patterns of cognitive distortions in various problem situations among clients with different psychiatric disorder and normal people.*
- *To find out the Impact of CD on client's problems from client's perspective.*
- *To see the relation between CD and general mental health status among clients with different psychiatric disorder and normal people.*
- *To see the development of cognitive distortion.*

CHAPTER 2



METHODOLOGY

METHODOLOGY

2.1: Participants:

Clinical and non-clinical adult sample were drawn for the current research. People suffering from different psychiatric disorder in Bangladesh were considered as clinical population. Among the clinical population those who were suffering from most prevalent psychiatric disorder were considered as sample for the current research. Excluding psychosis prevalence of which was greater or equal to 0.5% according to the prevalence study of psychiatric disorder in Bangladesh (World Health Organization and National Institute of Mental Health, Dhaka, 2007) were taken as sample. According to that research major depressive disorder (4.6%), generalized anxiety disorder (2.9%), somatoform disorder (1.4%), panic disorder (1.3%), agoraphobia (0.9%) substance dependency (0.6%), obsessive compulsive disorder (0.5%) were found as most (at least 0.5%) prevalent psychiatric disorder in Bangladesh (Firoz et al.,2007). For the current research at least one person from the above patient group was purposively drawn as sample. Moreover people who never had any psychiatric disorder and currently well functioning was considered as non-clinical population group. The same number of person was drawn from non-clinical population to compare and contrast with clinical sample. As the present research was a qualitative one, patients from different age, sex, and socioeconomic status were included in the present research for ensuring diversity of the sample.

2.2: Sample size:

A total of 20 participants were purposively drawn as the sample of the present study. Out of the total sample 10 patients from the following disorders who were included in the sample are shown in the following table.

Table-1: No. of sample according to different disorders.

Serial No	Disorder	Sex	Socioeconomic Status	No. of sample
1	Major Depressive Disorder	One male and two female.	One from upper middle class and two from middle class	3

2	Generalized Anxiety Disorder	Two male	One from middle class and one from lower class	2
3	Somatoform	One female	Middle class	1
4	Panic disorder without agoraphobia	One female	Middle class	1
5	Panic disorder with agoraphobia	One male	Middle class	1
6	Drug dependency	One male	Higher class	1
7	Obsessive Compulsive Disorder	One female	Lower middle class	1
Total				10

Another 10 respondents were selected from non-clinical population group to compare with clinical population. Both groups were matched by age, sex, education and socioeconomic variables.

2.3: Sample selection:

A total of 10 patients in the clinical group were drawn as sample based on the following criteria.

- Psychiatric patients having no psychotic features.
- Patients having no psychosis.
- Minimal educational level is class eight.
- Communicable in Bengali language.
- Psychiatric patients having no history of psychotherapy within last one year.
- Psychiatric patients diagnosed by psychiatrist according to DSM-IV diagnostic criteria.

Patients who came for psychiatric services at Bangobondhu Sheikh Mujib Medical University (BSMMU) and National Institute of Mental Health (NIMH), Dhaka were diagnosed by different psychiatrists. After initial diagnosis a total of 24 patients were proposed to

participate in the current research among whom 23 were primarily agreed and one patient with Generalized Anxiety Disorder disagreed to participate in the current research. Finally considering the inclusion criteria 10 patients were taken as the clinical sample of this research and the rest of the patients were referred to other clinicians. A total of 10 non-clinical sample who never received psychiatric treatment for their own problems and scored below cut off point at Depression Scale (Uddin & Rahman, 2000) and Anxiety Scale (Deeba & Begum, 2002) were also taken as sample to compare and contrast the finding with clinical sample. Demographic features of clinical and non-clinical sample are presented in table-2

Table-2: Demographic and some clinical features of clinical sample.

S L	Code	Age	Sex	M.S.	Edu	Occu	SES	B. O.	Diag	Dur.of Pro
1	A1	23	F	Single	HSC	Student	Middle class	7/7	Depression	One month
2	B1	35	M	Married	SSC	Business	Middle class	5/5	GAD	Three year
3	C1	42	M	Married	MSS	Service	Lower middle class	2/5	Panic disorder with agoraphobia	One month
4	D1	25	M	Single	B. Sc	Student	Lower class	1/5	GAD	Two year
5	E1	32	M	Married	B.co m	Service	Middle class	5/8	Depression	Five month
6	F1	24	F	Single	HSC	Student	Upper middle class	1/2	Depression	Six month
7	G1	20	F	Single	HSC	Student	Lower middle class	2/2	OCD	One year
8	H1	24	M	Single	BA	Student	Higher	2/2	DD	Two year

							class			
9	I1	23	F	Single	SSC	Student	Lower middle class	2/4	Somatoform	Seven year
10	J1	25	F	Married	Eighth	House wife	Lower middle class	5/6	Panic disorder without agoraphobia	Five month

Table-3: Demographic and some clinical features of non-clinical sample.

SL	Code	Age	M.S.	Sex	Edu	Occu	SES	B.O.
1	A2	23	Single	F	BA	Student	Middle class	6/6
2	B2	37	Married	M	Ten	Business	Middle class	1/3
3	C2	45	Married	M	BA	Service	Middle class	3/5
4	D2	24	Single	M	B. Sc	Student	Lower middle class	1/3
5	E2	32	Married	M	BA	Service	Middle class	4/7
6	F2	24	Single	F	HSC	Student	Upper middle class	1/2
7	G2	22	Single	F	HSC	Student	Lower middle class	2/2
8	H2	24	Single	M	B. Sc	Student	Upper middle class	2/3
9	I2	21	Single	F	HSC	Student	Middle class	2/4
10	J2	28	Married	F	Ten	House wife	Lower middle class	3/5

BO=Birth Order; SES= Socioeconomic Status; MS=Marital Status.

2:4: Instruments:

All the respondents were assessed by clinical assessment interview along with some psychometric scales. The instruments used in the current research were as follows:

2.4.1: Demographic questionnaire: A standard demographic questionnaire developed by the researcher was used to collect different demographic data.

2.4.2: Topic guide: A topic guide was developed by the current researcher and checked and approved by three clinical psychologists and three psychiatrists. Some open ended and some probe questions were set in the topic guide to cover different areas of assessment which were set as specific objectives for the current research. Field testing of this instrument was done on two clients before final data collection phase. Based on the feed back of field testing the topic guide was finalized.

2.4.3: Thought listing: Different scenarios related to problems of a sample were collected from the respondent. Those scenarios were read allowed to that respondent and he or she was asked to describe the thoughts running through their mind. In this way every participant was imaginably exposed to different triggering situations and their cognitions were recorded.

2.4.4: Thought diary: Along with thought listing technique all respondents were supplied a thought diary sheet in first and second session and were asked to monitor themselves in different situations where their problems became worst. In those situations they were asked to write down their thoughts, feelings and situations. Each respondent was requested to complete that task between the time periods of each session.

2.4.5: Dysfunctional attitude scale (DAS): Dysfunctional Attitude Scale, form-A was used to assess the severity of cognitive distortion among the sample. The Dysfunctional Attitude Scale (DAS) and the Automatic Thought Questionnaire (ATQ) are two widely used instruments in research on cognitive distortion in psychopathology (Ohrt et al., 1999). DAS was developed by Weissman and Beck in 1978. It is a seven point rating scale consists of forty items which reflect different patterns of cognitive distortions. The Dysfunctional Attitude Scale (DAS) was designed to measure patterns of maladaptive thinking held by depressed individuals, Nelson et al.,(1992, 2005); Whisman et al.,(1991); Oliver et al.,(2007). Psychometric properties of the DAS were reported as promising. Correlations between the DAS parallel forms and between each form with total test scores ranged from $r=.84$ to $r=.97$.

Internal consistency of DAS Form A was .84 to .92 (Weissman & Beck, 1978). The DAS has been found to have high internal and test-retest reliabilities in student populations, ranging from .79 to .88 (Olinger, Kuiper, & Shaw, 1987). Support for the DAS as a valid measure of dysfunctional cognitions in depressed patients was also indicated by Nelson et al.,(2005); Torbjorn and Lars (1998). The scale was translated into Bengali by Hossain and Begum (2008) so that it can be administered on Bangladeshi populations. The initial translated draft was checked by the research supervisor and then the first draft was judged by seven judges. Among them there were one professor, three assistant professor and one lecturer of clinical psychology, one professor of psychology and one practicing clinical psychologist. Based on the recommendations of the judges second draft was made which was also judged by three judges and some further recommendations were taken. Based on those recommendation third and final draft was prepared with the help of research supervisor. Final draft of the scale was judged by thirteen judges. Among the judges there were one professor, two associate professor and four assistant professor of psychiatry, one professor of Psychology two assistant professor and one lecturer of Clinical psychology and also there were two Practicing Clinical psychologists. The judge agreement was found as 92.67%. After that English version of the original scale was administered on 33 (mean age=25.85 ;sd=3.17) graduate and post-graduate level students who were good at both in English and Bengali. After two weeks the Bengali version scale was administered on the same respondent. Both English and Bengali scales were scored differently and the mean score of DAS-english was found=127.88 (sd=26.37) and bangle was=119.30 (sd=31.24). The test-retest reliability was calculated by using computerized SPSS software. The Spearman's rho correlation coefficient was calculated as 0.812 which was significant at 0.01 level of significance in two tailed test. The original scale was valid to assess dysfunctional cognition and attitude which was also used by different researchers to assess cognitive distortion (Whisman et al.,1991). Dysfunctional Attitude Scale was also found highly correlated with irrational Beliefs scale, Cognitive Error Questionnaire and such type of scale which validly measure cognitive distortion (Wertheim and Poulakis,1992, 2005). Sub-scale and different items of DAS was found as correlated with both anxiety and depression symptoms (Dyck,1992). Therefore, in the present research Dysfunctional Attitude Scale was used.

2.4.6: General Health Questionnaire (GHQ-28): Goldberg and Hillier's 28-item scaled version of the General Health Questionnaire had been used to measure the psychological aspect of quality of life. To assess the general emotional disturbances the General Health Questionnaire (GHQ-28, Goldberg & Williams, 1988) was administered to patients with different psychiatric disorder. This 28-item checklist specifically concerns with the hinterland between psychological sickness and psychological health (Goldberg, 1988). It assesses the psychological disturbances in terms of both a full-scale score (maximum possible score=84) and scores on four sub scales, reflecting somatic symptoms, anxiety and insomnia, social dysfunction and severe depression (maximum possible score for each sub scale= 21). Each item consists of a question asking whether the respondent has recently experienced a particular symptom or item of behavior on a scale ranging from "less than usual" to "much more than usual" on a scale ranging 0 to 3. Thus the higher the scores the greater the level of symptoms or behavior across the four domains of functioning as well as aggregate scales total on GHQ. This measure has been reported to have good psychometric properties. It has been shown to have test-retest reliability from 0.51 to 0.90 in different groups of sample and the split half reliability was shown to be 0.95. GHQ was shown to have construct, content and concurrent validity. Banoo (2001) translated the GHQ-28 into Bengali. The test-retest reliability was found to be 0.682 by spearman's rho, which was significant at 0.01 level.

Along with the topic guide Dysfunctional Attitude Scale developed by Weissman and Beck(1978) translated into Bengali by Hossain and Begum (2008) and GHQ-28 developed by Goldberg (1988) and translated into Bengali by Banoo (2001) was used as the instrument for the current research.

2.4.7: Anxiety Scale: A 36 item Anxiety Scale developed by Deeba & Begum (2002) was used in the current study to select respondent for non-clinical group. It is a likert scale and developed in Bengali language which was tested as valid and reliable psychometric instrument. It can be administered on clinical and non-clinical population to screen as well as to assess the severity of anxiety. Reliability of this scale was $r = 0.916$, $\alpha = 0.01$ (Split-half reliability), $r = 0.9468$ (Cronbach-alpha), and $r = 0.688$, $\alpha = 0.01$ (test-retest reliability). validity of this scale was $r = 0.628$, $\alpha = 0.01$ (Criterion related validity), $F = 60.275$ at $\alpha =$

0.01(Construct validity). Item-total correlation was found to be ranging from $r = 0.399$ to $r = 0.748$, and were all significant at 0.01 level of significance.

2.4.8: Depression Scale: A 40 item Depression Scale developed by Uddin & Rahman (2000) was also used for non-clinical sample. The scale was developed for Bangladeshi population to assess the presence and severity of depression among clinical and non-clinical population. Reliability of this scale was $r=0.60$, $\alpha=0.01$ (Test-retest reliability), $r=0.76$, $\alpha=0.01$ (Split-half reliability), Concurrent validity and construct validity of the scale was also reported.

2:5: Procedure:

After selecting a patient as sample he/she was informed about the study and requested to sign on consent form. Before signature it was clearly described to each participant about different aspects of the study such as using tape recorder, confidentiality, client's benefits, ethical issue etc. It was clearly described to all participants that the information provided by them will be used only in the current research and confidentiality will be maintained. All tape recorded conversation will be destroyed after analyzing the data. It was also informed that they will not get any financial benefit but after assessment the research assistant will continue the therapeutic sessions up to termination and in case of having no research assistant the patient will be referred to appropriate clinician according to their needs. All patients were assessed by In-depth clinical interview, Dysfunctional Attitude Scale form-A and General Health Questionnaire (GHQ-28) within three consecutive sessions. Each session ranged from 50 to 60 minutes. In the initial session after establishing rapport scales were administered. In the following two sessions cognitive assessment was done by thought listing technique and thought diary along with clinical interview. In clinical interview demographic data were collected according to demographic questionnaire and each client was asked to describe his/her problems for which they came to hospital. This issue was illustrated to get a clear picture of different functional area such as eating, sleeping, interpersonal communication, professional activities, behavioral and somatic complain, sexual desire and performance etc. After getting clear picture of the problems, the respondents were asked to describe the scenarios or situations where their problems got worsen or the situations where they feel their problems most. To assess the cognitions in those situations the scenarios were read to the

respective clients and they were asked to describe their thinking and feelings in those situations *as for example "think you are in a public bus and it is becoming gradually crowded"*. Now please describe me, what kind of thought your mind or brain is preoccupied with in that situation. After getting the cognitions each respondent was asked to describe their feelings when they are preoccupied with those cognitions. They were also asked that what they think about the impact of those cognitions on their problems and functional areas and over quality of life. It was also assessed the developing history of their problems and those type of attribution pattern from their childhood. As different clients with different disorders were taken as sample in the current study therefore, there was no specific scenarios to assess the attribution of the clinical sample. Different problem situations were collected from the sample by interview method and then the perception of a specific situation was assessed by thought listing techniques. During clinical interview micro-skill like paraphrasing, summarizing, reflection of feeling, head nodding etc. were applied properly to establish a good rapport and to continue each interview session successfully. The total assessment was completed within three sessions in three consecutive weeks. After first session each client was given a thought diary as home work assignment to assess different problem situations and related thoughts and feelings so that it could be discussed in the following session. Second and third session mainly focused on the assessment of different problem situations which were read to them and related cognitions and feelings were assessed according to the thought listing techniques.

In the second phase a total of 10 non-clinical respondents who were matched with 10 clinical samples, were assessed. These respondents were selected with the help of other colleagues and relatives who were not involved in the current study. Firstly researcher gave those colleagues the demographic data based on which the sample would be selected. Based on those demographic data different colleagues approached their known people who did not have history of any psychiatric disorder, to participate. At first different aspects of the study and rationale to participate in the research was explained to the respondent. Anxiety and depression scale were administered on people who primarily agreed to participate in the research. If they scored below cut-off point of the scale they were selected as sample for non-clinical group. Rest of the respondents who did not meet inclusion criteria were referred to

other clinicians according to their needs. After selecting the sample they were requested to sign the informed consent form. They were also told that if they wish they could cancel their agreement and leave even after signing the consent form. After taking informed consent each respondent's demographic information was taken clearly and then different problem scenarios of specific clinical sample were read allowed to imaginably expose him or her to those situations. Then the respondent was asked to describe the thinking and feeling in those situations. In this way using thought listing technique 10 non-clinical respondents' cognitions and feelings were assessed based on the scenarios of 10 clinical respondents. Dysfunctional Attitude Scale (DAS) and General Health Questionnaire (GHQ-28) were also administered to the non-clinical sample. Then each clinical respondent was compared and contrast with specific non-clinical respondent.

At a glance the procedure of the current study for clinical and non-clinical sample can be shown in the following flow chart.

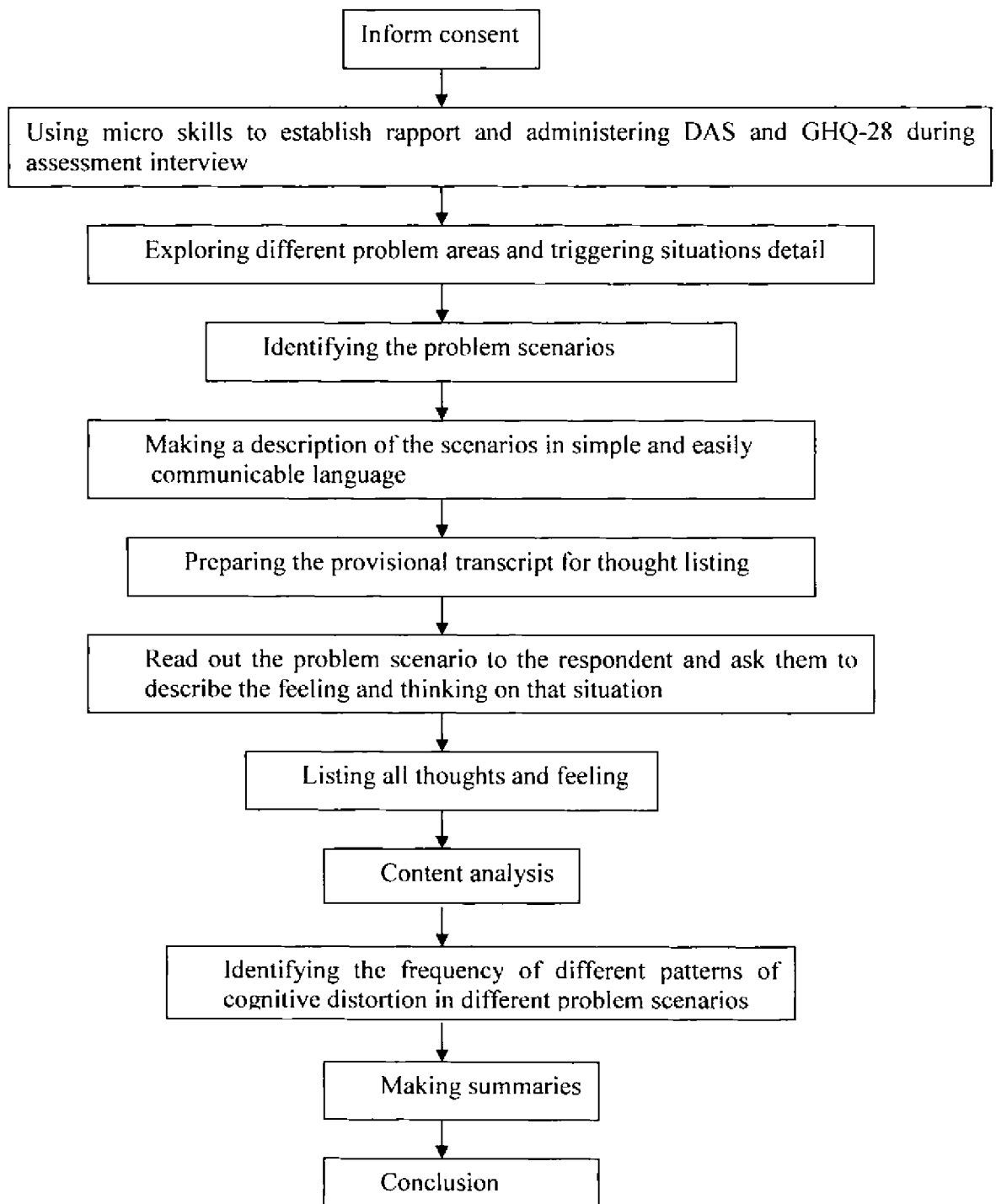


Figure-7: Flow chart of procedure for clinical sample.

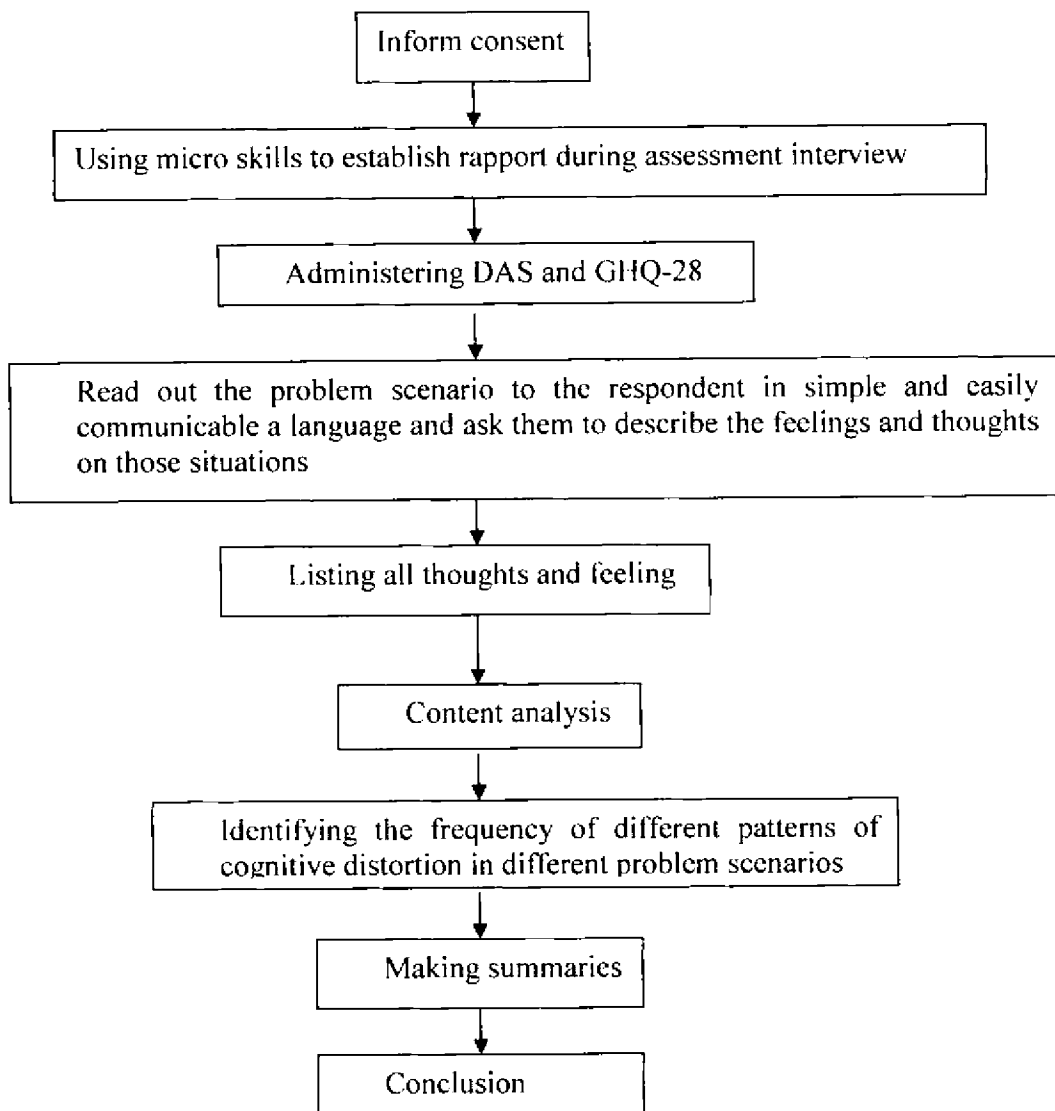


Figure-8: Flow chart of procedure for non-clinical sample.

2:6: Data processing and analysis:

The current study was designed to collect both qualitative and quantitative data. It was aimed to analyze the qualitative data both conceptually and relationally. Conceptually the cognitive distortion was analyzed as whether it was present among clinical and non-clinical sample or not. If cognitive distortion was present then the pattern and frequency of different cognitive distortions were also analyzed among the sample. Relational analysis of the data was also

done. Cognitive distortions were relationally analyzed to answer the question how cognitive distortions were developed? What was the impact of cognitive distortion on quality of mental health? How much it was related with dysfunctional attitude. For relational analysis simple correlation within sample and among sample was used to analyze different variable's score such as Dysfunctional Attitude Scale (DAS) score, General Health Questionnaire (GHQ-28) score. For conceptual analysis of cognitive distortions verbatim transcript of the interview was written with the help of tape recorded information during interview. At first all the information was read several times. Then the coding was done according to different research questions to reduce the huge amount of data into manageable stage. Then unnecessary information was excluded and all coded data was written into matrix. A matrix according to the objectives of the current research was developed to analyze the qualitative data. Every case was considered as a unit of analysis for the current research.

The data analysis and processing are shown in the following flow chart.

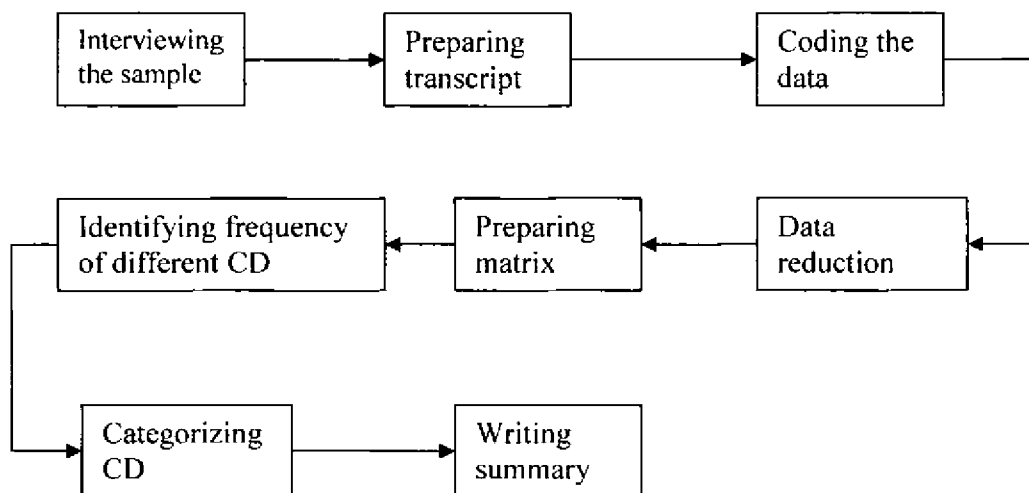


Figure-9: Flow chart of data processing and analysis.

Computerized SPSS program was also used to analyze the quantitative data of the present study. All quantitative data was input into SPSS program and simple descriptive and correlation analysis was done.

2:7: Ethical Issue:

From ethical perspective the current research is considered to be sound. It was approved by the academic and ethical committee of the department of clinical psychology and National Institute of Mental Health, Dhaka. Informed consent from all the respondents was taken. It was ensured in the current study that no respondent became victimized to any physical or psychosocial harm. All the respondents had full freedom to decide whether they would participate or not in the current research. Assessment was done in the presence of research assistants who were either trainee clinical psychologist or psychotherapist and were able to provide psychological treatment. Each clinical sample was referred to the research assistant for necessary treatment. In case of non-clinical sample another M. Phil researcher helped the current researcher to assess them. If there were any clinical problem found among non-clinical sample during assessment they were also referred to appropriate person according to their need.

CHAPTER 3



RESULTS

RESULTS

As the part of understanding cognitive distortion it was aimed to define the term operationally. By analyzing different theories of cognitive and personality development, the term was operationally defined by the current researchers which indicates that a Person's thinking is not rational when it

1. does not match with reality
2. is not internally consistent
3. is not useful or does not produce practical benefit
4. is not intersubjective and is not shared and uphold by a group of people

If a person's cognitions do not meet the above criteria then those cognitions can be considered as distorted which contribute to develop and maintain maladaptive view, feeling and behavior. Personality consisted with those maladaptive views, feelings and behaviors can be considered as pathological because they can not maintain their daily life properly.

3.1: Different patterns of cognitive distortions

To identify patterns of cognitive distortions thought listing and thought diary were used and the collected data were analyzed according to conceptual content analysis. All clinical samples having different psychiatric problems, described their four most problematic scenarios in which they felt their problems most. Those scenarios were used in thought listing to explore cognitions among both clinical and non-clinical (having no history and feature of psychiatric problems) sample. Among their cognitions the following dysfunctional or distorted cognitions were found by conceptual content analysis.

Table-4: Some clinical features and frequency distribution of cognitive distortions among the sample.

Clinical Sample												
Sample	Diagnosis	Total CD	Frequency of different types of Cognitive Distortions									
			AN	OVG	MF	DP	JC	MGMN	ER	SS	LML	PRS
C1	Depression	27	2	3	3	2	4		3	2	5	3
C2	GAD	27		1			5	11	2		1	
C3	Panic D	27		1			7	15	11	1	1	1
C4	GAD	21		4		1	1	7	2			1
C5	Depression	40	3	6	3	3	4	3		4	3	11
C6	Depression	40	4		5	3	10	3	4	2	4	5
C7	OCD	30	2	11	3		1	9			3	1
C8	Drug D	29		4	2	1	7		5	4	2	
C9	Somatoform	37		5	4	1	7	10	6	1	1	
C10	Panic D	16	1	2	1	2		4	2	2	2	
Total		294	12	47	21	13	51	62	26	16	24	22
Non-clinical Sample												
Sample	Diagnosis	Total CD	Frequency of different types of Cognitive Distortions									
			AN	OVG	MF	DP	JC	MGMN	ER	SS	LML	PRS
C1	Null	1	-	-	-	-	-	-	1	-	-	-
C2	Null	2	-	-	-	-	-	2	-	-	-	-
C3	Null	6	-	-	-	-	1	-	2	3	-	-
C4	Null	0	-	-	-	-	-	-	-	-	-	-
C5	Null	5	-	1	-	-	2	-	1	1	-	-
C6	Null	8	-	2	-	-	2	1	1	2	-	-
C7	Null	0	-	-	-	-	-	-	-	-	-	-
C8	Null	2	-	-	-	-	-	-	-	-	2	-
C9	Null	5	-	-	-	-	1	1	1	2	-	-
C10	Null	5	-	-	-	-	-	-	-	-	3	2
Total		34	-	3	-	-	6	4	6	8	5	2

Note: CD = Cognitive Distortion; PCD=Pattern of CD, SCD=Statement of CD, FCD = frequency of CD DAS= Dysfunctional Attitude Scale; GHQ = General Health Questionnaire; AN= All or Nothing; OVG= Overgeneralization; MF= Mental filter; DP= Disqualifying the positive; JC=Jumping to conclusion; MGMN= Magnification minimization; ER=Emotional reasoning; SS= Should Statement; LML=Labeling mislabeling; PRS=Personalization.

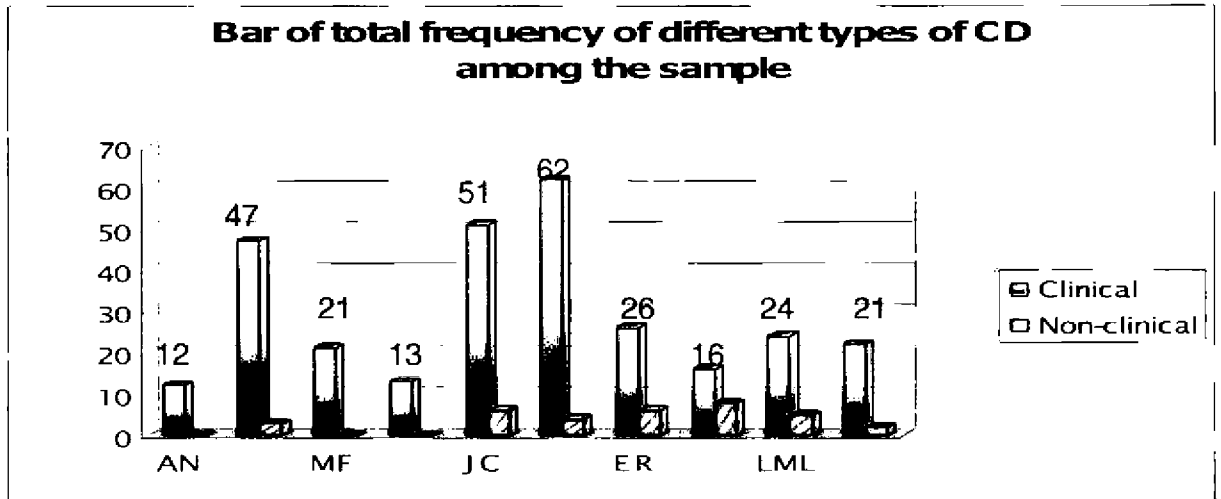
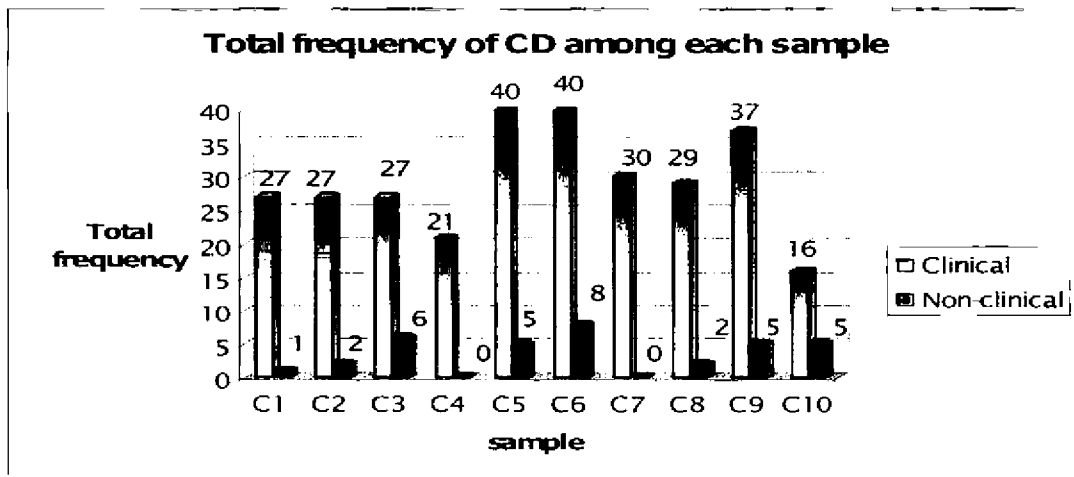


Fig-10: Bar of different types of total CD among clinical and non-clinical sample.



[Note: Depression=c1,c5,c6; GAD=c2,c4; Panic=c3,c10; OCD=c7; Drug=c8; Somatoform=c9]

Fig-11: Bar of total frequency of CD among each sample.

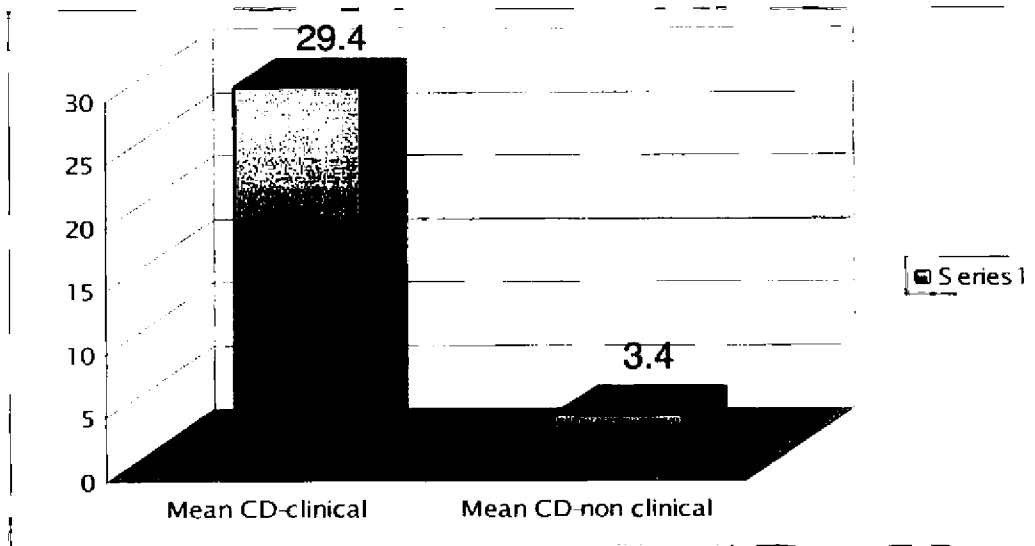


Fig-12: Bar of average CD among clinical and non-clinical sample.

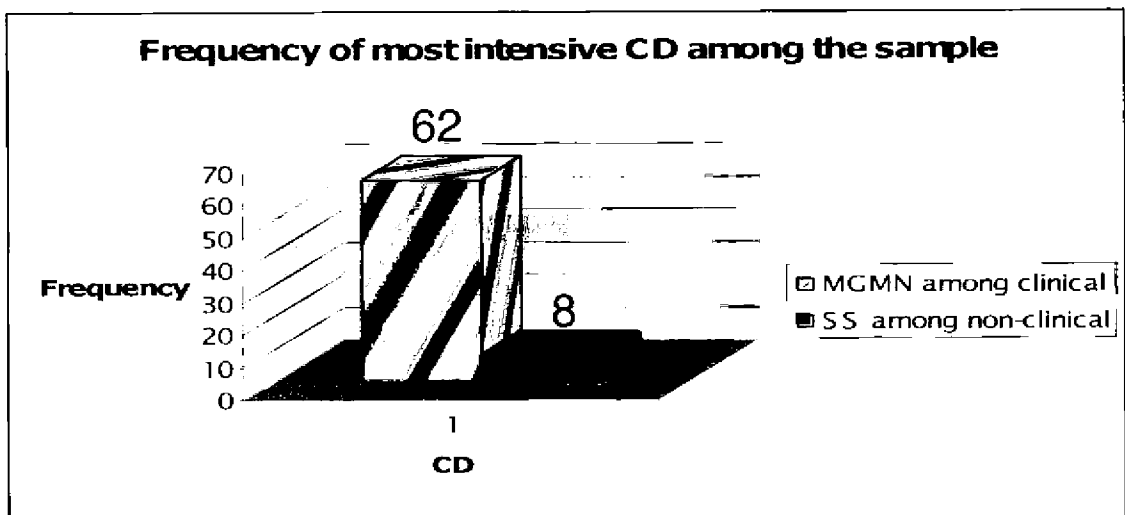


Fig-13: Bar of most intensive cognitive distortion among clinical and non-clinical sample.

Among the entire sample it was found that personalization was intensely present among depressive sample. Labeling was found in a lower frequency among all samples except one GAD sample but it was intensely present among client with depression, OCD and somatoform disorder. Should statement was found among five out of ten client but intensely found among depressive and drug dependent client. Emotional reasoning was found among eight out of ten clients and clients with depression, GAD, drug dependency and somatoform disorder had higher rates of emotional reasoning. The highest rate of catastrophisation or magnification and

minimization was found among panic disorder patients but most of the client (nine out of ten) except drug dependent sample had intensive level of distortion in this category. Under the category of jumping to conclusion mind reading was found among seven out of ten clients and fortune telling was also found among nine out of ten samples. Intense level of jumping to conclusion was found among eight clients but one panic disorder patient had no distortion in this category. Disqualifying the positive was intensely found among depressive client but it was also present among clients with GAD, drug dependency, OCD and somatoform disorder in lower rate. Mental filtering was significantly found among clients with depression, somatoform and OCD. Overgeneralization was the most intensive cognitive distortion of OCD patients but it was also intensely present among patients with drug dependency, GAD, depression and somatoform disorder. All or nothing thinking was present among depressive, OCD and panic disorder but it was intensely found among clients with depression. Different patterns of cognitive distortions were also found among non-clinical sample but the intensity was low. Should statement and labeling were intensely found only among two sample. Figure-2 indicates that clinical sample had significantly higher cognitive distortion (mean CD=29.4) than that of (mean CD=3.4) non-clinical sample.

Table-5: Hierarchy of patterns of cognitive distortion among different disorders.

Hierarchy Of CD ↑	SN	Diagnosis					
		<i>MDD</i>	<i>GAD</i>	<i>Panic</i>	<i>OCD</i>	<i>DD</i>	<i>SD</i>
1		PRS	MGMN	MGMN	OVG	OVG	MGMN
2		JC	OVG	JC	MGMN	JC	JC
3		OVG	JC	OVG	MF	ER	ER
4		LML	ER	ER	LML	SS	OVG
5		MF	LML	SS	AN	LML	MF
6		AN	SS	LML	JC	MF	LML
7		SS		PRS	PRS	DP	SS
8		ER		AN			DP
9		DP		MF			
10		MGMN		DP			

Table-5 indicates that personalization was the most significant CD among major depressive disorder, magnification and minimization was the most significant CD among GAD, panic and somatoform disorder. It also indicates that overgeneralization was found the most significant CD among OCD and drug dependency.

Table-6 CD score assessed by DAS among clinical and non-clinical sample.

Norms	clinical		Non-clinical	
	Frequency	Percentage	Frequency	Percentage
Below 120 (cut off score of DAS)	0	0%	1	10%
120 and above	10	100%	9	90%
Total	10	100	10	100%

Table-6 indicates that 100% of the clinical sample and 90 % of non-clinical sample had clinical level of cognitive distortion.

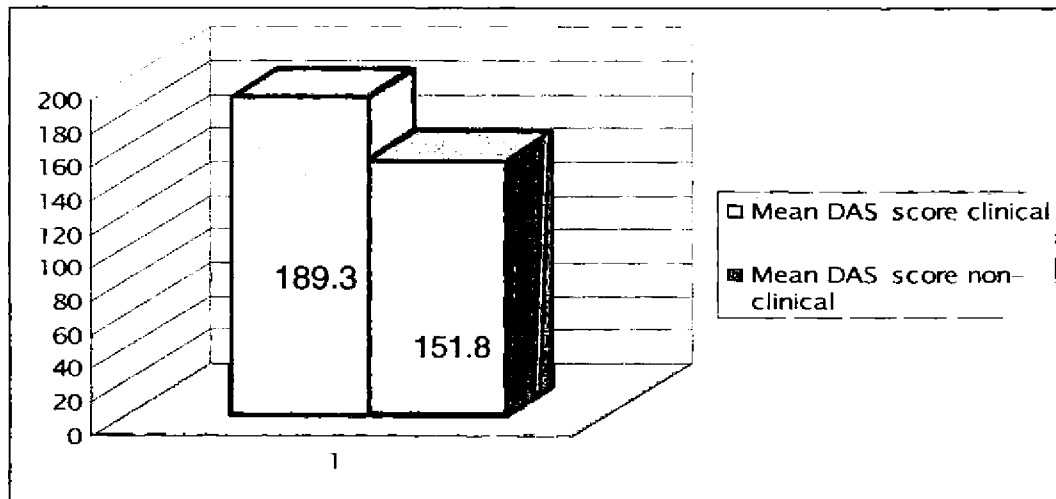


Fig-14: Bar of average DAS score among the sample.

Figure-14 indicates that though 90% of non-clinical sample had clinical level of cognitive distortion but average DAS score among clinical sample (mean=189.3) is higher than that of non-clinical sample (mean=151.8)

3.2: Impact of CD on general mental health

It was also aimed to know the impact of cognitive distortion on general mental health status. All the clinical respondent stated that they felt very bad when they are occupied by their negative thinking. They also stated that if they could avoid those thinking they could feel better but they could not do due to different unwanted and unexpected situation. One panic patient stated, "I have had the illness of thinking". The OCD patient mentioned, "I don't want to think negatively because I don't want to waste my time in bathroom, but thinking of being dirt made me stressed for which I had to spend more time in the bathroom." On the other hand five out of ten non-clinical samples stated that they also feel bad if they are occupied with the negative thinking. The rest of the sample mentioned that it is normal to face challenging situation but no need to be stressed. They added that they can control their thinking to reduce the bad feelings. As for example one non-clinical sample was exposed to the scenario of traveling without family members in a public bus and he stated, "we have to travel a lot without family members and it is very normal for our daily life so there is no reason to feel bad." Along with qualitative data GHQ-28 was administered on the sample to see the general mental health status of the sample and the findings were as below:

Table-7: Stress scores assessed by GHQ among clinical and non-clinical sample

Norms	c l i n i c a l		Non-clinical	
	F r e q u e n c y	P e r c e n t a g e	F r e q u e n c y	P e r c e n t a g e
Below 39 (cut off score of GHQ)	3	30%	10	100%
39 and above	7	70%	0	0%
Total	10	100	10	100%

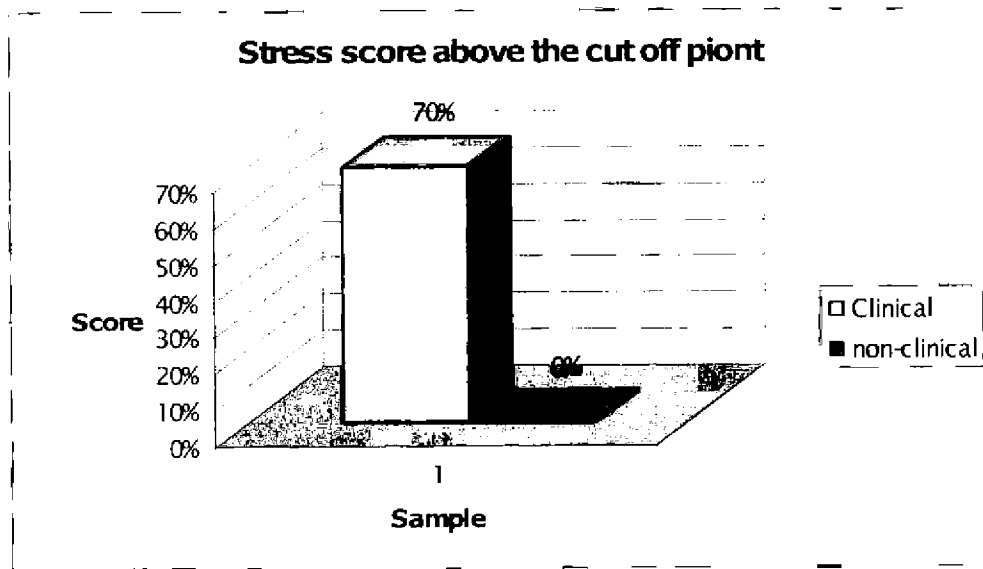


Fig-15: Bar of stress score above the cut off piont

Table-7 and figure-15 indicate that 70% of the clinical sample and 0% of non-clinical sample had clinical level of stress in their life.

Table-8: Stress scores on the sub-scale of GHQ.

Sub-scale	0 to 6 (Low stress)		7-13 (moderate stress)		14-21 (severe stress)	
	Clinical	Non-clinical	Clinical	Non-clinical	Clinical	Non-clinical
A(somatic)	10%	90%	60%	10%	30%	0%
B(Anxiety and insomnia)	10%	90%	60%	10%	30%	0%
C(Social dysfunction)	10%	70%	30%	30%	60%	0%
D(Severe depression)	30%	100%	50%	0%	20%	0%

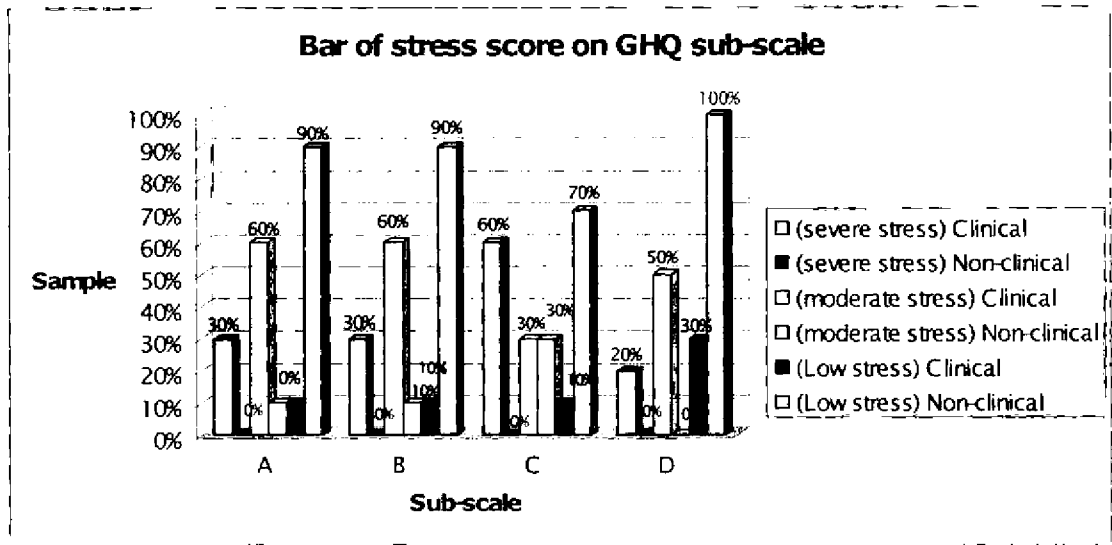


Fig-16: Bar of stress score on sub-scale.

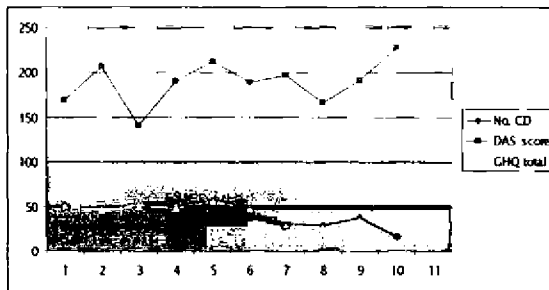
Table-8 and figure-16 indicate that most of the clinical sample had severe stress with social dysfunction, moderate stress with somatic and anxiety complain. Moreover a significant number of samples had moderate stress with severe depression.

3.3: Relationship among CD, DAS and GHQ

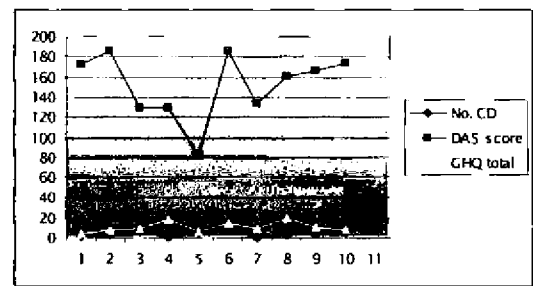
Table-9: GHQ and DAS scores along with total frequency of cognitive distortion among clinical and non-clinical sample.

Sample	Diagnosis	No. CD	DAS score	GHQ total	Clinical sample			
					GHQ sub-scale			
					A	B	C	D
C1	MDD	27	170	51	8	13	18	12
C2	GAD	27	207	46	6	13	14	12
C3	Panic D	27	141	51	16	17	15	2
C4	GAD	21	190	49	15	10	17	7
C5	Depression	40	213	55	7	13	17	18
C6	Depression	40	189	47	9	14	11	13
C7	OCD	30	197	30	7	10	11	2
C8	Drug D	29	166	26	9	7	5	5

C9	Somatoform	37	192	34	13	6	8	7
C10	Panic D	16	228	81	20	20	21	20
Non-clinical sample								
Sample	Diagnosis	No. CD	DAS score	GHQ total	GHQ sub-scale			
					A	B	C	D
C1	Null	1	172	4	2	2	0	0
C2	Null	2	186	8	0	0	8	0
C3	Null	6	129	9	4	0	5	0
C4	Null	0	130	18	8	4	2	4
C5	Null	5	82	7	1	0	6	0
C6	Null	8	185	14	2	2	8	2
C7	Null	0	133	9	1	0	8	0
C8	Null	2	161	20	6	7	6	1
C9	Null	4	166	10	4	0	6	0
C10	Null	5	174	8	4	1	3	0



Clinical



non-clinical

Figure-17: Line of CD, DAS and GHQ among the sample.

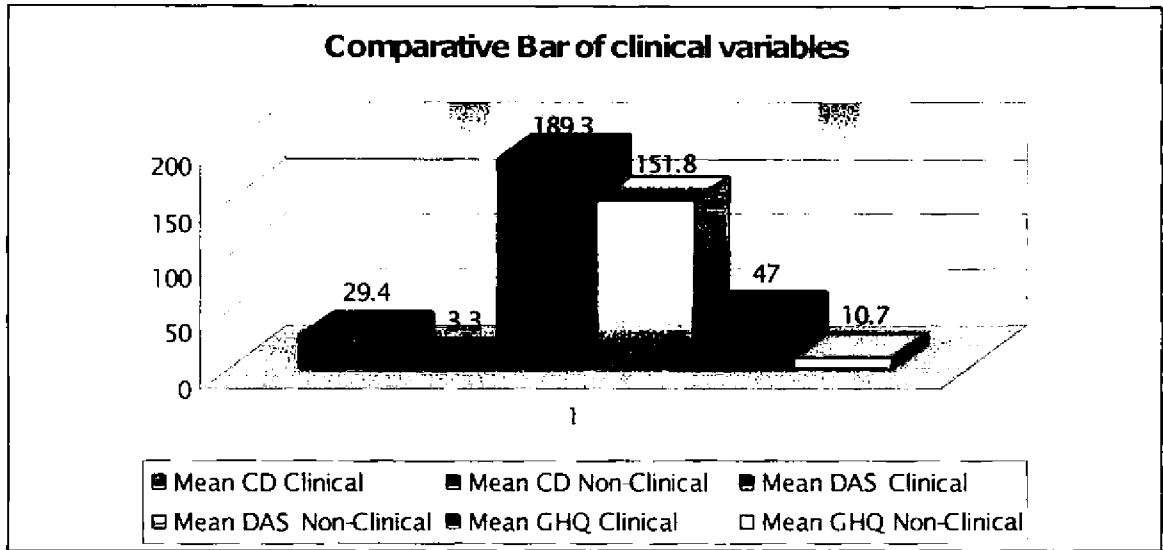


Fig-18: Mean of CD, DAS and QHQ scores of Clinical and Non-clinical sample.

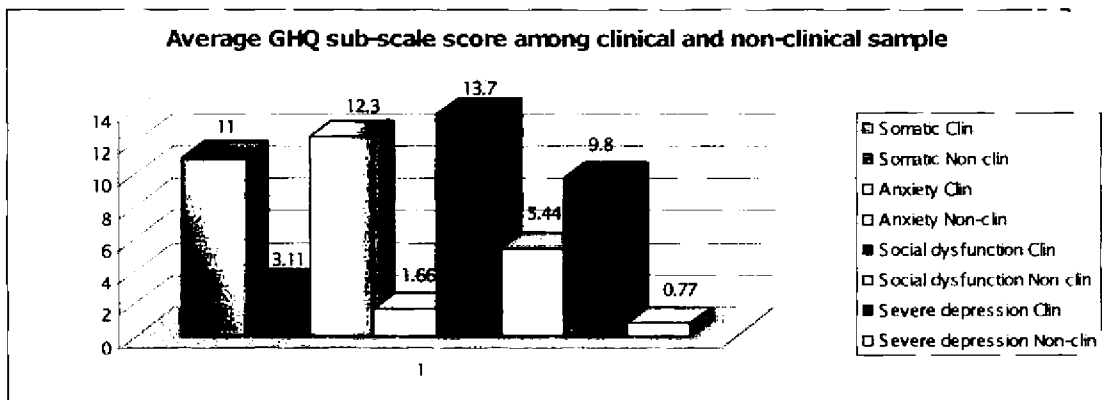


Fig-19: Bar of average GHQ sub-scale score among clinical and non-clinical sample.

Table-9 and figure 17 and 18 indicate that frequency of cognitive distortion; dysfunctional attitude and general mental health status influence each other. Higher dysfunctional attitude (mean=189.3), higher rate of cognitive distortion (mean=29.4) and higher level of stress (mean=47) or lower level of mental health status were found among clinical sample. On the other hand lower level of DAS (mean=151.8), CD (mean=3.4) and stress (mean=10.7) or higher level of mental health status were found among non-clinical sample.

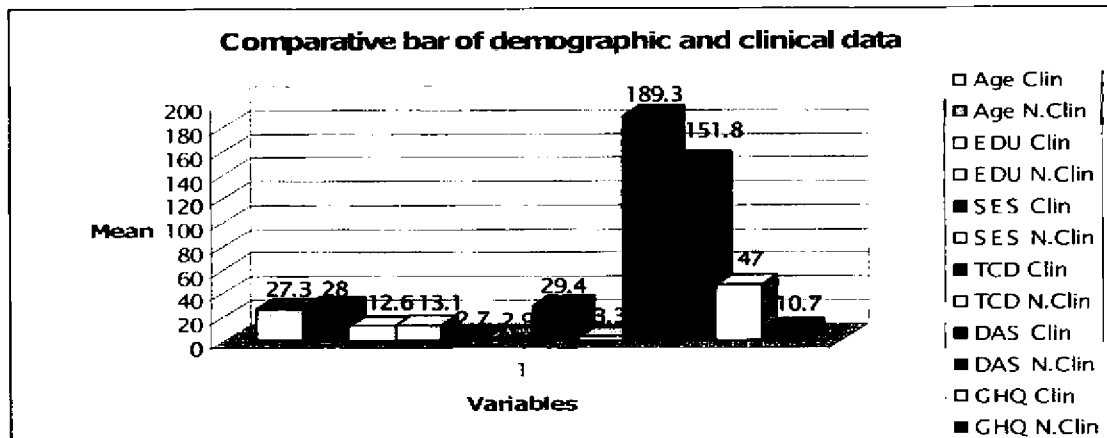


Fig-20: Bar of mean score of demographic and clinical data.

Figure-20 indicates that clinical and non-clinical group of sample are similar to demographic variable but they have a significant difference regarding the clinical variables.

3.4: Development of Cognitive Distortion:

The developmental history of cognitive distortion was assessed by interview and observation. Childhood and developmental histories were assessed and by conceptual content analysis it was found that psychologically no one was born with cognitive distortion. But different life experiences causes to develop different schema and attitude that guide their day to day activities. Maladaptive schema and attitude towards self and others lead to distorted perception. All sample mentioned a number of experiences responsible behind their views. Therefore, it can be predicted that different life experiences are responsible for developing cognitive distortion. Analyzing the experiences it was found that different types of positive and negative punishment influence to develop their negative pattern of thinking. Most of the respondent told that they experienced different life situation in their family, society and work place what were directly or indirectly painful to them. Those painful experiences lead them to develop negative idea about themselves and the surrounding. One of the respondents stated that *she had faced judgmental behavior and attitude from her parents since childhood that made her to believe that due to her feminine gender she is unlovable*. Based on the data the following model can be proposed to conceptualize the development of cognitive distortion.

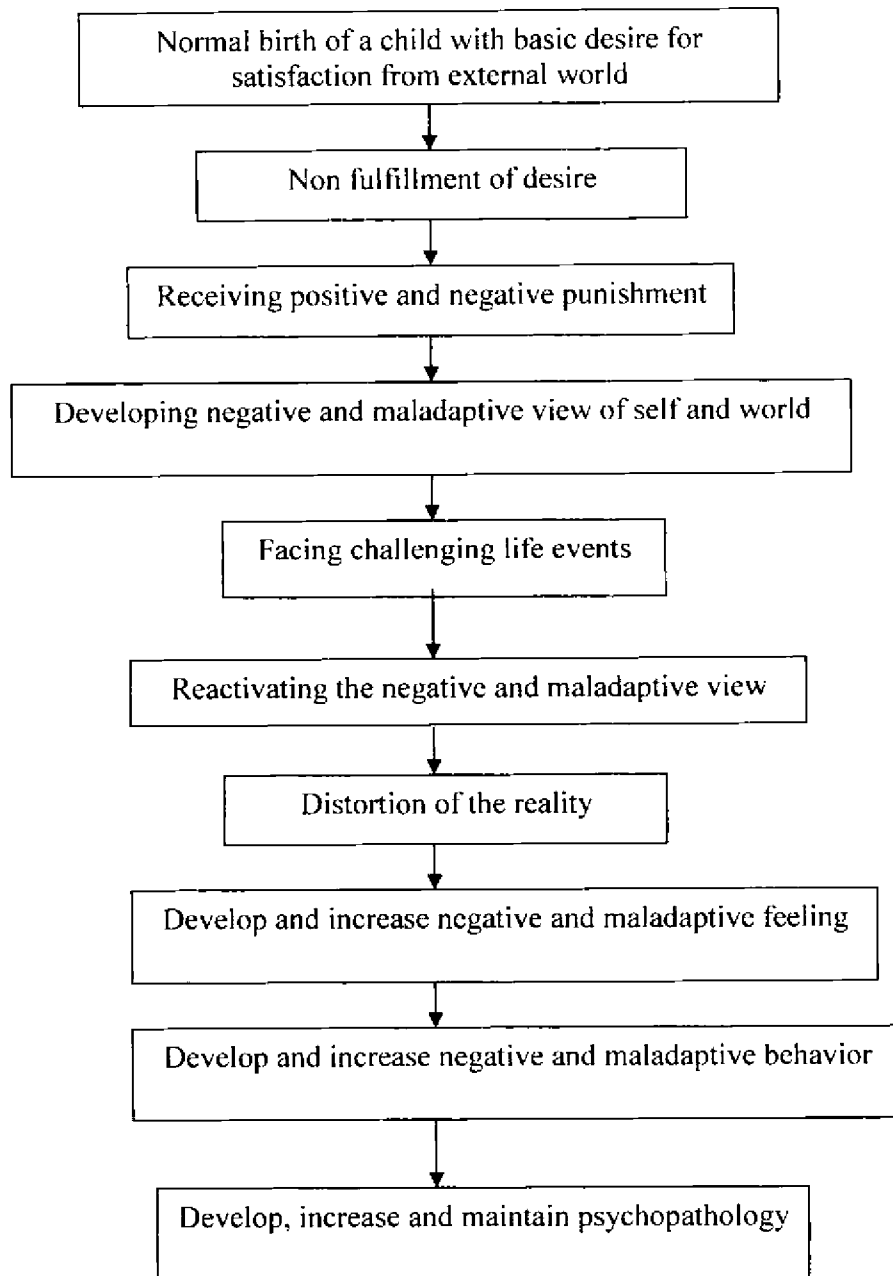


Fig-21: Flow chart of developing cognitive distortion.

quickly. The man was very charming and romantic. The client stated that her friend was very much interested to talk about sexuality and he always tried to make her sexually excited over phone. Though she denied discussing on those issues but she felt urge to receive his phone call every day and the man usually do so. Gradually, she fall in love with that person. But after one month of their relation, she came to know that the man is Hindu and older than her by 10 years. She became confused but finally decided to continue the relationship. But the man said that it was not possible to marry her as she belongs to different religion. He also informed her that his family especially his mother would not accept this relation. The client became crazy and decided to convert her religion to Hindu. It should be mentioned that she was a practicing Muslim and used to pray regularly. But from that time significant changes started to occur in her life style such as she started to visit temple in different occasions to make her boyfriend understood that she could do everything for him. But her friend did not respond positively. On the other hand, the patient's two elder sisters were married by their own choice for which her relatives usually warned her. Therefore, she did not make friendship with any boy and tried to obey family rules. But she was changed after that incidence for which she also felt guilty. Once she informed her family member about the situation. They took it easily and suggested her to change her mobile number but she did not change it. Though her boyfriend frequently behaved roughly and told her to forget him and to develop another relation but she was hopeful that her friend will accept her love. That situation continued about one year. Within this time one of the relatives and friend of that man sometimes call to console her. That persons' sympathy gradually made her dependent on that person and she felt supported by him. The man was also felt weakness to her. The client decided to marry that Hindu person to give a good lesson to her previous boy friend. During that time she refused two proposal of marriage arranged by her family. The second friend did not assure to marry her but requested to carry on her academic study. Six month ago of her illness the second friend informed that marriage is not possible but he could maintain a good friendly relation. She became disappointed and requested to meet her in Dhaka. He used to come in Dhaka but he offered her to meet at one of his friend's house. She thought that he might want to sex with her so she refused his proposal. The relation was going on in this way through mobile phone. Her first friend also phoned her and she expected his phone call regularly. She also expected that he will marry none but her and if the marriage is not possible

due to religious difference then both of them will never marry but they will live for each other. At the same time she also decided to marry her second Hindu friend but he denied to marry her. One month ago she came to know that her first friend had just married a Hindu woman. Then she phoned him but he behaved very roughly and denied to talk to her. From that time she became very depressed and developed other symptoms of major depressive disorder for which she came for psychiatric treatment.

Control-1:

Ms. "A2" was a 23 years old unmarried girl. She was a university student and had no psychiatric history. She was drawn as a control sample of case-1(A1) and the above four (1.1-1.4) scenarios were used to assess her cognitions. In the *first scenario* she stated, "I think I have done wrong and feel bad, but I will also think to hate him because I have to feel good for myself, as the relationship is not possible without the positive attitude of both side. So, I will try to forget him." She also mentioned that in our life we may take many wrong decisions but it is normal and I will see the incidence just as a simple mistake in my life which will not create any problem to carry on my daily life normally. In the *second scenario*, she said, "Real love does not consider the religious barrier as a problem, but if he deny me due to religion I will also hate him. She added, "I will feel bad and think that I have done wrong." She also mentioned that she will think in a way so that she can feel better. In the *third scenario*, Ms. "A2" told, "I will feel bad but I will accept their proposal and think that my previous relationship was wrong, I'll have to lead my rest of the life, so I will consider the suggestion and proposal of my family." In the *fourth scenario*, she stated, "Due to religious difference I did not get my love therefore, it might happen that his memories are coming back in religious occasion, but I will try to ignore his memories.

-----0-----

Case report-2:

Problem description:

Mr. "B1" was a 35 years old businessman. He was married having a child and lived in a city. He was suffering from Generalized Anxiety Disorder (GAD) for two years. Mr. "B1" complained that he always felt tired and nervous and did not feel physically and

psychologically energetic. He added that he felt excessive worry for simple thing and his body started to shake. The patient added that he felt headache for which he could not sleep properly. If he could not sleep properly he looked sick and it seemed to him that people thought him as a drug addicted person. He was afraid of this type of comments and became irritated. Moreover, the patient did have a fear of suffocation in lift, traffic jam and in any closed space. He also could not climb more than first floor of a building. He felt worry that he would fall down and die if he went to roof or side of a high ridge building, over bridge or flyover. The patient was also afraid of police, police car or van. He thought that police may arrest and beat him. He also mentioned that if police arrests and pick him up in police van then he will die automatically. Moreover, people will think him as a bad person and they will not respect and obey him. If police arrests him, he will loss his entire social support. Mr. "B1" added that he was afraid of sound, even mobile ring tone used to irritate him. He reported that his wife talked in loud voice which made him irritated because people will think her bad woman which is embarrassing to him. He had another fear of being bad to his wife, family and society due to extramarital relationship with his sister-in-law. He also mentioned that he always feel worry that if his wife came to know about that affair she might divorce him. Moreover, he wanted to forget the relationship with his sister-in-low but he could not. He expected that she would marry none but continue the love relationship with him. If she marry another person he could not live. The patient also reported that he always suspects that his sister-in-law might have love relationship with other boys which made him angry, frustrated and nervous as well. Whenever he gets or hears any news about relationship of her he become nervous and thinks that she should not maintain any other relation except him, she should not ignore his love towards her etc. This type of thinking made him angry, depressed and he could not behave normally. As he has fear of being caught to others so he does not want to face that type of incidence that made him angry and depressed.

Developing history:

Client's problem of worry and nervousness was developed gradually by the incidence of several unwanted situations. He started his occupation as a car driver and he had some bad experiences during five years of his driving such as giving illegal money to the police. During that time, he always scared of police and thought to fall in danger; police might arrest

him due to violating the rules etc. Though most of the driver violated many traffic rules but he became more scared and worried seeing the police. Once he stopped driving and started to do business. Among the business community, he always tried to be evaluated as a good man. One day some people came to his business center for taking money illegally from him and there was a chaos for the incidence. From that incidence he feel worry, anxious and nervous whenever he see crowd in their area. Moreover, if he hears some people are gathering and gossiping in front of his shop, he become so nervous and thinks that he is going to fall in danger again. He had another traumatic experience seven years back. He was waiting for a journey in a bus with his mother to go to their village home. It was ten minutes left to start the bus and he got down from the bus to buy a bottle of water. After coming back he saw that the bus had gone. He became so nervous and got into another bus to follow the previous bus but he could not catch the bus. At last he went to their village home but did not find his mother there. Then he phoned in their home at town and heard that his mother did not travel that bus and she went back to home with the help of a man. That incidence made him traumatized and after that he felt anxiety to travel in bus. The client stated that he always wants to be a good man but situation does not permit him. As for example, he liked a girl who was his friend's younger sister. He had good understanding with that family also. But his friend's mother requested him to marry his friend's sister. He could not refuse the proposal and marred his friend's sister about three years back. After marriage he was not satisfied with his wife's behavior. She talked in loud voice and did not perform house hold chores properly. These made him irritated and he gossiped most of the time with his sister-in-law rather than his wife. Gradually, a love relation was developed between them. For that relation he always felt scare and guilty also and for which he developed several bodily symptoms as well. Every where he sees some danger for which he could not concentrate in any activities.

Control-2:

Mr. "B2" was a 37 years old businessman. He was drawn as the control sample of case-2(B1). In the above four (2.1-2.4) scenarios his cognitions were assessed by thought listing. In the *first scenario* he stated, "I am very afraid and try to know the reason, I think that someone has stolen in my shop or somebody has come for robbery in the shop or there is an accident in front of my shop." He also said, "due to these thinking I may be more anxious, my heart bit

will be increased etc.” In the *second scenario* Mr. “B2” said, “I feel afraid to ride on lift because it may fall down, I also feel afraid to ride on roof of the high ridge building because I think that I will fall from the roof.” In the *third scenario* he stated, “I will feel nothing because it is normal to moving the police van hear and there and there is no reason to think any others.” In the *fourth scenario* the man mentioned, “I will feel pain because I have love relation with her but she is going to be wife of others, he also said, I’ll have to accept it easily because of my family.

-----0-----

Case report-3

Problem description:

Mr. “C1” a 42 years old male respondent who was suffering from panic disorder for one month. He had frequent panic attack, sleep disturbance, fear of death, fear of losing control over body, severe headache, irritation, guilt feeling etc. for which he was leading a disharmonious and unhappy life. Those problems were hampering his daily life functioning such occupational activity, family and marital life, social activity etc. which were escalating his sufferings. The client reported that when he got into a bus without his close relatives or well-known person he thought that he might get ill by collapsing his breathing and will die. He mentioned that when he thought that type of thinking he felt chest pain and headache, loss of energy and loosing his control over himself. In those situations he thought that he could not reach his house and he is going to be seriously ill and die, his family member will not even find his dead body. He added that he felt serious pain during the panic attack but after a couple of minutes he became free from that attack but felt very tired. He felt panic attack at his home also but the severity is low and his wife gave him courage and tried to normalize him. During night he could not sleep well though his wife reported that he slept at night. The client mentioned that he did not feel fresh at morning rather he felt tired for which he could not perform well at his office. At office he had a good reputation and credibility even six month ago but now he forgot about different file frequently and became anxious that he will be embarrassed by other colleagues. He also reported that currently he avoided going outside

alone due to fear of being attacked. He always searched for colleagues for going to office and return back to home.

Developing history:

The client brought un in a chaotic family environment. His father married three women who had different family setup. Client's mother was second in number. He had three brothers and two sisters among them one sister was mentally disturbed due to her marital conflict. The client lived with his wife and three children in a city. He married a woman with lower education level 15 years back but his wife could not teach their children well for which he felt that he had done wrong by marrying that woman. The client developed in a religious family and he had Madrasha background education. He usually practiced the rules and regulation of Islamic life style until his professional life. During professional life he could not control his demand and usually compare with colleagues from salary perspective. He reported that his colleagues usually earn a lot violating their job rules and regulation. Due to comparing with other colleagues, he felt that he should also earn some extra money beyond his monthly salary. Then he decided that he would take two or three thousand black money from different clients they usually dealt. Last ten years he was taking money from different clients in this way. He reported that though he earned in an illegal way he always felt conflict with that. For last five years he had been suffering from pain in his leg .During these periods he had suffered a lot for one year and he stopped his illegal earning from then. He visited different renowned doctors for his problem of pain but he was cured by consulting a junior doctor who said him that he had no problem and it would be cured automatically. That doctor also told him that due to earning money he (D) was writing some vitamin tablet but his problem will automatically be cured. After that treatment his pain was moved and he started illegal earning again. But sometimes he felt his pain still then. For last one year his job position was changed in the same location and after that his pain in leg, tension, guilt feeling, worry etc. became stronger. In the mean time, he had developed sleep disturbance for which he was not satisfied with sleeping. He usually thought that if he could not sleep well, he would not be able to do his regular activities properly for which he will be humiliated by other colleges. For the sleep disturbances he visited a number of physicians but significant improvement was not achieved. He started to think that he had problem in his brain for which he could not sleep. And the

problem occurred due to his sin. Therefore, he felt guilty for his misdeeds of earning illegal money. One month ago of his coming for psychiatric treatment he was going back to home from his office by public bus. On the way, he suddenly thought that possibly he was going to be seriously ill and he could not reach home. On that situation, he faced the first panic attack and the following day he had got another panic attack. Gradually his panic attack problem expanded in different situations. Whenever he goes outside alone he thought that the problem may occur for which he tries to manage a partner everywhere. But he could not manage partner every time for which his life functioning was greatly hampered. Therefore he came for psychiatric treatment.

Control-3:

Mr. "C2" was a 45 years old married man who had been servicing in private sector. He was drawn as a control sample for case-3 (C1). He had no psychiatric history and clinical level of anxiety and depression. The above four (3.1-3.4) scenarios were used to assess his cognition. In the *first scenario*, he stated that if he could not sleep at night, he would normally feel bad and try to sleep by recalling God but no other feelings would come to him. He also mentioned, "I think I should sleep properly otherwise my work plan will be hampered, if I have some family problem or financial crisis I will think how to solve the problems but I will not be upset about those problems." In the *second scenario*, he mentioned, "I will feel bore if I go for long route but usually I feel no problem." In the *third scenario*, he stated, "I will feel bad for my misdeeds and think that I should not have taken illegal money, possibly I am suffering for different problems for my misdeeds." He also mentioned, "I will feel afraid about my office file because once I took money for each file but now my file may be rejected by higher authority." In the *forth scenario*, he said, "I think, when I was young I did not take care of my leg properly. Moreover, sometimes I may think that due to my illegal earning my pain is not recovered."

Case report-4:**Problem description:**

Mr "D1" a 25 years old young man. He was unmarried and doing M. Ed. Degree in Dhaka. He lived in a govt. hostel. The client reported that he had many problems such as fear of being bad to others, fear of losing credibility to others, fear of being humiliated and embarrassed in social situation. He thought that his IQ and maturity is less than his peer and colleagues. Mr."D1" also reported that he felt very anxious and become nervous during viva voice for job and he thought that he would not get any job in future. The client added that he felt frequent thrust and gets tried easily. Moreover, his physical health is deteriorating and he thought that he might have any serious disease for which he could not concentrate and do usually wrong in every important task and decision. He also mentioned that he avoided many situations like going to marriage or any other parties. Attaining parties seems to be embarrassing because he thought that people screened his behavior such as eating, walking etc. and he thought that he could not eat, talk with people properly. He also avoided speaking in public situation because he became nervous and felt tremor and body shaking. He also felt stuttered during talking in public situation and with higher authority. He usually thinks that if he faces those people they will understand that his IQ is very low and he has no personality and problem solving ability. Whenever he feels the need to talk with higher authority he thought that he is going to fall in danger and lose important things. Therefore he did not want to face interview board and also thinks that he will never get a good job. He was always scared of being humiliated in public places for which he avoided public places and social situation. Moreover, he was afraid of bomb attack and chaos in public gathering for which he avoids public gathering such as any cultural program, party etc. Mr. S. also added that he could not initiate to talk with an unknown person due to fear of being evaluated as a bad and foolish person. Therefore, he could not develop and maintain friendship with newly known person. He had also fear associated with his family members. As his father died and his mother lived alone with his younger sibling so he always thought that his mother and other family members are in any problem consequences of which might be very dangerous for their family. One of his younger brothers lived in a foreign country and he frequently thought that his brother might be cheated by others and can lose all money and fall in danger, nobody will help him in foreign country. He had also complained that he could not maintain good relation with others due to throwing

foolish comments. He thought that his friends and colleagues are more matured and they can manage any situation very quickly but he can not do that and he is intellectually underdeveloped.

Developing history:

Mr. "D1" was brought up in a family with low socioeconomic status where he always had to face financial crisis. After all he was a good student in his class and did good results by hard work and taking help from his teachers. After passing SSC examination with good result he came to Dhaka to get admission in a good college. But after that he started to face adjustment problems with his classmates and roommates as well. He thought that no one in Dhaka is helpful in making his good result and his decision to come in Dhaka was wrong. He always felt stressed and thought that he would not be able to do good result in his HSC exam. He also thought that if he could not do good result he will be evaluated as a bad student by his villagers. Due to his stress he could not concentrate on his study and finally he got second division in HSC exam which was very shocking to him. He tried for the second time but could not do good result and after that he got admitted into graduate class but he always felt anxious about his carrier and performance. Meanwhile he lost his father for which he had more financial crisis. From that time his anxiety become pervasive into different social situation and he thought that he would fell into danger for which he would not be able to do anything in his life. He also thought that most of his friends are reaching to very good position but he is falling behind. After his father's death he took a job as a teacher in their village school but within few months he became very upset and thought that this job will destroy his carrier. So he resigned from the job and got admitted into Masters in education (M.Ed.) program in Dhaka. But he could not do any activity here with confidence. Even if he wants to talk with his classmates for education purpose he feels anxious to tell valueless statement. Moreover when he goes to school for practice teaching he could not control classes and thinks that the students know better than him.

Control-4:

Mr. "D2" was a 24 years old control subject for clinical case-4(D1). He was a university student and had not psychiatric history. According to Anxiety Scale and Depression Scale, he had no clinical level of anxiety and depression. The above four (4.1-4.4) problem scenarios

used for clinical case-4(D1) were also used to collect his cognitions by thought listing technique. In the *first scenario*, he stated that he will not feel bad because we all face many unknown person. If we need to talk with them, we have to create a positive situation to talk. He added that if the unknown person is interested to talk with him then he will continue the conversation. The person may be busy with other person or with many others thing, so he might not be interested to continue with him but hewill try to make him interested on his topic. Then if he also wants to talk, they will continue. In the *second scenario*, he mentioned that he had respect for higher authority but nothing is absolute. "I will not try to be 100% perfect in communicating with higher authority. I will try to present any thing as good as possible for me and will expect respect from higher authority that they will encourage me. If they don't do it, I will accept it easily because it will not destroy my life and I don't want to think anything that is harmful for me. Besides that I shall have to arrange my life according to myself. So, I will try in an alternative way. As for example, I will talk with another authority." In the *third scenario*, he stated that "to get job in our country is not so easy, so I will prepare myself before facing interview board. If the board has any intension to evaluate me negatively, they can do it because they are more experienced than me. However, I will try another one if I relay have need of a job." In the *forth scenario*, he told, "Once I felt very bad if someone avoided me or did not talk cordially. But now I think it in different manner because all people are busy with themselves so sometimes they may not talk to me cordially or even avoid me to talk."

-----0-----

Case report-5:

Problem description:

Mr. "E1" was a 32 years old married man. He was a private job holder. His prevailing problem was low mood, loneliness and lack of interest in all activities most of the time. He reported that he was suffering from these problems intensely for last six month and he thought several times for committing suicide along with one attempt by taking sleeping pills. Moreover he had late onset sleep disturbance problem, adjustment problem with his family members and wife, loss of appetite and weight loss. He had also serious guilt feelings for some previous decision and anger problem as well.

Developing history:

The client was brought up in a middle class family and they had a good reputation in their local area. From his childhood he was an average student but he had many friends. After graduation he did not continue his study and took a job in a medicine company. After getting the job the client got married 6 years back but he had adjustment problem with his parents-in-law. He reported that there was good and loving relation with his wife and they had a male child. But due to conflicting situation he decided to divorce his wife. He added that during conflicting relation with his parents-in-law's family he became involved in another love relation with a girl and he married second time one year ago followed by divorce with first wife. Within six month of second marriage he felt that his first wife loved and cared more rather than his second wife. This made him depressed and increased his guilt feeling about his wrong decision to divorce his first wife. He thought that he had made a sin by divorcing his first wife. He added that his second wife did not want to live with him in his job place for which he had to live alone most of the time. His second parents-in law accepted him cordially but he reported that they always gave preference to their daughter's decision like unwilling to live in the job place. It should be mentioned that the client's family did not accept his second marriage easily and some of their important family members have not accepted yet and they did not talk with the client. However the client lived alone in his job place and usually came to his wife at the weekend. After week end when he went back to job place at morning he had to go sometimes without eating. He stated that his wife is so lazy to leave the bed at morning and she did not prepare his breakfast for which he had to go without eating. The client felt too much neglected for that incidence and thought that he was responsible for those scenarios because he had done wrong by divorcing his first wife. He also thought that his second wife did not give him value as her husband and his parents-in-law also did not evaluate him as son. These made him depressed and angry. Moreover after six month of second marriage his wife started to mistrust about his sexual life. She started to believe that the client was maintaining another relationship either with his first wife or with another one. Though he assured her several times but she started to misbehave with him continuously on that issue and her behavior made the client so stressed, angry and frustrated as well. One day a sister of his colleague phoned him over his mobile for which his wife broke his mobile phone and scolded him a lot. He thought that there was meaning of his life so he decided to commit suicide by taking enough sleeping pills and he did so. His neighbors admitted him in the hospital and the authority referred him for psychiatric services.

Control-5:

Mr. "E2" was a 33 years old married man. He was drawn as a control sample of case-5(E1) and he had not psychiatric history. His cognitions were assessed by thought listing using the above four (5.1-5.4) problems scenarios. In the *first scenario*, he said, "I feel very bad and think that all wives are bad, I will divorce the second wife as well and never marry because no wife will believe me." He added, "I will be depressed also because my first wife has gone and if second wife also goes then I have to live alone for the rest of my life." In the *second scenario*, Mr. E2 stated, "If I can not live with my wife I will drop the job and live with my family, moreover, if I can not live with my wife my sleep problem will be increased." In the *third scenario*, he told, "It was my responsibility to prepare myself for office. Moreover, I am habituated to prepare food so I will not feel bad." In the *forth scenario*, he mentioned, "I have married for my betterment so she must go with me in my job place otherwise I will definitely feel bad."

-----0-----

Case report-6:**Problem description:**

Ms. "F1" was a 24 years old unmarried Muslim girl. She had been suffering from depression for six month. She was an honors student in Dhaka and came from upper middle class family. Her prevailing problems were lack of confidence, lack of interest in activity; indecisiveness; disturb relationship with boy friends and class friends. She had also lack of concentration and serious dissatisfaction with academic performance. She also stated that she had sleep disturbances and also had bad dreams during sleep. The client added that she could not achieve the goal of her parents and she is a failure person. She had an affair with her friend but she could not maintain it successfully and in future she will not be happy in life. Therefore she was scared with her future life. She believes that she does not have any good qualities and she looks unattractive and her personality is not impressive. Therefore nobody will like her to marry. She added that if she wants to develop friendship with her classmates and roommates she felt shame and low because she thought that they will came to know about her past history of affair and educational records. The client reported that her boy friend was a bad boy and he took alcohol and drugs but she did not know about it. She felt scared that if her classmates

came to know it they will evaluate her as a bad girl and worst student. Therefore she always avoids to talk with other girls and live alone most of the time in her room. The client also mentioned that she was confused with her boy friend. Their relationship started from school life and they were very good friend and liked each other. The client stated that she looks unattractive for which thought that her boy friend possibly did not like her with his heart. She added that she was confused because her boy friend usually said that he liked her very much. During college life they had a quarrel for mistrust and the relationship was broken. After that they did not communicate with each other for four years. During those periods the boy developed friendship with higher class boys and started to abuse alcohol and drugs. One year ago they communicated with each other with the help of some school friends and they agreed to reestablish their affair. But within few months the boy started to misbehave with her and they quarrel several times. The client stated that if her parents came to know about the relation they will never accept it and give her marriage forcefully ignoring her feeling. She thought that her parents did not love her and they could not understand her feeling. Therefore she felt scared and could not understand what to do.

Developing history:

The client was the first child of her parents and she had only one younger brother. Her parents and brother lived in a district town, out side Dhaka. Due to transferable job of her father she had to change her school and college several times. From her childhood she was an average grade student but she stated that if her parents sat beside her during study she could understand and learn her lesson quickly. She also stated that her parents usually did not give her time during study but she wanted it very much. During her school life her mother did not go to her school even in the parent's day but her friend's mothers usually came at school with her friends that gave her pain. She thought that her mother did not like and love her for which she did not give her much time. She also thought that as she is a girl so her mother did not like her. On the other hand her mother took care of her younger brother very much. She added that her mother went to school of her brother during his school age. Moreover in the S.S.C. examination she passed with C-grade but her expectation was to achieve minimum A-grade. Her family also expected so. She mentioned that due to bad result she had to drop and sit for the examination second time. In second time she achieved A-grade. Those incidences made

her self-esteem lower. Moreover her mother told her that they did not expect the result from her so bad and her father had to face embracing situation for her bad results. However in college education the client did not have any interest to study in science group but she had to do for parent's satisfaction. In H.S.C examination she had very good preparation but due to illness before examination she did bad results and achieved F-grade. This made her very frustrated and she decided to shift into arts group from science. For this reason she dropped another two years from her education life. It was harder to accept but she did it for better result. And at last she achieved A-grade in her H.S.C exam and got admitted for graduation.

Control-6:

Ms. "F2" was a 24 years old control subject for clinical case-6(FI). She was a university student and had no psychiatric history. According to Anxiety Scale and Depression Scale she had no clinical level of anxiety and depression. The above four (6.1-6.4) problem scenarios used for clinical case-6(FI) were also used to collect her cognitions by thought listing method. In the *first* scenario, she stated that she feels bad, depressed and thinks that her boy friend should inform her that he did not like and love her. She also told, "If he likes another girl he should go to her. He has not given value of my love. My study will be hampered and I will not be able to concentrate in my regular activities due to those thinking. I will go to my parents because without my parents support I will not get satisfaction in that situation." In the *second scenario*, she mentioned, "I feel bad and think I will not make friendship with them. I feel uneasy to mix with them because I always had confusion whether they will accept me or not. I am confused because I am senior to them and age difference must create a gap between us. Moreover, I feel that I am bad in study comparative to them. For those thinking even if I want to make friendship with my classmates I will not be able to mix with them freely." In the *third scenario*, she stated "I feel afraid and sad to tell them because they will not accept my relation. And if I don't say to my parent I will fall in danger in future and my life will be destroyed. My education will be greatly hampered. In *fourth scenario* she stated that she felt very bad anger, sad, and also said "I did not have tried enough to do good results for which I did bad result again, and in future good result will not occur. As a result I will feel very low and my self esteem will be lower and I will not be able to concentrate on my studies.

Case report-7:**Problem description:**

Ms. "G1" was a 20 years old unmarried female respondent. She came from a lower middle class family and was an honors student. She had one elder sister and all of her family members were religious minded. She was suffering from Obsessive Compulsive Disorder (OCD) for last one year. She stated that she had been suffering from feeling of discomfort with dirt for about three years but it was not hampering her life functioning. But since last year she could not maintain her daily life functioning for which everybody became annoyed and angry with her. The client reported that she had fear of being dirty by street, drain and dustbin dirt's. If she had a doubt of dirt she had to wash her orna, hand bag etc anywhere she felt dirt. She could not take a bath with stored water in bucket. More over she had to spend more than one hour for bathing for which family members scold her. She felt that she could come out from bathroom easily but as she had to wash everything in the bathroom before taking a bath so she took longer time to bath. She could not tolerate guests from village because she thought that they carried dirt under their shoes. If village people came to their house she felt irritated and wanted to wash everywhere they sat or walk in the room. The client added that due to fear of dirt, she consciously avoided to go to college. She thought that if she goes out side, her dresses will be dirty with the contact of dustbin and drain and she will have to wash everything. The client also said that it was painful to wash everything so she tried to avoid dustbin, drain and bathroom. To avoid bathroom she took very little water and food for which her health status was becoming worse. She also stated that she could not sleep alone in her bed. Two years ago she saw a film name "Koborer Ajab" and after that she felt scare to sleep alone. Due to washing problems the relationship with her mother and sister is becoming bad which made her more scared. She thought that without support of her mother and sister it is not possible to maintain her life.

Developing history:

The client was brought up in a religious family but she was very hyperactive in nature in her childhood. She played more than studying her school lessons time but her result was comparatively good. The client stated that her washing problems developed gradually. In her

childhood she was forced to be clean, wash etc. When the client read in class four she fell in a dirty drain during playing with her peers but that incidence did not create any discomfort within her. After S.S.C examination she started to feel irritation with dirt and her washing was increasing also. For last one year her problems became worst and pervasive to everywhere. She thought that there are urine and stool in drain and dust bin which are very dirty. Everywhere in the road there might be dirt so she felt irritated to go out side home. In home she felt irritated also whenever she has to go to bathroom because she thought that bathroom is a very dirty place. Therefore she has to wash everything in the bathroom before taking a bath. She stated that she feel relaxed for two/three hour after taking a bath. But rest of the time she felt bad and could not concentrate on her daily life activities and study.

Control-7:

Ms. "G2" was drawn as the control sample of case-7(G1). She was 20 years old and had no psychiatric history. Her cognitions were assessed in the above four (7.1-7.4) situations using thought listing technique. In the *first scenario*, she stated, "As there is accommodation problem, I may feel little bit bored but my behavior towards them will not be changed and my feeling will not be sustainable." She added that as she did not like village guest so she had to sacrifice for everything and she would do it easily." In the *second scenario*, G2 said, "I have no problem regarding bathroom inside the home but I feel bad for outside because most of the public toilet are dirty." She added that still she could go in public toilet if it was necessary. In the *third scenario*, she stated that as most of the dustbin in our country spread bad smell so she always try to avoid or pass quickly the dustbin. In the fourth scenario, she mentioned, "I will feel nothing but if I get bad smell before eating, I will fresh myself otherwise I will feel like vomiting".

-----0-----

Case report-8:

Problem description:

Mr. "H1" was a 24 years old unmarried Muslim male respondent. He was suffering from drug dependency for two years. He stated that he had abused different types of drug like heroin, cannabis etc. that stimulate him a lot to enjoy different situations. He was primarily a social addict from his college life but for last years he could not maintain his normal functioning

without drugs. Every day he had to take drug to remove his withdrawal problems. He could not sleep at night without drugs. The client mentioned that he had an adjustment problem with his parents that increased his craving for drug. He added that he hardly communicates with his parents at home and most of the time he receives negative feedback from them. In those situations he felt alone, angry and urge to take drugs. He had also problem of feeling of rejection by his peers and teachers. He always wants to be accepted by others but he felt that he might be rejected by others due to his wrong decision. Therefore he always felt scared of being rejected by others and could not take decision confidently. He added that due to lack of confidence many times he took wrong decision and he felt guilty and angry as well. All of these triggered his drug taking behaviors. Mr. "HI" also mentioned that when he interacts with others in social situation, he does not feel confidence to initiate the talking. He thought that he might say illogical words for which he can lose the acceptance of others in social situation. Those situations also forced him to take drugs. He believed that drug increases his confidence to communicate with others.

Developing history:

The client came from a higher class family. He was youngest between two siblings but their age gap is 15 years. His father was a teacher of Cadet College and he developed in the cadet college campus. The client was an ex student of cadet college. He reported that he took alcohol occasionally from his college life but the amount and frequency was negligible. When he got admitted into university he was very regular in his study. He had a love relation with one of his classmates. In first year examination he obtained good result but his girl friend could not do well for which she blamed the client and gradually the relation was dismissed. After that the client started to believe that there is no need to maintain good relationship with girls and like many other boys he will also become a negative hero who enjoyed the antisocial activities such as having sex with different girls, breaking the social norms etc. He then developed friendship with such type of boys who usually tried to be focus of discussion by doing antisocial activities such as breaking the rules, disobeying senior students and teachers, having sex with multiple girls etc. He stated that he had a tendency to break rules from his cadet college life. And it was exciting to him because he got a lot of punishment from the senior students for silly mistake. Therefore he got pleasure if he could break the rules silently. Many of his teachers also gave him emotional and physical punishment due to minor

mistakes. So, he usually tried to avoid most of the teachers for personal educational help. He thought that his teachers do not like him and he is a bad boy. He also thought that he had no need to be good boy and he will do more negative activities rather than positive activities. Moreover his father always indicates his negative activates and told him to do good things like doing better results, saving money etc. On the other hand, he mentioned so many good things about his son to others that made the client confused. The client also mentioned that his elder sister usually took care of him more than his parents. Therefore, he had more attachment with his sister rather than his parents and he usually share everything with her. When he was in class five his sister went away to her husband's family that made him very sad. Afterwards his out going tendency increased for which he got lot of punishment. He told that they had a group who enjoyed lot by breaking rules. However, during his university life his desire for negative heroism was increased with the contact of his university friends. They would like not to read regularly but to do good results in the exam. They usually read a lot taking stimulant drugs during the exam and they also arranged different parties to take drugs and gradually he became fully dependent on drugs.

Control-8:

Mr. "H2" was drawn as the control sample of case-8(H1). He was 23 years old and had no psychiatric history. His cognitions were assessed in the above four (8.1-8.4) scenarios used for case-8(H1). In the *first scenario*, he stated, "When I was in school I felt angry and thought that they did not like me, but now I think that my parents are helping me to solve my problems. So, I accept their comments positively." In the *second scenario*, Mr. H2 said, "I am dynamic and if someone ask me to follow the traditional rules I feel bored and it seems to me that they are out of date for which I avoid them". In the *third scenario*, he stated, "I primarily try to discuss with my friends and then with the teacher if it is necessary". He added that if he knows that the teacher is not collaborative then he himself will proceed with the question. Moreover, if there is senior teacher in the exam hall, I will not talk with them because senior teachers are unhelpful. In the *fourth scenario*, he said, "If we want to enjoy the situation I'll have to participate in the gossiping but it will depend on my mind. If I feel bad, I will not cordially participate."

Case report-9:**Problem description:**

Ms. "11" was a 23 years old female respondent. She had been suffering from somatoform disorder for seven years. She was a student and was brought up in a lower middle class family. She had multiple somatic complains for which she could not continue her study and other daily life functioning. The client had headache, chest pain, difficulty in bearing specially feel pain and suffocation, pain in different parts of the body and lack of energy. She also added that she did not get pleasure in any activity and preoccupied with fear of being ill with serious disease. For last two years, she could not sleep properly and felt very tired also. She also mentioned that she had constipation problem and felt gas in her stomach for which she could not eat properly and lost her weight. Along with these problems she mentioned that she wants to continue her study but she can not concentrate on study and whenever she sits for study she becomes preoccupied with her illness and feels problem in her body.

Developing history:

The client lived in a village. She had very good relation with her family members. She had one elder sister and two younger brothers also. Her father was a govt. employee and mother was a house wife. She was an average student from her childhood. When she was in class six, she suffered from frequent diarrhea for which she could not attend school regularly. However, subsequently she cured from that problem but her headache problem started from class nine and in S.S.C she could not obtain good result. After that different somatic problems were developed but no medical treatment cured her completely and she could not continue her study in college. Afterwards she took different treatments but she could not come back to normal life functioning. Whenever she faced stressful situation like preparing for examination, she became ill. She stated that her friends are going to finish their graduation but she could not complete her H.S.C. When she thought all these, she feels so upset and stress and also thinks that "she is failure in life", "she will not be able to complete her education and to establish in life" etc. She added that some of their relatives and neighbors told that after marriage her problems will be automatically cured but she thought that the problem will be more complex because she will not be able to maintain family and household chores. Moreover, she believes that it is not possible to leave her parents' house. If she goes to other's

family they will not understand her problem. Therefore she is scared of marriage. Whenever she thinks to live outside their home and family, she became much stressed and her somatic complain exacerbate.

Control-9:

Ms. "I2" was a 21 years old control sample for case-9(11). She was a university girl and had no psychiatric history. Her cognitions were assessed in the above four (9.1-9.4) scenarios by thought listing method. In the first scenario she stated, "As I have a goal and my study will help me to achieve that goal so I will feel very good to study regularly." In the *second scenario* she said, "I will definitely feel bad because marriage is not solution, I will feel angry with them because they should understand my problem. Moreover I will think that I must establish myself to face these difficulties. In the *third scenario* "I2" stated, "It will increase my pain and I will think that if I can live with my family my problems will be decreased, out side home I will not feel relaxed but I have to cope with pain." In the *fourth scenario* she mentioned, "I will feel normally sorry for the news of accident but if the news is related to my close one then my physical problems will be increased.

-----0-----

Case report-10:

Problem description:

Ms. "J1" was a 25 years old married Muslim woman. She lived with her two children and parents in-law. Her husband was living in abroad for last one year. The client was suffering from panic disorder without agoraphobia for five months and reported the complain of headache, tiredness, loss of appetite, weight loss, sleep disturbance, intense fear of death, body shaking, fear of loosing control over body, etc. The client reported that she felt her problem most when someone criticized her. She mentioned that being criticized by other is similar to death. Therefore, if someone criticizes her, she thought that her life is meaningless and she should rather die, everybody is knowing that she is a bad woman etc. these type of thinking made her so anxious and depressed also and she developed different somatic symptoms.

Developing history:

The client was brought up in a middle class family and she was the only one daughter of her parents. She was good student but she developed an affair with her relatives when she was in class eight and they got court marriage which was not accepted by her family. After three years of their marriage her family accepted them. However she could not continue her study afterwards. Moreover she gave birth of her first child at her 17 years of age. When her first child was one year old she had a conflict for silly matter with her parents-in-law and her father-in-law beat her. Her husband was only one son of his parents for which he made her understood to cope with the situation. Subsequently she had a communication gap with her parents-in-law. She stated that they always scold her and criticize her. The client added that as she always tries not to do any fault so she had not to face any criticism. But as her parents-in-law always criticize her so she was scared of being bad to others. Two years ago her elder brother scolded and criticize her and told that she was not taking care of her parents-in-law. That incidence made her so upset and she had a serious headache and chest pain. The following day she had serious breathing problem and it seemed to her that she was dying. She took treatment from a doctor and her problem disappeared. One year ago her husband went to abroad for job and her tension increased a lot. She thought that she will never meet her husband and she could not sleep at night properly. Six month ago her husband sent 50 thousand taka for repairing their house. She was doing so but her mother-in-law told other people that she was wasting money by doing fashion but did not give money for their feeding and treatment. Other people also told her about that. These made her so tensed and stressed as well and she thought that she was becoming bad to others. One night she was trying to sleep and suddenly she felt that she was dying by collapsing her breathing. Subsequently she felt the same problems in different time for which she felt so tired that she could not work and eat properly. She took treatment from doctors and natural healers but was not cured. Finally she came for psychiatric treatment.

Control-10: Ms. "J2" was a 27 years old married woman. She had no psychiatric history and had no clinical level of anxiety and depressive feature. She was imaginably exposed to the above four (10.1-10.4) scenarios that was used for thought listing of client-10(J1) to assess her cognition. In the *first scenario*, she stated, "I feel bad and think, I have done any mistake or misbehave for which others are criticizing me." In the second scenario, "J2" said, "I will

feel bad and think to take rest.” She added that she will try to understand the reason of discomfort and talk to doctor. In the third scenario, she mentioned, “I feel upset because I think that obviously I have done some wrong thing.” She added that if her family members also criticize her, she will feel hopeless and thinks that she is helpless. In the fourth scenario, she said, “It seems to me that if my husband was with me, nobody will criticize me and if I remember his memory very frequently, I will feel helpless and alone for which everything will be boring.

-----0-----

CHAPTER 4

DISCUSSION

DISCUSSION

Maladaptive cognitions have an essential role in the development and maintenance of different psychiatric disorders. Therefore, changing maladaptive cognition about different life situations is the prime focus in Cognitive Behavior Therapy. Sufficient data about any phenomena is essential to make it more scientific and to develop different technologies for the wellbeing of society. In Bangladeshi cultural perspective very few scientific data are available on maladaptive cognitions, schema or core belief etc. This is the first empirical initiative to study on cognitive distortion among different psychiatric patients in Bangladesh. Therefore, the aim of the current research was to understand the phenomena of cognitive distortion in Bangladeshi cultural perspective. For this reason a number of specific objectives such as “what are the different types of cognitive distortion present among different psychiatric patients? What is the impact of those cognitive distortions on their mental health? What is the relationship among cognitive distortion, dysfunctional attitude and general mental health status? etc. were set for the current research. To pursue the current research objectives a total of 10 clinical and 10 non-clinical samples were purposively drawn into two phases. At first 10 clinical samples with different psychiatric disorders which are mostly common in Bangladesh, were assessed by in-depth interview, Dysfunctional Attitude Scale (DAS) and General Health Questionnaire (GHQ-28). By in-depth interview four most problematic scenarios were assessed first which were used for thought listing to explore cognitive distortion. All situations were different in content. In the second phase, 10 non-clinical samples were selected matching the demographic variables of clinical samples but who did not have any psychiatric history. Each non-clinical sample was used as control sample for each clinical sample and their cognitions were also assessed by thought listing using the same problem situations used for the respective clinical sample. DAS and GHQ-28 were also used to assess their severity of cognitive distortion and the status of mental health condition. One of the prime objectives of this study was *to explore different pattern of cognitive distortion*. By conceptual content analysis of qualitative data, collected by in-depth interview, it was found that all clinical samples had a number of cognitions which were maladaptive and distorted as well. As the scenarios were associated with problem of the respective sample so a number of cognitions were elicited when they were imaginably exposed to those situation. Among their

cognitions different pattern of distorted cognitions were found. As for example a patient with depression was exposed to four problem situations and it was found that 27 distorted statements (Table-4) were elicited on those situations. Patient with depression had more cognitive distortion among different clinical sample. They had minimum 27 and maximum 40 distorted cognition (Table-4) in their respective four problem scenarios. Research found that depressive patient shows greater level of cognitive distortions. In an empirical comparative group study it was found that the depressed subjects selected significantly more depressed distortions on the Cognitive Bias Questionnaire than did the non-depressed subjects (William et al., 2005).

Once the term cognitive distortion was widely used for depressive patients but the current study shows that cognitive distortion is also common among other psychiatric patients. Table-4 shows that patients with GAD, Panic, OCD, drug dependency and somatoform disorder also had higher level of cognitive distortion which ranged from 16 to 37 distorted statements in their respective four problem scenarios. Pattern of cognitive distortion varies according to diagnosis. Among all the patterns of cognitive distortion it was found that magnification and minimization pattern was reported the most and all or nothing pattern was least. All or nothing pattern (eg., *I have even no quality to get love of a man*) was found mostly among depressive patient and magnification pattern (eg., *I will be seriously ill and die if I can't sleep*) was mostly found among different types of anxiety patients. In the current study there were more sample with anxiety disorder and they had more cognitive distortion of magnification and minimization therefore, the total frequency of magnification and minimization was higher than other cognitive distortions among clinical sample. The most significant cognitive distortion among the depressive patients was personalization (eg., *I have destroyed our family reputation by second marriage*) and jumping to conclusion (eg., *My life will be end with dissatisfaction*). In another study in Bangladesh it was found that overgeneralization and Jumping to conclusion were the most frequent CD among patients with major depression (Hossian, Deeba and Begum,2008). Among the patient with Generalized Anxiety Disorder magnification-minimization and overgeneralization were found the most significant cognitive distortion. Literature suggests that GAD patients hold Catastrophizing, Arbitrary Inference, Personalization, Selective Abstraction, Overgeneralization, Dichotomous Thinking, and Labeling type of cognitive distortion, (Meek,2009). Patients with panic and somatoform

disorder had the most significant cognitive distortion of magnification-minimization and jumping to conclusion. Different studies (eg., Casey et al., 2004) also show that panic patients had Catastrophic misinterpretation of their bodily sensation. Patients with somatoform disorder hold mostly the catastrophising, dichotomous thinking and selective abstraction types of cognitive distortion (Wells, 2004) which were also significantly found in the current study except dichotomous thinking or black and white thinking. The current client with somatoform disorder got higher attention from her family members due to her illness and it might be the reason of showing no distortion in black and white thinking. Moreover, this distortion usually found when the person feels more depression. But the current case had a good family support to prevent and heal her depression. Among OCD patients it was found that overgeneralization and magnification-minimization were most significant cognitive distortion (Table-5). Literature suggest that *All or nothing*" thinking are common in OCD, Gorbis (2008). Another research indicates that tendency to Overvalue of dangerousness and disastrous consequences if the ritual is not performed are found among OCD patients (Foa & Kozak,1986). In a Bangladeshi study overgeneralization and emotional reasoning was found as the most frequent cognitive distortion among OCD patients (Uddin et al.,2008). Patient with drug dependency had more cognitive distortion in overgeneralization and jumping to conclusion category. Previous study indicates that Levels of cognitive distortion among drug user is comparable with depressed people (Chabon & Robins,1986). Depressive patients in the current study also had high level of jumping to conclusion and overgeneralization (Table-5).

On the other hand cognitive distortions among non-clinical sample in the same problem scenarios were found but at a lesser degree. A total of 0 to 8 distorted statements were found among different non-clinical sample. The highest rate of distorted statement was found in the should statement category and no distorted statement was found in all or nothing, mental filtering and disqualifying the positive category. Emotional reasoning, jumping to conclusion and labeling-mislabeling were also present in a higher rate but significantly lower than clinical sample. Analysis of results show that average number of cognitive distortion among clinical sample was significantly higher than that of non-clinical sample (Fig-12). Literature also says that we all experience cognitive distortions to some extent but people with **anxiety** and **depression** tend to experience greater and more frequent distortions (Sykes, 2008). Table-6 and Fig-14 indicate that the qualitative findings of cognitive distortion contradict

little bit with the measurement of dysfunctional attitude scale. Literature and psychometric properties of dysfunctional attitude scale stated that higher score in DAS indicates higher cognitive distortion and the score above 120 indicates the clinical level of dysfunctional attitude having higher level of cognitive distortion. But in the current study Table-6 shows that 100% of clinical sample scored above 120 and 90% of the non-clinical sample also scored in clinical level. Though there is a significant difference between the average score of DAS but most of the non-clinical sample along with all clinical samples had clinical level of dysfunctional attitude which is alarming. Though the People having no clinical feature of psychiatric illness were drawn for control sample but the assessment shows that they have cognitive vulnerability that might contribute to develop different psychiatric problem. As for example one non-clinical respondent rated the highest score in item-8 of DAS that describe “I should be able to please everybody”. As the person strongly believe this hypothesis so she will always try to make all people satisfied which is not possible practically. Because satisfaction depends on many things and it is rational that each people will be conscious about their own satisfaction showing respect to others. Although the above mentioned person had no psychiatric problem and had very few cognitive distortions she might be predicted as a vulnerable case in any stressful situation. Moreover, as the problem scenarios used in thought listing were taken from clinical sample which might not be representative of the non-clinical sample. For which non-clinical sample shows little cognitive distortion because people usually perceive any pattern by assimilating with their own schema. The rate of cognitive distortion might be higher if the original scenarios of their own life were used for thought listing. However, as the current study focused on exploration and the qualitative assessment on a small number of sample it is not possible to generalize the findings. But it can be assumed that many people in the current cultural perspective have dysfunctional attitudes that might make them vulnerable for developing psychiatric disorder such as depression, anxiety etc.

It was also aimed to know *the impact of cognitive distortion on general mental health state*. From the qualitative data it was found that all clinical samples evaluated the negative thinking as bad for themselves but they could not think with out negative thinking. They added that due to those type of thinking they can not perform their daily life functioning properly because they feel bad due to their unexpected life situations and negative thinking as well. In

a study it was found that high cognitive distortion is associated high functional impairment (Alan et al.,1999). In another study it was found that cognitive distortions have significantly negative impact on Chinese student's sense of autonomy and could play the roles of psychological defense mechanism (Zhang,2008). Judge and Locke (1992) found that there is a strong causal relationship among subjective well-being, job satisfaction and dysfunctional thought processes.

In the current study as the samples were neurotic patients who are usually aware of their sufferings. They were also aware of the psychosocial reasons of their sufferings. Moreover, most of them added that their family members or friends suggested them not to think negatively. Therefore, it was found that all clinical samples were aware of the impact of negative thinking but they did not have control over their thinking for which they were suffering from different problems in different life situations. On the other hand non-clinical sample showed mixed answers. Five out of ten respondents mentioned that their thinking in the negative situation will be disappeared after leaving the situation. So, they did not feel any impact on daily life functioning. Rest of the non-clinical sample mentioned that they feel very bad if they think negatively. But most of the non-clinical sample responded that they try to avoid negative thinking because it will increase the bad feelings. To see the impact of cognitive distortion on general mental health, GHQ-28 was also administered and it was found that clinical sample, who had high level of cognitive distortion, had higher GHQ score also. High GHQ score indicates high life stress or low mental health state. So, the clinical sample had high level of cognitive distortion and high level of stress or low level of mental health state. On the other hand non-clinical sample had low level of cognitive distortion and low level of life stress or high level of mental health state. Table-7 and fig-15 indicate that most (70%) of the clinical sample had clinical level of stress but none of the non-clinical sample had clinical level of stress. GHQ-28 also measures four sub-area of mental health (Table-8) and it was found that most of the clinical sample had moderate to severe stress in all the four sub-scales. On the other hand very few non-clinical samples had moderate stress and no one had severe stress in any sub-scale. Only in social dysfunction sub-scale 30% non-clinical sample had moderate stress. Overall finding reveals that the cognitive distortion was higher and the status of mental health was lower among clinical sample. On the other hand

cognitive distortion was lower and the status of mental health was higher among non-clinical sample. Therefore, it might be said that there is a negative correlation between cognitive distortion and mental health state which indicates that cognitive distortions affect mental health negatively. In another study it was found that cognitive distortion and functional impairment was reported as highly correlated among medical patients also (Christensen et al., 1999).

There was another objective *to see the relationship between cognitive distortion and general mental health status*. It was found that clinical sample had high frequency of cognitive distortion, high level of dysfunctional attitude and high level of GHQ score or low level of mental health state. On the other hand non-clinical sample had low frequency of cognitive distortion, and comparatively lower score on dysfunctional attitude and lower score on General Health Questionnaire (GHQ) or higher level of mental health state (Table-9 and Fig-17, 18). Therefore, it can be predicted that there is a relationship between cognitive distortion and mental health. In a study it was found that DAs were significantly correlated with levels of depression and anxiety at intake and at 12 weeks; in addition, changes in DAs were significantly correlated with changes in depression and anxiety during treatment (Burns and Spangler, 2001).

In the current study it was also found that clinical sample had higher scores on different sub-scale of GHQ-28 than non-clinical sample (Fig-19). It was also evident from the Fig-20 that both clinical and non-clinical sample were almost similar, considering the demographic variable but there were significant differences in the frequency of cognitive distortion, dysfunctional attitude and general mental health state between the groups. Though the DAS score of non-clinical sample was lower than clinical sample but they also had clinical level of dysfunctional attitude like clinical sample. The difference between two groups can be described from other clinical perspective such as general mental health state and the frequency of cognitive distortion. As the non-clinical group of sample had no clinical level of anxiety, depression and they did not have any psychiatric history so they might have better coping strategies. Therefore, the negative automatic distorted cognitions were not in activated state and it may help them to feel better. If people can feel better they can perceive most of

the situations in an optimistic way which make them motivated to achieve their goal. On the other hand if people can see different phenomena in a positive way they can feel better as well. After all, the non-clinical group of sample was in good mood for which they did not show many cognitive distortions but still they had maladaptive schema and dysfunctional attitude according to the scale score for which they had vulnerability to feel worse by activating those schema and cognitive distortion when they will face unwanted and unfavorable situations in their lives. Previous research also indicates that there are specific association with dysfunctional schema or/and cognitive distortion and psychopathology (Leung and Poon, 2001) It should also be mentioned about the cognitive coping strategies of the sample. The clinical sample mentioned that they could not control their negative automatic thinking but half of the non-clinical sample told that they could resolve their problems and control the negative thinking for which they did not feel bad for a long time when they face difficult situations. Therefore, it can be said that if the sample had cognitive control over their thinking they could avoid psychiatric illness and maintain happy and productive life. But it can not be claimed from the current study that cognitive distortion causes mental health problems or mental health problem causes cognitive distortions. It can be claimed that if people can perceive any situation in an adaptive and practical way then it is possible to feel better and to avoid mental health problem.

To see the development of cognitive distortion the childhood experiences and other developmental histories were analyzed to see the contributing factors of developing cognitive distortion. It was found that all clinical sample had different life experiences behind their distorted cognitions. Two of them mentioned the critical incidence after which their psychological problems and distorted perception were developed but the rest of the clinical sample mentioned a number of life experiences which made them to think in a pattern that creates negative feelings within their mind. As for example a clinical sample stated that his parents and some of his teachers evaluated him negatively which were very painful to him. Those experiences lead him to think that his teachers and parents do not love him and he can lose their support for silly mistake. Research shows that negative parenting and negative life events are corresponded with higher levels of depressive cognitions, whereas positive parenting is corresponded with lower levels of depressive cognitions (Bruce et al.,2006). In

the current research these types of incidences were experienced by six out of ten clinical samples. Previous study also suggest that emotional maltreatment, parents' typical feedback styles, and parents' dysfunctional attitudes regarding their offspring contribute to develop maladaptive cognitive patterns (Oliver et al.,2007).

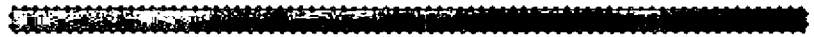
Limitations of this research:

- We know generalization is the essence of science. But the current research has limitation in respect of global generalization. Cognitive distortion is a vast issue in the world of science. But in Bangladesh this is the first initiative to study with CD. Therefore, the aim of this was to understand the general picture of CD among Bangladeshi sample. The current research focused on some general questions among different psychiatric disorders. So, there was no representative sample from any disorder.
- The current study found the relationship between CD and mental health but it is not possible to calculate and predict the causal relationship from this findings.
- The current study did not cover all research questions related to cognitive distortions because there was a time limit for the current research. Moreover as it was a qualitative study so diverse group of sample were studied here. But many specific questions related to specific disorders were not included here.
- The scenarios used for thought listing were not representative and common for all sample. To develop representative scenarios is very time consuming but there was a time limitation for which it was not possible to develop representative scenarios. Moreover, the psychometric instruments (DAS and GHQ) used in the current study were not developed in Bangladesh. Therefore, the findings of these instruments might not be free from bias due to cultural variation.

Recommendations :

- No research design is 100% perfect. Therefore knowledge gained in any research is not out of bias but repeated conduction of a research can promote more perfect knowledge. As the current research was the first initiative in Bangladeshi perspective and it was a small sample study so further study should be conducted on this phenomenon with large number of sample. The study could be replicated by same design and with random sampling to increase the strength of knowledge found in the current study.
- Research questions such as what is the relationship between parenting style and cognitive distortion? Are there any relationship between cognitive distortion and intelligence? What is the causal relationship between cognitive distortion and psychopathology? All these questions should be studied to understand the cognitive distortions more comprehensively.
- Different research focusing on specific disorder should be conducted to gain more knowledge on different disorders.
- Different challenging situations are common in human life. Therefore, development of every child should be promoted in a way so that they can accept those challenges easily. To prevent and minimize CD, scientific knowledge about life should be promoted within community
- Clinical Psychologists (CP) should be employed in different govt. and non-govt. organizations so that they can help people to learn how to think in an adaptive way to promote positive living. Moreover, Clinical Psychologists should be engaged to design different programs to improve the mental health status of the community.

CHAPTER 5



REFERENCES

REFERENCES

- Banoo, S.N. (2001). Stress and Burden of the Care givers of Chronic Mental Adult Patients. *An M. Phil thesis paper* submitted to Dept. of clinical psychology, D.U.
- Barnett, P. and Gotlib, I. (1988) Psychosocial functioning and depression: distinguishing among antecedents, concomitant, and consequences. *Psychol Bull* **104**:97-126.
- Barriga, A., Landau, J., Stinson, B., Liao, A., & Gibbs, J. (2000). Cognitive distortion and problem behaviors in adolescents. *Criminal Justice and Behavior*, **27**(1), 36–56.
- Beck, A.T. (1963). Thinking and depression: Idiosyncratic content and cognitive distortions. *Archives of General Psychiatry* **9**, 324-333.
- Beck, A.T. (1964). Thinking and depression: II. Theory and therapy. *Archives of General Psychiatry*, **10**, 561-571.
- Beck, A. T. (1967). *Depression: Causes and treatment*. Philadelphia: University of Pennsylvania.
- Beck, A. T. (1976) *Cognitive Therapy and the Emotional Disorders*. New York: International Universities Press.
- Beck, A. T. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.

- Blalock SJ, Devellis RF, Brown GK, Wallston KA.(1989). Validity of the centre for epidemiological studies depression scale in arthritis populations. *Arthritis Rheum*; 32:991-7.
- Brenda Chabon, B. & Robins, C.J.(1986).Cognitive Distortions among Depressed and Suicidal Drug Abusers. *Substance Use & Misuse*. Volume 21, Issue12, pages 1313 – 1329.
- Briere, J. (2001). *Cognitive Distortions Scale*. Los Angeles: Psychological Assessment Resources.
- Briere, J., Runtz, M., Giancola, P., Mezzich, A., Clark, D., & Tarter, R. (1993). Cognitive distortions, aggressive behavior, and drug use in adolescent boys with and without a family history of a substance use disorder. *Journal of Interpersonal Violence*, 8(3), 312–330.
- Bruce,A.E., Cole, D.A., Dollaire, D.H., Jacquez, F.M., Pineda, A.Q. and LaGrange,B. (2006). Relations of Parenting and Negative Life Events to Cognitive Diatheses for Depression in Children. *Journal of Abnormal Child Psychology*. Volume 34, Number 3, Page 310-322.
- Burns, D. (1980). *Feeling good: The new mood therapy*. New York:William Morrow.
- Burns, D., & Beck, A. T. (1978). Cognitive behavior modification of mood disorders. In J. P. Foreyt, & D. Rathjen (Eds.), *Cognitive behavior therapy: Research and applications*. New York: Plenum Press.
- Burns, D. D. and Spangler, D. L. (2001). Do changes in dysfunctional attitudes mediate changes in depression and anxiety in cognitive behavioral therapy? *Journal of Behavior Therapy*, Volume-12, Issue 2, page 337-369

- Carleson, P. (2008). Learning About Automatic Thoughts and Cognitive Distortions; <http://www.articlebase.com/mental-health-articles/learning-about-automatic-thoughts-and-cognitive-distortion-359952.html>.
- Casey, L.M., Oei, T.P. and Newcombe, P.A. (2004). An integrated cognitive model of panic disorder: the role of positive and negative cognitions. *Clin Psychol Rev.* **24**(5):529-55.
- Chabon B; J. Robins C.J. (1996). Cognitive Distortions among Depressed and Suicidal Drug Abusers. *International Journal of the Addictions* (0020-773X).
- Chabon B; J. Robins C.J. (1986). Cognitive Distortions among Depressed and Suicidal Drug Abusers. *Substance Use & Misuse*, Volume **21**, Issue 12, pages 1313 – 1329.
- Christensen, A. J., Edwards, D. L., Moran, P. J., Burke, R., Lounsbury, P. and Gordon, E. E. I. (1999). Cognitive Distortion and Functional Impairment in Patients Undergoing Cardiac Rehabilitation. *Journal of Cognitive Therapy and Research*, Volume **23**, Number 2.
- Conover, J. (2008). BPR-L Intransitives of Determination of Priorities. <http://www.johncon.com/may,10>.
- Coyne, J. Gotlib, I. (1983). The role of cognition in depression: a critical appraisal. *Psychol Bull* **94**:472-505.
- Deeba, F. Begum, R. (2002) Development of an Anxiety Scale for Bangladesh, *An M. Phil Thesis Paper, Dept. of clinical psychology, University of Dhaka, Bangladesh.*

- Demyttenaere, K., Bruffaerts, R., Posada-Villa J, et al.,(2004). Worldwide prevalence of mental disorders is high but treatment needs are not always met. *Evidence-based Healthcare and Public Health - Volume 8, Issue 6*.
- Dobson, K.S.,& Shaw, B.F. (1986). Cognitive assessment with major depressive disorders. *Cognitive Therapy and Research*, **10**, 13-29.
- Doeglas, D. (2000). Functional ability, social support and quality of life: A longitudinal study in patients with early rheumatoid arthritis. *PhD Thesis. University of Groningen, The Netherlands*.
- Donaldson, C. & Lam, D. (2004). Rumination, mood and social problem-solving in major depression. *Psychological Medicine* **34**, 1309–1318.
- Dyck, M.J. (1992). Subscales of the Dysfunctional Attitude Scale. *Br J Clin Psychol*; **31**(pt 3): 333-5
- Eleanor, H. W. and Zeffie, P. (1992).The relationships among the general attitude and belief scale, other dysfunctional cognition measures, and depressive or bulimic tendencies *Journal of Rational-Emotive and Cognitive Behavior Therapy*. Volume **10**, Number 4.
- Eleanor, H. W. and Zeffie, P. (2005).The relationships among the general attitude and belief scale, other dysfunctional cognition measures, and depressive or bulimic tendencies. *Springer Netherlands , Behavioral Science*, 1573-6563 (Online), 10.1007/BF01062376; 219-233 February 02.

- Ellis, A. (1962). Reason and emotion in Psychotherapy, Lyle Stuart, New York.
- Firoz, A.H.M., Karim, M.E., Alam, M.F., Rahman, AHM.M. and Zaman, M.M.(2007). Prevalence, Medical Care, Awareness and Attitude Towards Mental Illness in Bangladesh. *Presented in a national workshop at NIMH, Dhaka.*
- Foa, E.B. & Kozaj, M.J. (1986). Emotional processing and fear: Exposure to corrective information. *Psychological Bulletin*, **99**, 20-35.
- Franceschi, P. (2008). Cognitive therapy of generalized anxiety disorder. <http://www.univ-corse.fr/~franceschi>.
- Freeman, A., Felgoise, S. H., Nezu, C.M., Nezu, A.M. and Reinecke, M.A. (2005). *Encyclopedia of Cognitive Behavior Therapy*.
- Fuller, T.D., Edwards, J.N., Vorakitphokatom, S. Semsri, S. (1996). Chronic stress and psychological well being: evidence from Thailand on household crowding. *Soc. Sci. Med.* **42(2)**:265-280.
- Goldberg, D.P., Hillier, V.F. (1979). A scaled version of the General Health Questionnaire. *Psychol Med.* **9**:139-45.
- Goldberg, D, Williams, P. (1988). A user's guide to the General Health Questionnaire. *NFER NELSON Publishing company Ltd.* Windsor.
- Gorbis, E. Anan'yev, D. (2008). Intensive OCD Program: It Works, Westwood Institute for Anxiety Disorders. <http://www.hope4ocd.com/gorbisprogram.php>.

Haaga, D.A.F., Dyck, M.J., & Ernst, D. (1991). Empirical status of cognitive theory of depression. *Psychological Bulletin*, **110**,215-236

Hamlyn, D. W. (1970). *The theory of knowledge*. Garden City, NY: Doubleday Anchor.

Hoffart, A., Sexton, H., Hedley, L.M., Martinsen, E.W. (2008). Mechanisms of change in cognitive therapy for panic disorder with agoraphobia. *J Behav Ther Exp Psychiatry*. **39(3)**:262-75. Epub2007 Jul 25

Hossain, M.S., Deeba, F. and Begum, R. (2008). Exploring Cognitive Distortions among different individuals with Depressive Disorder. An M. Phil part-I research submitted to dept. of clinical psychology, D.U. and submitted to publish in *Dhaka University Journal of Psychology* in vol.**33**, June.2009.

Judge, T.A. and Locke, E.A. (1992). The Effect of Dysfunctional Thought Processes on Subjective Well-Being and Job Satisfaction. <http://digitalcommons.ilr.cornell.edu/cahrswp/296>.

Keitner, G. I., & Miller, I. M. (1990). Family functioning and major depression: An overview. *American Journal of Psychiatry*, **147**, 1128–1137.

Kelly, G. (1955). *The psychology of personal constructs*. New York: Norton.

Kirisci, L., Tarter, R., Vanyukov, M., Reynolds, M., Habeych, M. (2003) Relation between cognitive distortions and neurobehavior disinhibition on the development of substance use during adolescence and substance use disorder by young adulthood: a prospective study. *Drug and Alcohol Dependence*. Volume **76**, Issue 2, Pages 125 – 133.

Krol, B., Sanderman, R., Suurmeijer, T. (1993). Social support, rheumatoid arthritis and quality of life: concept, measurement and research. *Patient Educ Couns.* **20**:101-20.

Kuiper, N.A, Olinger, L.J., & Swallow, S.R. (1987). Dysfunctional attitudes, mild depression, views of self, self-consciousness, and social perceptions. *Motivation and Emotion*, **11**, 379-401.

Leung, P.W.L., Poon, M.W.L.(2001). Dysfunctional Schemas and Cognitive Distortions in Psychopathology: A Test of the Specificity Hypothesis. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, Volume **42**, Number 6, pp. 755-765(11)

Lewinsohn, P. M. (1992). *Control your depression* (revised and updated ed.). New York: Simon and Schuster.

446943

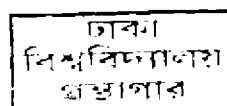
Marton, P., Churchard, M., & Kutcher, S. (1993). Cognitive distortion in depressed adolescents. *Journal of Psychiatry and Neurosciences*, **18**(3), 103-107.

Marton, P. and Kutcher, S. (1994). The prevalence of cognitive distortion in depressed adolescents. *J Psychiatry Neurosci.* January; **20**(1): 33-38.

Matlin, M. W. (2002). *Cognition* (5th ed.) SUNY Geneseo, Earl McPeck.

Meek, W.(2009). Cognitive Distortions in Generalized Anxiety Disorder: what are they and how can they be changed. *About.com: Generalized Anxiety*: February 1. <http://gad.about.com/od/treatment/a/cognitivedist.htm>.

Moczynski, N.P. (2005). Cognitive Disorder. Tufts OpenCourseWare @2007 Tufts University.



- Najavits, L.M., Gotthardt, S., Weiss, R.D. & Epstein, M. (2004). Cognitive Distortions in the Dual Diagnosis of PTSD and Substance Use Disorder. *Cognitive Therapy and Research*, Vol. 28, No. 2, pp. 159–17.
- Nelson, L.D., Stern, S.L. and Cicchetti, D.V. (1992). The Dysfunctional Attitude Scale: How well can it measure depressive thinking? *Journal of Psychopathology and Behavioral Assessment*. Volume 14, Number 3, Page, 217-223.
- Nelson, L.D., Stern, S.L. and Cicchetti, D.V. (2005). The Dysfunctional Attitude Scale: How well can it measure depressive thinking? *Behavioral Science*. Springer Netherlands. Date Monday, January 10.
- Neziroglu, F.A., Yaryura-Tobias, J.A. (1993). Exposure, response prevention, and cognitive therapy in the treatment of body dysmorphic disorder. *Behav Ther* 24, 431-438.
- Noda, Y., Nakano, Y., Lee, K., Ogawa, S., Kinoshita, Y., Funayama, T., Watanabe, N., Chen, J., Noguchi, Y., Kataoka, M., Suzuki, M. and Furukawa, T.A. (2007) Sensitization of catastrophic cognition in cognitive-behavioral therapy for panic disorder. *BMC Psychiatry*. 10; 7:70.
- Ohrt, T., Sjodin, I. & Thorell, L. H. (1999) Cognitive distortions in panic disorder and major depression: Specificity for depressed mood. *Nordic Journal of Psychiatry*, Volume 53, Issue 6, pages 459–464.
- Olinger, L. J., Kuiper, N. A., & Shaw, B. F. (1987). Dysfunctional attitudes and stressful life events: An interactive model of depression. *Cognitive Therapy and Research*, 11, 25–40.

- Oliver, J.M., Murphy.S.L, Ferland, D.R. and Ross.M. J. (2007). Contributions of the Cognitive Style Questionnaire and the Dysfunctional Attitude Scale to Measuring Cognitive Vulnerability to Depression. *Cognitive Therapy and Research*, Volume 31, Number 1, pp. 51-69(19).
- Oxford English Dictionary (2008), *Oxford University Press*, New York.
- Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), Carmichael's manual of child psychology, Vol. 1, 3rd edition (pp. 703-732). New York: Wiley.
- Pincus, T. and Callahan, L.F.(1993). Depression scale in rheumatoid arthritis: criterion contamination of patient responses. *Patient Educ Couns.*20:133-43.
- Silvia, S. S., Unnewehr, S.,Tina In-Albon, T.I. and Margraf, J. (2008). Attention Bias in Children of Patients with Panic Disorder. *Psychopathology: International Journal of Descriptive and Experimental Psychopathology, Phenomenology and Psychiatric Diagnosis*. Vol. 41, No. 3.
- Spilker B.(1990). Quality of Life Assessments in Clinical Trials. Raven Press, Ltd. New York.
- Sykes, M. (2008). Cognitive Distortions With Anxiety and Depression. <http://www.articlebase.com/psychology-articles/cognitive-distortion-with-anxiety-and-depression-469157.html>.
- Toneatto, T. (1999). Cognitive psychopathology of problem gambling. *Substance Use and Misuse*, 34(11), 1593–1604.
- Torbjorn, O., Lars,H. T., (1998). Dysfunctional Attitude Scale (DAS). Psychometrics and Norms of the Swedish Version. *Journal of Cognitive Behavior Therapy*, Volume 27; Issue 3, page 105-113.

- Uddin, M. Z. Rahaman, M. (2000). Development of a Depression Scale for Bangladesh. *An M. Phil Thesis Paper*, Dept. of Clinical Psychology, University of Dhaka, Bangladesh.
- Uddin, M.Z., Hossain, M.S., Mohit, M.A., Chowdhury, M.K.P., Islam, M.M. Karim, M.E. and Firoz, A.H.M. (2007). Characteristics of patients with Obsessive Compulsive Disorder. *Bangladesh Journal of Psychiatry*, Vol.21, No.2, December,2007.
- Veale, D., Riley, S. (2001). Mirror, mirror on the wall, who is the ugliest of them all? The psychopathology of mirror gazing in body dysmorphic disorder. *Behaviour Research and Therapy* 39, 1381-1393.
- Veale, D. (2004). Advances in a cognitive behavioural model of body dysmorphic disorder. *Body Image* 1,113-125.
- Weissman, A. N., & Beck, A. T. (1978). *Development and validation of the Dysfunctional Attitude Scale*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada.
- Wells, A.(2004) "*Cognitive Therapy of Anxiety Disorders A Practice Manual and Conceptual Guide*" JOHN WILEY & SONS. New York.
- Wertheim, E.H and Poulakis, Z. (1992). The relationships among the general attitude and belief scale, other dysfunctional cognition measures, and depressive or bulimic tendencies. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. Volume 10, Number 4. 219-233.
- Wertheim, E.H and Poulakis, Z. (2005). The relationships among the general attitude and belief scale, other dysfunctional cognition measures, and depressive or bulimic tendencies. *Behavioral Science*. Springer Netherlands, Wednesday, February 02.

WFMH (2006), Manual of World Mental Health Day 2006. WWW.WFMH.org;

Whisman, M. A., & Bruche, M. I. (1999). Marital dissatisfaction and incidence of major depression in a community sample. *Journal of Abnormal Psychology*, *108*, 674–678.

Whisman, M. A., Miller, I. W., Norman, William, H., Keitner, Gabor, I.(1991). Cognitive therapy with depressed inpatients: Specific effects on dysfunctional cognitions. *Journal of Consulting and Clinical Psychology*. Vol. *59*(2), 282-288.

Wierzbicki, M., & Rexford, L. (1989). Cognitive and behavioral correlates of depression in clinical and nonclinical populations. *Journal of Clinical Psychology*, *45*, 872-877.

William, H., Norman, Ivan, W., Miller III and Steven H. K. (2005). Assessment of cognitive distortion in a clinically depressed population. *Cognitive therapy and research*, Springer Netherlands (Online); 1573-2819, 133-140.

Wise, E.H., & Barnes, D.R. (1986). The relationship among life events, dysfunctional attitudes, and depression. *Cognitive Therapy and Research*, *10*, 257-266.

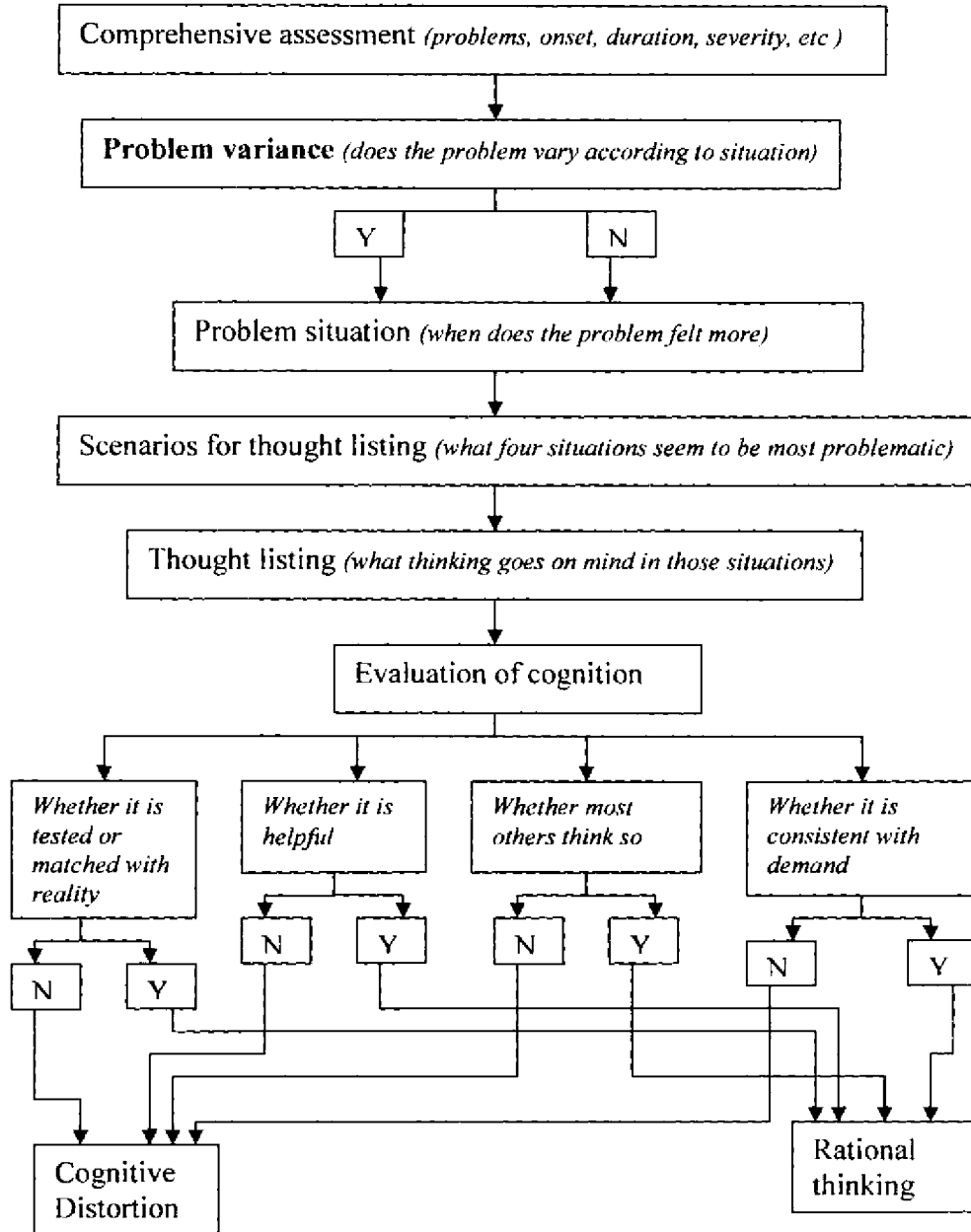
Zhang, L. f. (2008). Cognitive Distortion and autonomy among chinese university students. *Learning and Individual difference*, vol *18*, issue-2, 2nd Quarter, page 279-284.

APPENDICES



APPENDIX-I

Guideline to assess CD



APPENDIX-II:**List of problem scenarios and CD****Cross table of CD for clinical and non-clinical sample: 1**

The following four stressful scenarios were applied on clinical and non-clinical sample-1 for thought listing.

Scenario-1.1: Though I was committed to myself not to have love relation before marriage, I got in love with a man from different religions and the relation is also broken. When I remember my commitment I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-1

Cross table-1 for scenario: 1.1

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	I have lost my everything	AN	.	.....
OVG	2	None will marry me	OVG	.	.....
MF	1	I could not be happy in life	MF	.	.....
JC	1	Everybody will know about my relation and I could not show my face to others.	JC	.	.....
PRS	1	I have ruined my family status	PRS	.	.....

Scenario-1.2: I talked over telephone with a hindu boy and fall in love with the boy and he did also. But he avoids and denies the relationship as well as me due to religious barrier. This makes me thinking

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-2

Cross table-2 for scenario: 1.2

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
DP	1	I have even no quality to get love of a man	DP	.	..........
JC	1	I could not come back to normal life again	JC	.	..........
SS	1	He should not cheat me	SS	.	.....
LML	3	Hindu nation is very bad	LML	.	.....
PRS	1	I could not control myself, I was in wrong	PRS	.	..........

Scenario-1.3:

After breaking the relationship when my family members suggest to marry another boy and to forget that beloved boy it makes me thinking.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-3

Cross table-3 for scenario: 1.3

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	I could not love my husband completely.	AN	.	..........
DP	1	Family members can not understand	DP	.	.....

		my pain			.....
JC	2	I could not make my husband happy	JC	.	..........
ER	2	I am spoiled so I could not be happy in marital life.	ER	.	..........
SS	1	Family members should evaluate my feelings	SS	.	..........
LML	2	No family members love me	LML	.	.....
PRS	1	I myself have burned my forehead	PRS	.	..........

Scenario-1.4

When ever I go to any religious occasion I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-4

Cross table-4 for scenario: 1.4

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	No one is available to stand beside me	OVG	.	.....
MF	2	Religious difference has spoiled all my feelings	MF	.	.....
ER	1	If I were hindu my dream would come to be true	ER	1	Due to religion I did not get my love

Cross table of CD for clinical and non-clinical sample: 2

The following four stressful scenarios were applied on clinical and non-clinical sample-2 for thought listing.

scenario-2.1: When I have heard by others that some people are gathering in front my shop or if my relatives ask me to meet, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-5

Cross table-5 for scenario-2.1:

Clinical sample			Non clinical sample		
AN	FCD	SCD	AN	FCD	SCD
OVG	1	I will be alone if I can't help the relatives	OVG	.	.....
JC	2	Someone in the family may be in threat	JC	.	.....
MGMN	4	My shop has been attacked by criminal	MGMN	1	Someone has stolen in my shop or somebody has come for robbery

Scenario-2.2: When I go upstairs in a building or ride on lift or roof or on crowded bus, I think.....

On the above scenario, a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-6

Cross table-6 for scenario-2.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
MGMN	3	I will be closed and die	MGMN	1	I will fall from the roof
ER	1	I couldn't come out from bus if it stuck in jam	ER	.	.....

Scenario-2.3: When I see police van on my way to road I become think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-7

Cross table-7 for scenario-2.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	I will be bad to all if police arrest me.	OVG	.	.....
JC	1	I am going to fall in police hazards.	JC	.	.....
MGMN	2	I will die if police get me into police van.	MGMN	.	.....
ER	2	Police is going to arrest me for some reason.	ER	.	.....
LML	1	Police is very bad people.	LML	.	.....

Scenario-2.4: I have extra marital relationship with my sister in law and when her family members talk about her marriage anywhere I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-8

Cross table-8 for scenario-2.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	5	I will be evaluated as very bad in the society and nobody will obey me.	OVG	.	.....
JC	2	Others are knowing my bad side from my irritation.	JC	.	.....
MGMN	2	My fame and respect will be destroyed.	MGMN	.	.....

Cross table of CD for clinical and non-clinical sample-3:

The following four stressful scenarios were applied on clinical and non-clinical sample-3 for thought listing.

Scenario-3.1: When I go to bed for sleep but lay down without sleep, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-9

Cross table-9 for scenario-3.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	If I can not sleep my breathing problem will occur again and again.	OVG	.	.....
JC	3	If I can not sleep I will do wrong and others will criticize me at office	JC	.	.....
MGMN	6	I will be seriously ill and die if I can't sleep	MGMN	.	.....
SS	1	I shouldn't made sin by taking extra money.	SS	1	I should sleep properly otherwise my work plan will be hampered

Scenario-3.2: When I climb up public bus alone I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-10

Cross table-10 for scenario-3.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
MGMN	4	I will lose control over my body and will not be able to arrive at the family	MGM N	.	..........

Scenario-3.3: When I remember those scenarios of taking illegal money from different clients or if someone wants to see any official file from me I think....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-11

Cross table-11 for scenario-3.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
JC	3	Due to my sin treatment is not working	JC	1	My file may be rejected by higher authority
ER	1	I am sick so I am going to do wrong and lose my job position.	ER	1	Possibly I am suffering for different problems for my misdeeds
SS		.....	SS	1	I should not have taken illegal money
LML	1	I have done illegal action by knowing I am bad	LML	.	.....
PRS	1	I will be responsible for any mistake in any file.	PRS	.	.....

Scenario-3.4: Sometimes when I feel pain in my leg for which I suffered a lot ten years back, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-12

Cross table-12 for scenario-3.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
JC	1	I have to suffer for whole life due to my sin	JC	.	.....
MGMN	5	My whole body will be paralyzed and no treatment will be effective.	MGMN	.	.....
ER		.....	ER	1	Due to my illegal earning my pain is not recovered.”

Cross table of CD for clinical and non-clinical sample: 4

The following four stressful scenarios were applied on clinical and non-clinical sample-4 for thought listing.

Scenario-4.1: When I want to talk with an unknown person or among multiple people I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-13

Cross table-13 for scenario-4.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
JC	3	They will come to know that my IQ is low	JC	.	..........
MGMN	5	He is more intelligent and smart than me	MGMN	.	..........
ER	1	I will prove myself as foolish by saying illogical words	ER	.	..........

Scenario-4.2: When I want to initiate to discuss something with higher authority or if I face the higher authority I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-14

Cross table-14 for scenario-4.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	2	My intellectual development is not occurred for which my self-confidence is very poor.	OVG	.	..........
DP	1	I have no capacity to impress others	DP	.	..........
JC	1	I may say wrong words and they will think me as a bad boy.	JC	.	..........
LML	1	My intelligence is low	LML	.	.....

Scenario-4.3: When I go for facing interview board for any job I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-15

Cross table-15 for scenario-4.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	I will never get a job	OVG	.	.....
JC	1	Board members think from my answer that I am a foolish	JC	.	.....
MGMN	1	I will be asked very hard question	MGMN	.	.....
ER	1	My head will be jam and I will not be able to answer easy question	ER	.	.....
LML	1	I am a low intellect	LML	.	.....

Scenario-4.4: When someone known to me does not talk cordially I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-16

Cross table-16 for scenario-4.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	My insight is low so I fall in danger	OVG	.	.....
JC	1	Others think that I am very bad and selfish	JC	.	.....
MGMN	1	everybody can understand other's mind but I can't do	MGMN	.	.....
PRS	1	Definitely I have some serious mistakes for which they are not talking with me.	PRS	.	.....

Cross table of CD for clinical and non-clinical sample:5

The following four stressful scenarios were applied on clinical and non-clinical sample-5 for thought listing.

Scenario-5.1: When my wife (2nd marriage) suspects that I am maintaining another affair for which she scolds, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-17

Cross table-17 for scenario-5.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	Only death can solve my problem	AN		.....
OVG	2	I will not be happy in life with my second wife	OVG	1	All wife are bad
MF		My wife is so bad and selfish women	MF	.	........
DP	1	I have no quality to please my wife	DP	.	..........
JC		.....	JC	2	No wife will believe me.
SS	1	She should not give me false blame	SS	.	..........
LML	1	I am valueless person	LML	.	.....
PRS	3	I have destroy our family reputation by second marriage	PRS	.	..........

Scenario-5.2: At night when I go to bed for sleep alone but can't sleep, I Think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-18

Cross table-18 for scenario-5.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	3	No one in this world will take care of me	OVG	.	.....
JC	3	My life will be end with dissatisfaction	JC	.	.....
MGMN	2	Due to lack of sleep I will be sick and die	MGMN	.	.....
ER	.	.....	ER	1	If I can not live with my wife my sleep problem will be increased
SS	1	My wife should stay with me	SS	.	.....
PRS	1	I myself have destroyed my luck for which she does not come to me	PRS	.	........

Scenario-5.3: Sometimes when I go to office in the morning at 7 o'clock from my parent's in law's house without taking breakfast I think...

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-19

Cross table-19 for scenario-5.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	My wife never take care of me	AN	.	.....
MF	1	They are insulting me	MF	.	.....
DP	1	I am an ignorable person	DP	.	.....
JC	1	I am going to be a funny man	JC	.	.....
SS	1	They evaluate me as their son	SS	.	.....
LML	1	I have no value as a husband	LML	.	.....
PRS	1	I am atoning for my decision to divorce my first wife having a child also.	PRS	.	.....

Scenario-5.4: When my wife does not agree to go and live with me in my work place I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-20

Cross table-20 for scenario-5.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	No one understands my suffering.	AN	.	.....
OVG	1	She does not obey and respect me	OVG	.	.....
MF	1	Everywhere she disobey my decision	MF	.	.....
DP	1	I have lost love and respect from all	DP	.	.....
MGMN	1	My children will not also obey me for my wife.	MGM N	.	.....
SS	1	She should obey my decision	SS	1	She must go

					with me in my job place
LML	1	My life is valueless	LML	.	.....
PRS	6	I have done the greatest wrong by marrying without acceptance of our family	PRS	.	..........

Cross table of CD for clinical and non-clinical sample: 6

The following four stressful scenarios were applied on clinical and non-clinical sample-6 for thought listing.

Scenario-6.1: When I think or someone else tell me that my boyfriend likes another girl I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-21

Cross table-21 for scenario-6.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	.	.....	OVG	1	He has not given value of my love.
JC	1	He will leave me or give pain me for whole life.	JC	.	.....
ER	1	I love him a lot but he does not really love me.	ER	.	.....
SS	1	I should have more conscious before doing the relation.	SS	1	He should inform me that he likes another girl.
LML	1	All boys are fraud they love multiple girls simultaneously.	LML	.	.....
PRS	2	I am not beautiful for which he has pain and unhappiness by loving me.	PRS	.	.....

Scenario-6.2: If I want to initiate to talk and make friendship with other classmates I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-22

Cross table-22 for scenario-6.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	It is worthless because they will not understand me completely	AN	.	.....
OVG	.	.....	OVG	1	I am bad in study
JC	3	They will know my past background and will not give me value	JC	.	.....
SS	.	.....	SS	1	Age difference must create a gap between us

Scenario-6.3: When I do bad result in any examination I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-23

Cross table-23 for scenario-6.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	I could not understand anything of my book .	AN	.	.....
MF	1	All my study is	MF	.	.....

		meaningless.			
DP	2	I have nothing good to offer my family.	DP	.	.....
JC	1	Parents think that I don't study regularly.	JC	1	They will not accept my relationship.
MGMN	.	.....	MGMN	1	If I don't tell my parents I will fall in danger and my life will be destroyed.
SS	1	I should have studied more seriously.	SS	.	.....
LML	2	I am very bad girl.	LML	.	.....
PRS	3	Parents will be shamed for my result.	PRS	.	.....

Scenario-6.4: when I think to say my parents about the relationship with my boy friend I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-24

Cross table-24 for scenario-6.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	2	They don't love me so our relation will not be accepted.	AN	.	.....
MF	1	They have never understand my pain.	MF	.	.....
DP	1	I have done nothing good for my parents.	DP	.	.....

JC	5	I will be a bad girl to my parents.	JC	1	In future good result will not be occurred.
MGM N	3	They will stop my education and forcefully give marriage anywhere.	MGM N	.	.....
ER	3	As I am their daughter so they will not give any value of my feeling.	ER	1	I did not have tried enough for good results for which I did bad result again.
LML	1	Basically I am not qualified for love.	LML	.	.....

Cross table for clinical and non-clinical sample: 7

The following four stressful scenarios were applied on clinical and non-clinical sample-7 for thought listing.

Scenario-7.1: if someone comes to visit in our home from village I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-25

Cross table-25 for scenario-7.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	2	If village people sit in the room everything in the house will be dirty.	OVG	.	..........
MF	2	There are stools under their shoes.	MF	.	.....
JC	1	Everybody will think that I am mad.	JC	.	.....
MGMN	1	Everything in the house has to be changed.	MGM N	.	..........
LML	1	Village people are dirty.	LML	.	.....

Scenario-7.2: When I have to go to bathroom or toilet in our home or anywhere I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented on Table-26

Cross table-26 for scenario-7.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	2	Everything in the bathroom are dirty.	AN	.	.........
OVG	2	If I go to bathroom I could not say my prayer.	OVG	.	......
MF	1	If I go to bathroom my pain will be increased.	MF	.	........
MGMN	3	If I go to bathroom I have to be scolded and be punished.	MGMN	.	..........
LML	2	I am unable to come out from bathroom quickly.	LML	.	..........
PRS	1	Suffering of my mother and sister is increasing for me.	PRS	.	..........

Scenario-7.3: If I have to walk beside the dustbin or the truck of dustbin goes beside me I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-27

Cross table-27 for scenario-7.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	3	Dirt will be speeded to all of my dresses in the house.	OVG	.	..........
MGMN	4	I will be sick by dustbin dirt.	MGMN	.	.....

Scenario-7.4: When I have to walk beside the drain or cross over the drain I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-28

Cross table-28 for scenario-7.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	4	I have to wash everything in the house if I cross the drain.	OVG	.	.....
				
				
				
MGMN	1	With the contact of drain my dresses will be dirty and I will be sick.	MGMN	.	.....
					...

Cross table for clinical and non-clinical sample: 8

The following four stressful scenarios were applied on clinical and non-clinical sample-8 for thought listing.

Scenario-8.1: When my parents say good things to others about me but they give me negative feedback and say to me that I have many negative characteristics which should be changed, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-29

Cross table-29 for scenario-8.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	They know me as a bad boy.	OVG	.	.....
MF	2	They don't love me.	MF	.	.....
DP	1	Basically I have no good things.	DP	.	.....
JC	1	Even if I quit drug they will not see me	JC	.	.....

		positively.			.....
ER	2	If I want get parents' love I have to achieve the top most level.	ER	.	..........
SS	1	They should not follow double standard rules.	SS	.	..........
LML	1	I am unable to please them.	LML	.	.....

Scenario-8.2: When I see some of my friends and others are very much obedient to social rules and regulation I think that they are fraud. And if they advise me to be respectful to senior and to obey the social rules and norms, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortion and some sample statements are presented in Table-30

Cross table-30 for scenario-8.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	3	If I say sorry to others my self-esteem will be damaged.	OVG	.	........
ER	1	I could not show myself extraordinarily if I behave like gentle boy.	ER	.	..........
SS	1	Everybody should express genuine feeling.	SS	.	..........
LML	1	They are fraud who behave gently.	LML	1	They are out of date.

Scenario-8.3: My position in our class is comparatively better other but during my examination if I don't understand a question and if I want to ask the teacher or my friends to remove my confusion, I think....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-31

Cross table-31 for scenario-8.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	3	I will be valueless to everybody.	OVG	.	.....
JC	3	Others will criticize me and I will lose my leadership	JC	.	.....
LML	.	.....	LML	1	Senior teachers are unhelpful

Scenario-8.4: My cousins usually make fun to each other and through fun they express their feelings and demand to others but if I plan to do so, I think....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-32

Cross table-32 for scenario-8.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	I will lose my status in the family.	OVG	.	.....
JC	3	Family will not give value to my demands.	JC	.	.....
ER	2	If I say about my demands I have to be insulted.	ER	.	.....
SS	2	Others should understand about my needs and demands.	SS	.	.....

Cross table for clinical and non-clinical sample: 9

The following four stressful scenarios were applied on clinical and non-clinical sample-9 for thought listing.

Scenario-9.1: I could not continue my study due to illness but my friends have already become four year academically senior to me. Now a day whenever I try to prepare myself for the examination, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-33

Cross table-33 for scenario-9.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	I could not do anything in my life.	OVG	.	..........
MF	1	I am staying behind from all of my friends.	MF	.	..........
JC	1	Everybody thinks that I have no ability to study.	JC	.	..........
MGMN	2	I have problem in my head.	MGMN	.	.....
LML	1	I am a girl with bad luck.	LML	.	..........

Scenario-9.2: Our relatives and neighbors say that after marriage my illness will be cured. When they recommend my marriage, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-34

Cross table-34 for scenario-9.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	2	I can not adjust with other's family.	OVG	.	.....
MF	1	People are destroying my life by humiliating me.	MF	.	.....
JC	5	People think that I intentionally become ill.	JC	.	.....
MGMN	1	I will be completely ill after marriage.	MGMN	.	.....
SS	1	They should not interfere in my personal life.	SS	2	They should understand my problem.

9.3: When I have to stay out side my home or other's house, I think....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-35

Cross table-35 for scenario Scenario-9.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	Nowhere I will get support out side of my family.	OVG	.	.....
DP	1	I can not help my self when I feel bad.	DP	.	.....
JC	.	.....	JC	1	Out side the home I

					will not feel relaxed but I have to cope with pain.”
MGMN	5	If I go outside of our family problem my problem will be increased.	MGMN	.	.....
ER	6	If I stay at our home I will be cured.	ER	1	if I can live with my family my problems will be decreased
LML	2	Doctors can not understand my problem.	LML	.	.....

Scenario-9.4: When I see or hear any news of illness of others, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-36

Cross table-36 for scenario-9.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	Bad news is linked with my problems.	OVG	.	.....
MF	2	Everything will be bad to day.	MF	.	.....
JC	1	Something very bad will also occur to my family.	JC	.	.....
MGMN	3	My pain will also be increased.	MGMN	1	My physical problem will be increased.

Cross table for clinical and non-clinical sample:10

The following four stressful scenarios were applied on clinical and non-clinical sample-10 for thought listing.

Scenario-10.1: When my parents-in-law criticize me towards others and they tell me about that, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-37

Cross table-37 for scenario-10.1:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
OVG	1	I am becoming bad to everybody	OVG	.	.....
MF	1	They are trying to punish me by others	MF	.	.....
DP	2	They are bad parents	DP	.	.....
SS	1	I should prove myself as good to others	SS	.	.....
LML	1	Everybody is against me	LML	.	.....
PRS	.	.....	PRS	1	I have done some mistake or misbehavior with others for which others are criticizing me.

Scenario-10.2: Whenever I feel any discomfort in my body, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-38

Cross table-38 for scenario-10.2:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
MGMN	5	I will die by collapsing my breathing	MGMN	.	..........
ER	1	If I stayed with my husband then the problem would gone	ER	.	..........
LML	1	My life is meaningless	LML	.	.....

Scenario-10.3: When someone specially my family members say that I am not doing well enough for others, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-39

Cross table-39 for scenario-10.3:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
AN	1	They always consider me as bad.	AN	.	.....
OVG	1	I am totally failure to satisfy others.	OVG	.	......
SS	1	My family should consider everything.	SS	.	..........
LML	1	I am alone.	LML	1	I am helpless.
PRS	.	.....	PRS	1	I have done some wrong thing.

Scenario-10.4: When I think about my husband or remember husband’s memory, I think.....

On the above scenario a number of cognitive distortions were identified. Frequency of those cognitive distortions and some sample statements are presented in Table-40

Cross table-40 for scenario-10.4:

Clinical sample			Non clinical sample		
PCD	FCD	SCD	PCD	FCD	SCD
MGMN	1	My husband will also misunderstand me	MGMN	.	..........
ER	1	I am going to be bad to my husband also	ER	.	..........
LML	.	.....	LML	2	I am alone

APPENDIX-III:

Dysfunctional Attitude Scale (DAS-Form-A)

বিচ্যুত মনোভাব মানক

নাম: বয়স: পেশা: লিঙ্গ:

শিক্ষাগত যোগ্যতা: তাং:

নির্দেশনাঃ

এই মানকটিতে লোকজনের বিভিন্ন ধরনের বিশ্বাস বা মনোভাবকে তালিকাভুক্ত করা হয়েছে। প্রতিটি বিবৃতি যত্নসহকারে পড়ে সিদ্ধান্ত নিন যে, বিবৃতিটির সাথে আপনি কতটুকু একমত অথবা ভিন্নমত পোষণ করেন। প্রতিটি মনোভাবের ডান পাশের নির্দিষ্ট কলাম গুলোর মধ্যে যেটা আপনার মনোভাবকে সবচেয়ে ভালভাবে প্রকাশ করে সেটাতে (✓) চিহ্ন দিন। প্রতিটি মনোভাবের জন্য শুধু মাত্র একটি উত্তরই বাছাই করুন। মানুষে মানুষে পার্থক্য থাকে, তাই এই বিবৃতি গুলো কোনটিরই সঠিক বা ভুল উত্তর নেই। এখানে দেখা কোন মনোভাব কতটা আপনার দৃষ্টিভঙ্গিকে প্রতিফলিত করে তা নির্ধারণ করার সময় বেশীর ভাগ সময় আপনি কেমন থাকেন তা মনে রাখুন।

মনে রাখবেন, বেশীর ভাগ সময় আপনি যা ভাবেন তার ভিত্তিতেই প্রতিটি বিবৃতির উত্তর দিবেন।

(মনোভাব)	পুরোপুরি ভিন্নমত	অনেকটা ভিন্নমত	সামান্য ভিন্নমত	নিরপেক্ষ	সামান্য একমত	অনেকটা একমত	পুরোপুরি একমত
১. আমি কোন ভুল করলে লোকজন সম্ভবত আমাকে কম গুরুত্ব দিবে।							
২. আমাকে অবশ্যই যোগ্য, ফলপ্রসূ ও সৃজনশীল মানুষ হতে হবে অন্যথায় বেঁচে থাকার কোন মানেই থাকবে না।							
৩. অন্যকে কুশি করার চেয়ে নিজের পছন্দে যখন কোন কাজ করি তখনই আমি বেশি আনন্দ বুঁজে পাই।							
৪. একটা পরিস্থিতিতে কিভাবে ব্যাখ্যা করি তা নিয়ন্ত্রণ করার মাধ্যমে আমি আমার আবেগ নিয়ন্ত্রণ করতে পারি।							
৫. আপনি যদি কোন কিছু ভাল মতো করতে না পারেন তবে সেটা করার কোন অর্থই হয় না।							
৬. অন্যরা আমার সম্পর্কে কি ভাবে সেটা খুবই গুরুত্বপূর্ণ							
৭. লোকজনের অবশ্যই সবচেয়ে খারাপ পরিস্থিতির জন্য প্রস্তুত থাকা উচিত অন্যথায় তাদের আশাহত অথবা হতাশ হতে হবে।							
৮. প্রত্যেককেই কুশি করার মতো ক্ষমতা আমার থাকা উচিত।							
৯. জীবনে যা ঘটে তা নিয়ন্ত্রণ করা ব্যক্তির পক্ষে সম্ভব না হলেও সে তার চিন্তাভাবনাকে নিয়ন্ত্রণ করতে পারে।							
১০. দুর্বলতা প্রকাশ করা ব্যক্তির জন্য লজ্জাজনক।							
১১. যদি কোন ব্যক্তিকে দীর্ঘ সময় ধরে একা থাকতে হয় তাহলে পরবর্তীতেও তাকে নিঃসঙ্গই থাকতে হবে।							
১২. ব্যক্তি বা কিছু করে তার সব গুলোতেই সেটা হওয়ার চেষ্টা করা উচিত।							
১৩. যদি কেউ সফল না হয় তবে তার জীবন অর্থহীন।							
১৪. ব্যক্তি যা চায় তা পূরণ করতে গিয়ে বীধার সম্পূর্ণ হলে হতাশ হওয়ার প্রয়োজন নেই।							
১৫. অর্থহীন কথা বলার মানেই হলো আমি একটা বোকা।							
১৬. নিজের অনুভূতির উপর সব সময়ই আমার পূর্ণ নিয়ন্ত্রণ থাকা উচিত।							
১৭. যখন অন্যরা আমাকে পছন্দ করছে না এমনকি তখনও আমি আনন্দে থাকতে পারি।							
১৮. নিজের জন্য সর্বোচ্চ মানদণ্ড নির্ধারণ না করলে আমি							

(মনোভাব)	পুরোপুরি ভিন্নমত	অনেকটা ভিন্নমত	সামান্য ভিন্নমত	নিরপেক্ষ	সামান্য একমত	অনেকটা একমত	পুরোপুরি একমত
শেষে দ্বিতীয় স্তরের মানুষে পরিণত হতে পারি।							
১৯. সর্বদাই ভাল না করলে লোকজন আমাকে সম্মান করবে না।							
২০. কোন সমস্যার সর্বোত্তম সমাধানের চেয়ে বাস্তব সম্মত সমাধান খোঁজাই উচিত।							
২১. ব্যক্তি হিসাবে আমার মূল্য অনেকটাই নির্ভর করে অন্যেরা আমার সম্পর্কে কি ভাবে তার উপর।							
২২. একজন ব্যক্তি যে সমস্ত কাজ হাতে নেয়, তার সবগুলোতেই ভাল করা উচিত।							
২৩. কেউ যদি আমার সাথে ঘিঁষত পোষন করে, সম্ভবত তার অর্থ সে আমাকে পছন্দ করে না।							
২৪. আমি যাদের চিনি তাদের বেশীর ভাগই যদি আমাকে ভালবাসা ও শ্রদ্ধার চোখে না দেখে তবে আমি সুখী হতে পারি না।							
২৫. অন্যদের মতামতের চেয়ে আমার নিজের সম্পর্কে নিজের মতামতই বেশী গুরুত্বপূর্ণ।							
২৬. আমি যদি মানুষের প্রতি সহানুভূতি, স্বচ্ছতা ও সুবিবেচনার সাথে আচরণ না করি, তাহলে আমি একজন খারাপ মানুষ।							
২৭. গুরুত্বপূর্ণ ব্যক্তিদের কাছ থেকে সমর্থন না পাওয়া আপনার জন্য খুবই খারাপ বা ভয়ানক ব্যাপার।							
২৮. নির্ভর করার মতো মানুষ না থাকলে আপনি দুঃখিত হতে বাধ্য।							
২৯. আমি যদি সফল নাও হই তবু লোকজন আমাকে পছন্দ করবে।							
৩০. আপনি আসলে যেমন, লোকজন যদি সেটা জানে তবে তারা আপনাকে নিয়ে কমই ভাববে।							
৩১. যখনই আমি মুক্তি নেই তখনই আমি বিপদ ডেকে আনি।							
৩২. যদি কোন ব্যক্তি সমস্যা গুলোকে এড়িয়ে চলে তবে সেগুলো চলে যাবে বা সমাধান হয়ে যাবে।							
৩৩. কথার দ্বারা কেউ আমাকে কষ্ট দিতে পারে না। লোকজনের কথাকে আমি যেভাবে ব্যাখ্যা করি তার ভিত্তিতে নিজেই কষ্ট পাই।							
৩৪. আমার সমস্ত দুর্বলতা জানার পরও অন্যরা আমার প্রতি যত্নশীল থাকবে।							
৩৫. আংশিক ব্যর্থতা পুরোপুরি ব্যর্থ হওয়ার মতোই খারাপ।							
৩৬. লোকজন যদি আপনার সব দুর্বলতা জেনে যায় তবে তারা আপনাকে গুরুত্ব দিবে না।							
৩৭. অত্যধিক পরিশ্রম না করেও অথবা কৃতদাসের মত না বেটেও আমি আমার গুরুত্বপূর্ণ লক্ষ্যগুলো অর্জন করতে পারি।							
৩৮. আমার সুখে ঝাকা নিজের চেয়ে অন্যের উপরই বেশি নির্ভর করে।							
৩৯. আমি যাকে ভালবাসি সে যদি আমাকে ভাল না বাসে, তার অর্থ হচ্ছে আমি ভালবাসার অযোগ্য।							
৪০. আমার সমস্যাগুলি খুব দ্রুত এবং খুব বেশী চেষ্টা ছাড়াই সমাধান করার সামর্থ্য থাকা উচিত।							

APPENDIX-IV:

General Health Questionnaire(GHQ-28)

নির্দেশনা :

অনুগ্রহ করে লেখাটি মনোযোগ দিয়ে পড়ুন। গত কয়েক সপ্তাহে আপনার কি কোন শারীরিক অভিযোগ ছিল? গত কয়েক সপ্তাহ ধরে আপনার স্বাস্থ্য মোটামুটি ভাবে কেমন ছিল তা জানতে আমরা আগ্রহী। অনুগ্রহ করে পরবর্তী সকল প্রশ্নের উত্তর দিন। যে উত্তরটি আপনার কাছে সবচেয়ে বেশী গ্রহণ যোগ্য তা নিশ্চিত করুন। মনে রাখবেন যে, আমরা আপনার বর্তমান অর্থাৎ এখনকার অভিযোগ সম্পর্কে জানতে আগ্রহী, যা আগে ছিল সেগুলো নয়। সবগুলো প্রশ্নের উত্তর দিতে চেষ্টা করবেন, কারণ সেটা জরুরী। আপনার সহযোগিতার জন্য ধন্যবাদ।

	আপনি কি আকণ্ডাল				
A ₁	সম্পূর্ণ ভালো এবং সুন্দর স্বাস্থ্য অনুভব করেছেন?	সচরাচরের চেয়ে ভালো	সচরাচরের মতো	সচরাচরের চেয়ে খারাপ	সচরাচরের চেয়ে অধিক খারাপ
A ₂	ভালো টনিক খাওয়াবর দরকার মনে করেছেন?	একেবারেই না	সচরাচরের চেয়ে বেশী না	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
A ₃	ক্রান্ত এবং কিছু ভালো লাগছেন? এমন অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
A ₄	আপনি কি অসুস্থবোধ করেছেন?	ঐ	ঐ	ঐ	ঐ
A ₅	মাথায় কোন ব্যথা অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
A ₆	আপনার মাথায় আঁটসটি অথবা চাপ অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
A ₇	হঠাৎ হঠাৎ কিছু সময়ের জন্য গরম ভাব বা ঠান্ডাবোধ করেছেন?	ঐ	ঐ	ঐ	ঐ
	আপনি কি আজকাল				
B ₁	দুশ্চিন্তার কারণে নিদ্রাহীনতায় ভুগছেন?	ঐ	ঐ	ঐ	ঐ
B ₂	অবসরে ঘুমিয়ে থাকতে অসুবিধা হয়েছে?	ঐ	ঐ	ঐ	ঐ
B ₃	অবিরত মানসিক চাপ অনুভব করছেন?	ঐ	ঐ	ঐ	ঐ
B ₄	খিটখিটে বা বদমেজাজী হয়ে যাচ্ছেন?	ঐ	ঐ	ঐ	ঐ
B ₅	কোন উপযুক্ত কারণ ছাড়াই ভয়ে চমকে উঠছেন বা আতঙ্কিত হচ্ছেন?	ঐ	ঐ	ঐ	ঐ
B ₆	লক্ষ্য করেছেন যে, সবকিছুই আপনার সাধের বাইরে চলে যাচ্ছে?	ঐ	ঐ	ঐ	ঐ
B ₇	সহজেই ভীত বা আবদ্ধ অনুভব করছেন?	ঐ	ঐ	ঐ	ঐ
	আপনি কি আজকাল				
C ₁	নিজেকে ব্যস্ত রাখতে এবং কাজে ডুবে থাকতে পারছেন?	সচরাচরের চেয়ে অনেক বেশী	সচরাচরের মতো	সচরাচরের চেয়ে কম	সচরাচরের চেয়ে অনেক কম
C ₂	আপনি যা করেন তা করতে অপেক্ষাকৃত বেশী সময় লাগাচ্ছেন?	সচরাচরের চেয়ে ভাড়াভাড়ি	সচরাচরের মতো	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অনেক বেশী
C ₃	সবমিলিয়ে এটি অনুভব করছেন যে আপনি ঠিকমতো কাজ করছেন?	সচরাচরের চেয়ে ভালো	একই রকম	সচরাচরের চেয়ে ভালো	সচরাচরের চেয়ে অনেক কম ভালো

C ₄	আপনার কাজ যে ভাবে করছেন তাতে সন্তুষ্ট হচ্ছেন?	অনেক সন্তুষ্ট	সচরাচরের মতো একই রকম	সচরাচরের চেয়ে কম সন্তুষ্ট	অনেক কম সন্তুষ্ট
C ₅	বিভিন্ন ব্যাপারে আপনি মূল্যবান ভূমিকা রাখছেন বলে আপনার মনে হয়েছে?	সচরাচরের চেয়ে বেশী	সচরাচরের মতো	সচরাচরের চেয়ে কম	সচরাচরের চেয়ে অনেক কম
C ₆	বিভিন্ন বিষয়ে সিদ্ধান্ত নেয়ার ক্ষমতা আছে বলে অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
C ₇	আপনার প্রতিদিনের স্বাভাবিক কাজ-কর্ম উপভোগ করতে সক্ষম হচ্ছেন?	ঐ	ঐ	ঐ	ঐ
	আপনি কি আজকাল				
D ₁	নিজেকে একজন অপদার্থ ব্যক্তি হিসাবে ভাবছেন?	একেবারেই না	সচরাচরের চেয়ে বেশী না	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
D ₂	অনুভব করছেন যে, জীবন সম্পূর্ণ রূপে নৈরাশ্যজনক?	ঐ	ঐ	ঐ	ঐ
D ₃	অনুভব করছেন যে, বেঁচে থেকে লাভ নেই?	ঐ	ঐ	ঐ	ঐ
D ₄	এমন সম্ভাবনার কথা কি ভেবেছেন যে, আপনি নিজেকে মেরে ফেলতেও পারেন?	নিশ্চয়ই না	আমি এমনটি ভাবিনা	এটা আমার মনে দাগ কেটেছে	নিশ্চয়ই হ্যাঁ
D ₅	মাঝে মাঝে এমনকি মনে হচ্ছে যে, আপনার স্নায়ু (নার্ভ) খুবই দুর্বল বলে কিছুই করতে পারছেন না?	মোটের ও না	সচরাচরের চেয়ে বেশী না	বরং সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
D ₆	এমন ভাবছেন যে, আপনি যদি মরে যেতে পারতেন এবং সবকিছ থেকে দূরে চলে যেতেন?	ঐ	ঐ	ঐ	ঐ
D ₇	নিজের জীবন শেষ করে ফেলার চিন্তা আপনার মনের মধ্যে অবিরত আসছে?	নিশ্চয়ই না	আমি এমনটি ভাবিনা	এটা আমার মনে দাগ কেটেছে	নিশ্চয়ই হ্যাঁ

A B C D Total

APPENDIX-V:

Data collection format by interviewing

1. Demographic data:

a) Name:.....; b) Age:.....Y; c) Sex: M/F; .

d) Education:.....; e) Occupation:.....;

f) Total family income: Tk.....per month/year.

g) Total family members:.....; h) Average budget for each member:.....Tk/month

(Socioeconomic status: >2000/P=Lower class; 2001-4000/P=lower middle class; 4001-6000=Middle class; 6001-8000/P=Upper middle class; 8001 and above/P= Higher class)

i) Living area: Village/town/city; (town= thana/ dist.; city= division)

j) Family genogram:

k) Birth order:

l) Educational records:

Topic Guide

Exploring problem related cognitions and different patterns of cognitive distortions among clients with different psychiatric disorder and normal people (What are your problems for which you have come to hospital; what are the triggering situations on which you fell your problems; in these situations how do you feel; what are the meaning of these situations to you when you face these situations/ how do you interpret or appraise these situations; what are the evidences behind your such types of appraisal)

1. Problems suffering from

a) Would you tell me your problems for which you are seeking treatment? {probe for exploring problems in different functional areas such as eating, sleeping, professional activities, interpersonal relationships (eg. family, social etc.)}

2. Triggering situations

a) Would you tell me that how you feel when do you face these situations (probe for specifying the feelings eg., depressed, anxious, angry, disgust, sad, cry etc.)

3. Cognitions triggered by the situations

a) You are saying that in Situations you feel Could you now please tell me you thinking that are passing through your mind just now (probe to explore different cognitions and cognitive/perceptual process and attributions which are done by the patients to the different triggering situations)

- When you remember that/those incidence and think/preoccupied with these thinking how would/did you feel?
- What do you think about the impact of these types of feelings that you feel when you are preoccupied with these thinking? / What type of benefit or loss occur to you when your mind is preoccupied with these feelings and thinking

To see the Impact of CD on client's problems from client's perspective (when you face these situations your appraisal are! What are the impact of these appraisal on the functional area of your life)

1. Problem in functional area

a) What are the functional area in your life where you have to contribute eg., at office, at home, at instruction, within society, within friends and colleagues, within family members and relatives etc.

- b) How are you performing in your functional area?

- c) Do you think that your functionality is hampering by your current cognitive process and how? (probe to explore the impact on different functional area and different problem situations)

Assessing the development of CD (when did you experienced such satiations for the first time and from when you appraise the situations in this way)

1. Childhood experience

- a) Would you please tell me your different experiences during childhood at your home (parenting), school, surroundings, friends, relatives etc which are frequently remembered in your mind in different situation now a days
- b) When you feel your problems and think about you, others and future what previous experiences are recalled frequently?
- c) Among these experiences which are related to your present suffering
- d) When you feel your presenting problems what experiences automatically come to your mind?

APPENDIX-VI:

Consent form for clinical sample

অংশগ্রহনকারীর প্রতি নির্দেশনা

প্রিয় অংশগ্রহনকারী,

আমি ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা মনোবিজ্ঞান বিভাগের এম.ফিল দ্বিতীয় পর্বের একজন প্রশিক্ষনার্থী চিকিৎসা মনোবিজ্ঞানী। আমি এই বিভাগের অধীনে “ জ্ঞানীয় বিকৃতির ধরণ অনুধ্যান” শিরোনামে একটি গবেষণা করছি। এই গবেষণায় আমি বাংলাদেশে বিভিন্ন ধরনের মানসিক রোগে আক্রান্ত ব্যক্তিগণের মধ্যে বিভিন্ন ধরনের চিন্তন বা জ্ঞানীয় বিকৃতির ধরণ ও প্রকৃতি অনুধ্যান করতে চাই। এই গবেষণাটি বিভাগের নৈতিক ও শিক্ষা কমিটি কর্তৃক অনুমোদিত। গবেষণাটিতে আমি আপনার কাছ থেকে কিছু গুরুত্বপূর্ণ তথ্য নিতে চাই যেগুলো শুধুমাত্র গবেষণা কর্মে ব্যবহৃত হবে এবং সম্পূর্ণরূপে গোপনীয়তা রক্ষা করা হবে। আমার সাথে অপর একজন প্রশিক্ষনরত চিকিৎসা মনোবিজ্ঞানী থাকবেন যিনি আপনার সমস্যার জন্য প্রয়োজনীয় চিকিৎসা প্রদানের ব্যবস্থা করবেন অথবা আমি আপনাকে উপযুক্ত চিকিৎসকের কাছে পাঠাব যিনি আপনার চিকিৎসা প্রদান করবেন। গবেষণা সহকারী প্রথম অধিবেশন থেকেই আমাদের সাথে বসবেন এং তিনি আপনার চিকিৎসা শেষ হওয়া পর্যন্ত সপ্তাহে একদিন আপনার সাথে কথা বলবেন এবং প্রয়োজনীয় সুপারভিশনের অধীনে আপনাকে চিকিৎসা সেবা প্রদান করবেন। আমি আপনাকে এটা নিশ্চিত করতে চাই যে, আপনার দেওয়া সকল তথ্যই শুধুমাত্র গবেষণা ও আপনার চিকিৎসায় ব্যবহৃত হবে। এই গবেষণায় অংশ গ্রহণের মাধ্যমে আপনার কোনরূপ শারীরিক, মানসিক, আর্থিক এবং সামাজিক ক্ষতি হবে না এবং এই গবেষণার ফলাফল বাংলাদেশের বিভিন্ন ধরনের মানসিক রোগে আক্রান্ত ব্যক্তিদের সমস্যা অনুধ্যান ও চিকিৎসায় গুরুত্বপূর্ণ অবদান রাখবে। তাই এই গবেষণায় অংশগ্রহণ করে আমার বর্তমান গবেষণাটি সঠিকভাবে সম্পন্ন করার ক্ষেত্রে আমাকে সাহায্য করার জন্য আমি আপনার কাছে কৃতজ্ঞ থাকব। সব কিছু জানার পর এই গবেষণায় অংশগ্রহণ করা বা না করার পূর্ণ স্বাধীনতা আপনার আছে। অংশগ্রহনে সম্মত হওয়ার পরও সম্মতি বাতিল করা বা অংশগ্রহণ না করারও পূর্ণ স্বাধীনতা আপনার থাকবে। গবেষণাটিতে অংশগ্রহনের রাজি থাকলে অনুগ্রহ করে নির্ধারিত স্থানে স্বাক্ষর করুন।

মোঃ শাহানুর হোসেন

এম. ফিল দ্বিতীয় পর্ব

চিকিৎসা মনোবিজ্ঞান বিভাগ

ঢাকা বিশ্ববিদ্যালয়

অংশগ্রহনকারী ব্যক্তির

স্বাক্ষর ও তারিখ

APPENDIX-VII:

Consent form for non-clinical sample

অংশগ্রহনকারীর প্রতি নির্দেশনা

অংশগ্রহনকারী প্রিয় ভদ্র মহিলা / মহোদয়,

আমি ঢাকা বিশ্ববিদ্যালয়ের অধীনে ক্লিনিক্যাল সাইকোলজি বিভাগে এম. ফিল শেষ পর্বের একজন প্রশিক্ষার্থী চিকিৎসা মনোবিজ্ঞানী। “ জ্ঞানীয় বিকৃতির ধরন অনুধ্যান” শিরোনামে আমি আমার এম. ফিল গবেষণা করছি। এই গবেষণাটি ক্লিনিক্যাল সাইকোলজি বিভাগ, ঢাকা বিশ্ববিদ্যালয়, মনোরোগবিদ্যা বিভাগ, বঙ্গবন্ধু শেখ মুজিব মেডিকেল বিশ্ববিদ্যালয় ও জাতীয় মানসিক স্বাস্থ্য ইনিস্টিটিউট, ঢাকা এর নৈতিক কমিটি কর্তৃক অনুমোদিত। বর্তমান গবেষণাটিতে যারা অংশ গ্রহণ করবেন তাদের যেন কোন রকম শারীরিক, মানসিক, সামাজিক বা আর্থিক ক্ষতি সাধিত না হয় সেটা নিশ্চিত করা হয়েছে। এই গবেষণায় তথ্য সংগ্রহের প্রথম পর্যায়ে বিভিন্ন ধরনের মানসিক রোগে আক্রান্ত ব্যক্তিগণের কাছ থেকে তথ্য সংগ্রহ করা হয়েছে, সেই সব তথ্যগুলো বর্তমান গবেষণাটিতে সম্পূর্ণ গোপনীয়তা রক্ষা করে ব্যবহার করা হবে যেন অন্যরা ঐ সকল ব্যক্তিগণকে চিহ্নিত করতে না পারেন। তথ্য সংগ্রহের দ্বিতীয় পর্যায়ে কিছু স্বাভাবিক মানুষের সাক্ষাৎকার নেওয়া হবে, যাদের কোন ধরনের মানসিক রোগ নেই এবং অতীতে ছিল না। সেই উদ্দেশ্যে বর্তমান গবেষণার দ্বিতীয় পর্বে অংশগ্রহনের জন্য আমি আপনাকে অনুরোধ করতে চাই। আপনি যদি রাজি থাকেন তাহলে, প্রথমে কিছু মনোবৈজ্ঞানিক মানক ও কাঠামোবদ্ধ সংক্ষিপ্ত সাক্ষাৎকারের মাধ্যমে Inclusion criteria নিশ্চিত করা হবে। মানকে যদি কোনরূপ সমস্যা ধরা পড়ে তাহলে আপনাকে এই গবেষণায় অন্তর্ভুক্ত করা হবে না এবং আপনি চাইলে আপনাকে উপযুক্ত চিকিৎকের কাছে পাঠানো হবে। আপনি যদি গবেষণাটিতে অন্তর্ভুক্ত হন তাহলে আপনাকে কতকগুলো পরিস্থিতি পড়ে গুনানো হবে এবং সেই সব পরিস্থিতি সম্পর্কে আপনার চিন্তা ভাবনা ও অনুভূতি গুলো বর্ণনা করতে বলা হবে এবং সেগুলো নিয়ে সহজ ও সংক্ষিপ্ত আলোচনা করা হবে। আমি আপনাকে এটা নিশ্চিত করতে চাই যে, আপনার প্রদান করা সকল তথ্যই সম্পূর্ণ গোপনীয়তা রক্ষা করে শুধু মাত্র গবেষণা কর্মে ব্যবহৃত হবে। এবং এই গবেষণায় অংশগ্রহনের জন্য আপনার কোনরূপ ক্ষতি সাধিত হবে না। আপনার গুরুত্বপূর্ণ সময় থেকে শুধুমাত্র ১/২ ঘন্টা থেকে ১ ঘন্টা সময় ব্যয় করার জন্য আমি আপনাকে অনুরোধ করব। আপনার অংশগ্রহণ বর্তমান গবেষণাটিকে ফলপ্রসূভাবে সম্পন্ন করতে আমাকে সাহায্য করবে যেটা বাংলাদেশে মানসিক স্বাস্থ্য সেবায় গুরুত্বপূর্ণ অবদান রাখবে। আপনি ইচ্ছা করলে গবেষণাটি সম্পর্কে যেকোন প্রশ্ন আমাকে জিজ্ঞাসা করতে পারেন তবে অন্যান্য অংশগ্রহনকারীর ব্যক্তিগত তথ্য ছাড়া। সবকিছু জানার পর গবেষণাটিতে অংশগ্রহণ করা বা না করার পূর্ণ স্বাধীনতা আপনার আছে। অংশগ্রহনে সম্মত হওয়ার পরও সম্মতি বাতিল করা বা অংশগ্রহণ না করারও পূর্ণ স্বাধীনতা আপনার থাকবে। আপনি যদি রাজি থাকেন তাহলে দয়া করে নির্ধারিত স্থানে স্বাক্ষর করুন।

মোঃ শাহানুর হোসেন

প্রশিক্ষনরত চিকিৎসা মনোবিজ্ঞানী

এম. ফিল দ্বিতীয় পর্ব

ক্লিনিক্যাল সাইকোলজি বিভাগ

ঢাকা বিশ্ববিদ্যালয়

অংশগ্রহনকারী ব্যক্তির স্বাক্ষর ও তারিখ

 APPENDIX-VIII:

List of Research Assistant

I want to acknowledge the support of my following colleagues who helped me a lot to collect data for this research.

Name	Profession
Hasina Khatun	Trainee Clinical Psychologist, 9 th intake, Dept. of Cpsy. D.U
Md. Shaiful Islam	Trainee Clinical Psychologist, 10 th intake Dept. of Cpsy. D.U
Md Shibly Sadik	Trainee Clinical Psychologist, 10 th intake Dept. of Cpsy. D.U
Zianur Kabir	Trainee Clinical Psychologist, 10 th intake Dept. of Cpsy. D.U
Nayma Islam	Trainee Clinical Psychologist, 11 th intake Dept. of Cpsy. D.U
Shaima Siddika Sheme	Trainee Clinical Psychologist, 11 th intake Dept. of Cpsy. D.U
Mitu Sharmin	Trainee Clinical Psychologist, 11 th intake Dept. of Cpsy. D.U
Shahinur Akter Dipu	Trainee Psychotherapist, Dept. of Psychiatry, BSMMU
Abu Yousuf	Trainee Psychotherapist, Dept. of Psychiatry, BSMMU

APPENDIX-IX:

Permission Letter

Date: 06 .03.2008

To

The director,

National Institute of mental health (NIMH),

Sher-e-Bangla Nagar, Dhaka.

Bangladesh.

Subject: Prayer for the permission of data collection for M. Phil research.

Sir,

With due respect I beg to state that I am an M. Phil researcher of Dhaka University under the supervision of Professor Dr. Roquia Begum, Dept. of Clinical Psychology, University of Dhaka. I am going to conduct an exploratory research for the partial fulfillment of my M. Phil degree in clinical psychology. My research title is "Understanding Patterns of Cognitive Distortions". Main objective of this research is to explore different types of cognitive distortions among clients with psychological disorder which are mostly prevalent in Bangladesh. I will use clinical interview and different psychometric scale as the instrument for this research. For data collection phase of this research I greatly need to have some diagnosed patients with psychological disorder from your institute. The period of data collection phase may range from two to three months.

In this circumstance I pray and hope that you would be kind enough to grant me permission to collect data from diagnosed indoor and/or outdoor patients from your Institute.

Sincerely yours

Md. Shahanur Hossain

M. Phil part-II, Dept. of clinical psychology

University of Dhaka.

Recommended by

Professor Dr. Roquia Begum

Dept. of Clinical psychology. D.U.

Date: 06.03.2008

To

The chairman,

Dept. of Psychiatry,

Bangabondhu Shekh Mujib Medical University (BSMMU).

Dhaka-1000

Bangladesh.

Subject: Prayer for the permission of data collection for M. Phil research.

Sir,

With due respect I beg to state that I am an M. Phil researcher of Dhaka University under the supervision of Professor Dr. Roquia Begum, Dept. of Clinical Psychology, University of Dhaka. I am going to conduct an exploratory research for the partial fulfillment of my M. Phil degree in clinical psychology. My research title is "Understanding Patterns of Cognitive Distortions". Main objective of this research is to explore different types of cognitive distortions among clients with psychological disorder which are mostly prevalent in Bangladesh. I will use clinical interview and different psychometric scale as the instrument for this research. For data collection phase of this research I greatly need to have some diagnosed patients with psychological disorder from your department. The period of data collection phase may range from two to three months.

In this circumstance I pray and hope that you would be kind enough to grant me permission to collect data from diagnosed indoor and/or outdoor patients from your department.

Sincerely yours

Md. Shahanur Hossain

M. Phil part-II, Dept. of clinical psychology

University of Dhaka.

Recommended by

Professor Dr. Roquia Begum

Dept. of Clinical psychology. D.U.