Exploring attribution style and metacognitive process in borderline personality disorder

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Statement of Approval

The undersigned have examined the dissertation entitled:

Exploring attribution style and metacognitive process in borderline personality disorder

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Declaration

I declare that this thesis is an original research and it is not submitted or used for any other degree or diploma in any academic institution. I am also confirming that in best of my knowledge, no material is used in this study was previously written or published by another person, except where due reference is made in the text of the thesis.

Tarun Kanti Gayen
September 2023

Dedication

To all with borderline personality disorder, often misread andmaltreated

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Abstract

Introduction

Borderline Personality Disorder is a complex mental health problem where affective instability and interpersonal relationship of the person is markedly disrupted. Various biological, developmental, psychological and contextual factors are indicated for this disruption along with other signs and symptoms of BPD. This study explored metacognition and attributional style in Borderline Personality Disorder (BPD). Both metacognitive ability and attribution style impacts an individual's quality of social interaction and mental health and these two have been found to be impaired in different psychiatric conditions including personality disorders. A comprehensive literature review identified some gap in knowledge regarding the role of these two variables in the cases of borderline personality disorder.

Rationale: The present study is conceived to address the generic knowledge gap regarding the relation between cognitive constructs (such as, metacognitive process, and attribution style) (see Semerari, et al., 2014) as well as contextual knowledge gap from a low resourced Asian culture that is Bangladesh.

Objective: The present study aims to understand the attribution style and metacognitive process in borderline personality disorder. To achieve this overarching objective, several specific objectives were formulated as follows: 1) To assess metacognitive skills in BPD;
2) To assess attribution styles in BPD; 3) To explore relation between different metacognitive skills and four BPD sectors of psychopathology that is to say, affective, interpersonal, behavioral and cognitive/self; 4) To explore the relation between internal, personal and situational attribution style and four sectors of BPD psychopathology that is to say, affective, interpersonal,

behavioral and cognitive/self; 5) To explore relation between different metacognitive skills and attribution styles in BPD.

Method

Design: Mixed method sequential approach using both quantitative and qualitative methods was employed to investigate the objectives of the present research.

Participants: 40 diagnosed with BPD and 40 screened as without BPD took part in the research. Both groups were matched on the basis of age (average age being bpd=25.96 years and normal =26.68 years), sex (male=31, female=9) and education (average years of education, bpd=13.72 years; normal=13.92 years).

Inclusion and Exclusion Criteria: Status of diagnosis of BPD was the key inclusion criteria for the two groups of participants. While to be included in the Group 1 i.e., the BPD patient, the participants needed to have a confirmed diagnosis of BPD while to be included in the Group 2 i.e., the normal control, the participants needed to be screened out of BPD.

Ethical clearance: For data collection ethical clearance was obtained from the respective Ethics Committees of the Department of Clinical Psychology, University of Dhaka and National Institute of Mental Health and Hospital, Bangladesh.

Measures: The metacognitive self-assessment scale (MSAS) and Internal Personal and Situational Attribution Questionnaire (IPSAQ) were used to assess the metacognition and attributional style of the participants respectively. Both the scales were translated in bangla following the forward-backward translation procedures. Cronbach's alpha ranged between 0.623 and 0.830 for all MSAS subscales and for overall metacognitive function as measured

by total MSAS score was 0.898. Cronbach's alpha for the IPSAQ Bangla from the current sample was 0.754.

For qualitative part indepth interview was conducted following a topic guide, which were recorded and transcribed for analysis.

Analysis: For quantitative part of the study, analysis of data comprised of both descriptive and inferential statistical procedure using SPSS. The analysis of qualitative part consisted of open coding, followed by focused coding and finally extracting of themes.

Result

Quantitative: Results showed that total metacognitve ability of the participants with BPD (*M* = 31.40, *SD* = 8.136) was found less than the total metacognitve ability of the participants without BPD (*M* = 42.07, *SD* = 5.070). An independent *t*-test showed that the difference between ability scores was significant and effect size was large (*t* = 7.042; df=65.326, *p* = 0.000, two-tailed, *d*=0.80). In all subscale scores of metacognition, viz., monitoring, integration, differentiation, decentration and mastery, with BPD was low compared to the without BPD sample, and the differences were significant in all sub-scales scores except decentration. As for Attribution style BDP group showed greater tendency towards internal attribution style for negative events than without BPD group and also attributed the cause of negative events to others and situational factors significantly less. As regards *internalizing bias* BPD group scored less and as regards *personalizing bias*, for with BPD and without BPD on average more than half the attributions for negative events were ascribed to other people which in other words is blaming others for negative events. Pearson Correlation among SCID score, Metacognition and Attributional Style scores were calculated. Total score on SCID of the BPD group has showed a significant negative correlation with Monitoring and Decentration; and affect domain on SCID has a significant negative correlation with Decentration. Whereas, SCID Interpersonal Sector has a significant positive correlation with

Personalizing Bias. Other results inform about significant correlation between different metacogntive abilities with attribution style of the BPD. Thus Negative-internal attribution has negative correlation with Decentration and Mastery. Whereas, Negative-situational has positive correlation with Decentration and Mastery. On the other hand Personal Bias has significant negative correlation with Monitoring, Decentration and Mastery. All these correlations hint to BPD's characteristic thinking and behavior patterns, like self and other blaming, hostility and depression etc. As regards severity of BPD psychopathology, affective domain has found to be the highest followed by Interpersonal, behavioral and self/cognitive domains.

Qualitative: Five core themes themes were extracted which were as follows: "prioritization of emotion"; "thought emotion fusion"; "failed subtle communication"; "primacy of personal view"; "loop of self-criticism and rumination."

Discussion

The findings gives a cognitive profile consisting of two significant variables that explains some difficulties of the borderline people in self and relational context. Qualitative findings have further supported and elucidated the findings. Findings of this study is supported in many ways by similar research for different disorders, and further the findings has implications for clinical intervention in BPD. Thus training the BPD patients on enhancing metacognitive skills and educating to deal with negative attribution style seem to have good prognostic outcome in BPD intervention.

Limitation & Conclusion: Non-probabilistic sampling, small sample size, and drawing the sample only from urban, educated and middle and upper socioeconomic strata, are some limitations of the present study. However, being a research of first of its kind on Bangladeshi BPD population further studies addressing different aspects of metacognition and attribution is deemed necessary.

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List of Abbreviations

AS	Attribution Style
BPD	Borderline Personality Disorder
DSM	Diagnostic and Statistical Manual of Mental Disorders
IPSAQ	Internal Personal and Situational Attribution Questionnaire
PTSD	Post Traumatic Stress Disorder
MSAS	Metacognitive Self Assessment Scale
MC	Meta Cognition
NIMH	National Institute of Mental Health and Hospital
PD	Personality Disorder
SCID-5-PD	Structured Clinical Interview for DSM-5 Personality Disorders

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Introduction

Borderline Personality Disorder is a complex mental health problem. It is well established that in Borderline Personality Disorder (BPD) affective instability and interpersonal relationship is markedly disrupted. Various biological, developmental, psychological and contextual factors are indicated for this disruption along with other signs and symptoms of BPD. In recent time two psychological constructs, namely metacognition and attribution style have come to focus in explaining major symptoms of BPD. In psychological literature metacognition is described as the ability to understand one's own and others mind which is a prerequisite for meaningful interpersonal communication and hence intimacy and durable relationship. Impairment or deficit of this ability is found in a number of mental disorders like depression, schizophrenia, personality disorder etc. Similar to metacognition, attribution style, which is how people ascribe cause of any good or bad event that happens to them, is another cognitive process that largely influences human emotion and behavior. The role of attribution style has been studied in a number of metal health problems, however, no such studies has been conducted in Bangladeshi population. It is well known that cultural practices and experiences play an important role in shaping believes and attributional style (Hakim & Mozumder, 2021). Thus, it is understandable that metacognitive and attributional style of patients from Bangladesh may have a unique presentation and interaction with the pattern of their symptoms. The present study attempted to understand metacognitive process and attribution style among Bangladeshi patients with BPD with the aim to expand understanding of this disorder.

1.1 Prevalence of Borderline Personality Disorder

BPD is quite common as a mental disorder. Worldwide lifetime prevalence of BPD is estimated to be of 3%-6% (Grant et al., 2008; Trull, Jahng, Tomko, Wood & Sher, 2010). Available treatment data show that, among all psychiatric diagnosis, BPDpatients occupies

10-20% beds or appointments of the inpatients and outpatientsdepartments (Widiger and Frances 1989). BPD patients has a markedly high mortality by suicide which is around 10%.Both adult and adolescent data show high suicide attempts (9%-33%) among patients with BPD (Kullgren et al. 1986; Runeson and Beskow 1991). Among all suicide attempters a staggering proportion (41%) is diagnosed with BPD which is even higher (56%) if classified among female attempters (Persson et al., 1999). BPD is found equally in all socioeconomic status (SES). There is no variation of distribution of BPD as per race, but gender wise it is more common among the females, which is about 75% (Skodol, 2003). Recent genetic and longitudinal study data clearly indicates that BPD can be validly diagnosed among adolescents which was previously excluded from diagnosis in line with other personality disorders which requires the patient to be an adult to be eligible for diagnosis (Miller, Muehlenkamp & Jacobson, 2008; Sharp & Romero, 2007).

Among its citizens 18.7% of adults and 12.6% of children in Bangladesh meet criteria for a mental disorder (WHO, 1918-19). Of the patients who receive treatment for psychiatric disorders 6 percent is reported to suffer from different types of personality disorder. And among patients with different types of personality disorders who seek treatment, BPD patients are reported to be the highest. So, it can be assumed that number of BPD cases would be quite high in psychiatric outdoors and inpatient set-ups. Clinical experience suggests that similar to other parts of the globe, prevalence of the disorder is comparatively higher among female than male population in Bangladesh. However, it is noteworthy that research among BPD population is scarce here. Other than anecdotal knowledge from clinical work, studies aiming to understand the prevalence or different causes and consequences associated with BPD are yet to be conducted. This led to a noticeable gap in the evidence base in Bangladesh on this complex mental health condition.

1.2 Borderline Personality Disorder: A complex mental health problem

BPD is considered to be a complex psychiatric condition due to its inconsistent phenomenology, elusive etiology, debatable diagnosis, resistance to treatment and poor prognosis. Instability in intimate relationship, difficulty regulating emotion and troubled behaviors are hallmarks in BPD diagnosis (American Psychiatric Association, 2005). Though personality disorders in general are conceived to be stable over time, BPD tends not to follow this rule. Some acute symptoms such as, mood swings, impulsive acts, suicidality and micropsychotic episodes often remit whereas affective instability is more stable (Skodol, Pagano et al., 2005; Hennen, Refich, & Silk, 2005). Unlike patients of other personality disorders, BPD patients can realize that they have painful problems and are keen in seeking psychiatric help (Zanarini, Frankenburg, Khera, &Bleichmar, 2001) and this is why psychiatric in-and-outdoors worldwide are frequented by BPD patients.

BPD patients often demonstrate uncontrollable anger, impulsivity and recklessness (in spending, sexual engagement, or eating), self-harm, suicidality, feeling of emptiness and identity disturbance. Due to volatile nature of their affect and behavior BPD patients experience significant amount of distress and often cause distress to others related to them. All these create a profound impact in their relationships and functioning including their occupational and social activities.

BPD diagnosis has added more confusion than clarity in understanding of the disorder. Similar to other psychiatric disorders, the diagnosis system of BPD suffers from validity issues due to unclear boundary with some other psychiatric disorders. Absence of obvious biological markers and varied presentations with combinations of symptoms suggests heterogeneity (Biskin et al., 2012). As in current diagnostic system (DSM-5) any five of the nine diagnostic criteria can be used to confirm a diagnosis of BPD and thus leading to 256

possible combinations of symptoms, which has made it challenging for a clinicians to make a confident diagnosis of BPD.

BPD's comorbidity with a number of disorders such as, Post Traumatic Stress Disorder (PTSD), Major Depressive Disorder (MDD), Bipolar Mood Disorder (BMD), Antisocial Personality Disorder, Substance Abuse Disorder (SUD) and Eating Disorder (Zanarini et al., 1998; Shah et al. 2018; Becker et al.,2011; Sjåstadet al.,2012; Ha et al.,2014) has added further difficulties in the diagnosis, formulation and intervention of the disorder.

Amidst the complex presentation as discussed above, achieving clarity of understanding of the etiology of BPD can be equally challenging. However, an adequate understanding of the etiology is crucial for overall comprehension of the disorder as well as for implementing effective intervention.

1.2.1 Etiology of BPD symptoms

Though lots of research has been done in respect to etiology of BPD over the last few decades, experts still have divergent opinions about the genesis and perpetuation of the symptoms in the patients. Interplay of multiple factors including genetics, neurobiology, disposition or temperament, as well as psychological and environmental factors are thought to contribute to the development of BPD symptomatology.

Based on object-relations theory, Otto Kernberg attempted to give some initial explanation of BPD (Clarkin et al, 2006), followed by John Bowlby, whose attachment theory provided further insight on the possible mechanisms underlining BPD (Bateman, 2004) while importance of emotion dysregulation was proposed in other cognitive behavior theory (Linehan, 1993). Finally, cognitive theories point to dysfunctional thinking patterns to

be responsible for BPD (Young, 1999). All these theories, in some way, stress the role of individuals' emotional development impacted by trauma and emotional deficits, subsequently leading to a failure to adapt to environmental demands and hence making the child vulnerable to BPD.

Though no direct cause of BPD has so far been established, retrospective studies however indicate that BPD patients commonly present with history of childhood trauma, sexual abuse, prolonged separation from primary caregivers and neglect (Zanarini et al, 1997;Crawford et al, 2009). Similar to many other psychiatric disorders BPD has strong genetic link too, with a heritability estimate of 47% (Livesley, 1998) and this inheritance is polygenic (Steele & Siever, 2010).

Even before including BPD in DSM classification system scientists have been trying to demystify and bring clarity in the understanding of BPD. So far a number of theories have been proposed claiming to be able to explain BPD and its sign and symptoms and consequently multiple intervention methods are in practice to treat patients with BPD. Though much have been told about BPD both in the psychodynamics informed theories and in the comparatively recent cognitive-behavior oriented theories, researchers are still trying for further understanding of this enigmatic disorder. One such endeavor is to understand the core of BPD psychopathology. As mentioned earlier, 256 set of symptoms from the DSM-5 criteria can characterize individuals with BPD, this heterogeneity has necessitated a search for some core underlying dimensions of psychopathology that are common to all BPD patients. The most commonly suggested core structure consists of three basic disturbances: affective or emotional dysregulation, behavioral dyscontrol or impulsivity and disturbed interpersonal relatedness (Sanislow et al. 2002). However, among these suggested cores of BPD, cognitive elements are absent.

On the other hand reviewing multiple factor analytic studies Gunderson et al. (2018) reported that BPD psychopathology has four component sectors viz., *affective, interpersonal, behavioral and self/cognitive.* Each sector has corresponding DSM traits. Thus, anger, affective instability, emptiness constitute*affective* sector. *Interpersonal* sector includes intense, unstable relationships, fears of abandonment, and needy, fearful attachments. Self-harm/suicidality, impulsivity (e.g., excessive, spending, substance-abuse, promiscuity) comprise *behavioral* sector and self-image instability and distortions, dissociation and brief paranoid episodes are included in *self/cognitive* sector.

Gunderson (2018) has further narrowed down and succinctly identified the concept of core of BPD psychopathology in all major theories. He suggested unstable self in Kernberg's (1967), *excessive aggression* theory; inability to accept and regulate emotions in Linehan's (1990) emotional dysregulation theory; incapacity to read self and others in Fonagy and Luyten's (2009) *failed mentalization* theory; and interpersonal context in his own *interpersonal hypersensitvity*theory as the initiator and regulator of BPD signs and symptoms. Other major theories such as attachment theory locates *insecure attachment style* underlie BPD, whereas for Beckian formulation (Pretzer, 1990) it is the core assumptions of self as powerless and vulnerable, the world as dangerous and malevolent, self as inherently unacceptableare responsible for BPD. Young (McGinn & Young, 1996) offers the concept of *schema mode* which is an organized pattern of thinking feeling and behaving and in BPD this pattern is a kind of regression into intense emotional states experienced as child. DiMaggio and his colleagues (2007), introduce the concept metacognitive dysfunction at the core of BPD psychopathology. Metacognitive dysfunction is manifested by an impairment to reflect on ones mental states. This impairment makes it difficult to access one's inner experience, properly recognizing others' mental states and integrating different observations about one's own and others' behavior into coherent narratives.

Trull (2001) indicated affective instability/negative affectivity and impulsivity/disinhibition most common focus of attention in research regarding core feature of BPD. Some research indicated both of these (Siever & Davis, 1991; New & Siever, 2002) while others indicated affective instability (Linehan, 1993) or impulse control (Zanarini, 1993; Bornovalova, Fishman, Strong, Kruglanski, & Lejuez, 2008) as the core feature of BPD. It can be noted that emotion dysregulation i.e., the inability to aptly modulate mood fluctuations, occurs in the broader context of affective instability, which is defined as abrupt, frequent and intense fluctuations in mood - a negative emotional state and that occurs typically in response to contextual stimuli. This intense negative emotional state impairs individual's healthy cognitive functioning as well as decision making (Linehan& Heard, 1992; Shedler & Westen, 2004). Though it is strongly suggested in some theories that affective instability and/or impulsivity have big role in the formation of BPD, it is not yet decisively established whether they impair cognitive functioning or impaired cognitive abilities contribute to affective instability.

Cognitive school, emphasizes the primacy of impaired or distorted cognition in the origination and maintenance of psychological disorders. As five-part model of psychopathology (Padesky& Mooney, 1990) proposes, principally it is cognition that determines the emotion and behavior of an individual. This perspective necessitates the need for exploration of cognitive determinants in achieving concrete understanding of BPD. However, as emotionality and impulsivity in interpersonal contexts is predominantly considered in most of the theories explaining the clinical presentation of BPD, researchers seem to have focused more on these domains than cognitive determinants. Fertuck and Barbara (2006, p.1) rightly observed that in understanding BPD, "Cognitive determinants are viewed as secondary." Some researchers (Zanarini et.al., 1999) held that, the most characteristics and distinguishing cognitive features of BPD were still unclear which remains

true till to date. Detailed understanding the role of diverse cognitive components in BPD would be useful to conceptualize and treat this complex and difficult to treat disorder.

1.2.2 Cognitive Process in BPD

A few of cognitive constructs have been researched in association to BPD. Study on **locus of control** i.e., individual's belief about his/her control over life's outcomes, indicated association between external locus of control and the features of BPD (Hope et al., 2018). Research on **personal agency i.e.,** an individual's perception of ownself as the subject of his actions and life circumstances, has been found inversely related with BPD symptoms (Watson, 1998; Hope et al., 2018; Hashworth et.al, 2021). They found that individuals who met criteria for BPD show slower personal agency by exacerbating relationship difficulties. Cognitive bias is related with the emotionality in BPD (Baer et al., 2012). Borderline patients habitually attend to negative stimuli and have disproportionate access to negative memories, they hold a range of negative beliefs about themselves, the world, and other people, and make negatively biased interpretations and evaluations of neutral or ambiguous stimuli. In study on **cognitive distortion** Puri et al. (2021) found that cognitive distortions and also schema modes play a role in the origination and perpetuation of affective, interpersonal, and behavioral difficulties in individuals with Borderline Personality Disorder. Geiger and his colleagues (2014) found that individuals with higher BPD features report more difficulties engaging in goal-directed behavior, partially due to an increase in negative distortions under a cognitive load. In a meta-analytic review on **dissociation** and BPD it is found that though dissociation is not a core feature of BPD, higher levels of dissociation is found in BPD compared to other psychiatric disorders (Scalabrini et al., 2017). Other studies on dissociation in BPD demonstrate that BPD patients have clear impairments in memory issues - their "general memories" are better functioning than episodic memories, specifically in retrieving

of distressing, traumatic episodic memories (Meares et al., 1999). In a meta analytic study (Czégel et al., 2022) on **rumination** in BPD, it was found that all forms of rumination are present in BPD where the largest correlation was among pain rumination followed by anger, depressive, and anxious rumination. And also increased rumination had the strongest correlation with affective instability, followed by unstable relationships, identity disturbance, and self-harm/impulsivity. In a review on **empathy studies** Salgado et al. (2020) reviewed 45 original research studies, to assess differences between adult patients with the diagnosis of borderline personality disorder (BPD) and healthy control subjects in terms of empathy and related processes (i.e., theory of mind, mentalizing, social cognition, and emotional intelligence). Thirty-six studies reported deficits of empathy or related processes in patients with BPD. In **social cognition** studies, where social cognition refers to the study of the processes by which people make sense of themselves and of others as well as of their social environment, and the implications of this thinking for social behavior (Ric, 2015). Thus how people with BPD perceive and interpret social cues and how that might impact their social/interpersonal interaction are important cognitive and behavioral correlates of the BPD and thus in understanding BPD patients symptoms and consequent effective intervention. Social cognition studies in BPD have hinted that both cognitive empathy and emotional empathy are impaired or compromised in this clinical group.Cognitive empathy is the capacity to infer others' mental states and emotional empathy on the other hand is an emotional response to another person's emotional state (Davis, 1994; Blair, 2005). Adequate functioning of these two skills defines a successful interpersonal and social communication. But when impaired, obviously that impacts social communication which is troubled among patients with BPD.

All the above cognitive correlates, except social cognition seem to operate mainly at the intra psychic level of the individual with BPD and contribute to the origination and

maintenance of the symptoms. As most of the BPD symptoms are exhibited in relational contexts so very specific understanding of different types of social cognitive ability of this clinical group will have significant conceptual and practical value.

It is well established that affective instability in relational context is the hallmark of BPD (Trull, 2001). Among cognitive correlates, metacognition and attribution style play definitive role in determining nature of emotion. Capobianco, Heal, Bright M and Wells (2019) suggest that specific metacognition have causal effect on emotion symptoms. On the other hand pessimistic attributions to both positive and negative events results in higher depression (Haugen, 2010). Hu, Zhang and Yang (2015) shows that optimistic attribution style for negative events causes low rates of depression. Impulsivity is another hall mark of the BPD patients. Miller, Walshe , McIntosh , Romer and Winston (2021) have found that low metacognitive ability scores are associated with greater self-reported risky driving.

So it seems clear that, compared to other cognitive correlates mentioned above these two are far more contributing in the origination and maintenance of characteristic BPD symptoms. The likelihood of these two basic cognitive functions' role palying in BPD can be understood by the fact they are found responsible or strongly correlated with a number of mental health problems and disorders as well as BPD, and as such they seem to be trans-diagnostic in nature. The nature and extent of their connection to BPD will enhance our understanding of the disorder as well as efficacy of intervention too. To understand further, some elaboration on these two constructs is given here.

Attribution style

Proposed and developed by social psychologists, the concept of attribution style actually derived from Attribution theory, which basically looks at how people make sense of their world, what cause and effect they ascribe to or what inferences they make about the behaviors of others, of themselves and circumstances (Kaney & Bentall, 1989). Often an individual's affective states and behavioral responses are determined by how he identifies as the main cause of a positive or negative situation (e.g., always blaming others or always blaming oneself).

Fritz Heider (1958), who actually proposed attribution theory held that, when experiencing significant events, people first ask themselves what caused the event, and then they attribute cause. According to him people have a strong need to understand any transitory event or happening and they accomplish it by attributing the occurrence on the actor's character or some characteristics of the environment. Attribution has significant survival value for the humans. Through attribution people establish some cognitive control over one's environment by explaining and understanding the causes behind certain behavior or occurrence. Heider introduced two main ideas regarding attribution --Internal attribution and External attribution. In internal attribution people assign the cause of behavior to some internal disposition or characteristics of the actor rather than environmental or contextual or outside forces or factors. For example when we explain behaviors of others we try to ascribe the cause of it in the person's motive or belief or on over all personality.On the other hand, when we explain our own behavior we often tend to make environmental or situational or external factors responsible. This process of ascribing the cause of behavior to some external factor or forces that are deemed beyond a person's control is called External attribution.

AttributionStyle in mental health problems

Attribution Style has been found to be strongly related directly or as a mediating variable to depression (Love, 1988; Hermann et al.,1996; Kinderman & Bentall, 1997; Hu et al., 2015), depression and paranoia (Bentall et al.,2005), psychosis (Jolley et al., 2006), paranoid schizophrenia (Lincoln et al., 2010; Randjbar et al.,2011), PTSD and combat related PTSD (Mikulincer,1988; Gray et al., 2002), post sexual abuse adjustment (Feiring et al.,2000), eating disorder (Morrison et al., 2006), Cotard delusion(McKay et.al., 2007), psychological wellbeing (Cheng & Furnham, 2010), positive and negative affect (Pilar et al., 2008), suicidal behavior (Hirschs et al., 2015), and impulsivity and aggressive tendencies among adolescents (Sing, 2020) are among a plethora of mental health problems.

It is to be noted that, many of these distresses are often found in Boderline Personality Disorder. So attribution style in BPD should certainly be an area of exploration in clinical research.

Metacognition

Metacognition has been defined as the ability to understand and reflect on one's mental states. It helps us to manage our life tasks and regulate internal mental processes and interpersonal relationships (Dimaggio & Lysaker, 2010; Semerari et al., 2003). This definition emphasizes the functional meaning of metacognition and considers metacognition as a set of skills that enable us to comprehend our own mental states and those of others. Flavell (1970) views metacognition is very much related to 'cognitive monitoring' which is the ability to observe one's own cognitive processes and to detect errors in these processes.

Moritz & Woodward (2007) defined metacognition as a very specific thought processes, which is: 'being aware of cognitive distortions.' According to Wells (2000)

metacognition is not a function and thus does not enable us to be aware of our mental states but a set of beliefs about mental contents.

Semerari, Carcione, Dimaggio, Nicolò, and Procacci (2007), consider metacognition as a wide-ranging mindreading capacity.This has similarity with the concept of mentalization proposed by Bateman and Fonagy (2004). Metallization is considered as a mental process by which an individual unconsciously or consciously interprets the actions of his own or others, as meaningful on the basis of intentional mental states like personal desires, needs, feelings, beliefs, and reasons.

Though there seems to have some similarity between these two concepts, metacognition and mentalization, there is a significant difference too. Where mentalization has been conceptualized as an unidimensional function (Fonagy, Steele, Steele, & Target, 1998), to Semerari and colleagues metacognition is as amulti-component function,where any single component can be selectively impaired.

Lysaker and his colleagues (2005) proposed a new definition of metacognition that tried to integrate different definitions especially, they based on the work of Semerari and his colleagues (2003). Their definition involves four fundamental aspects: (i) Self-reflectivity: the ability to sense about one's own thoughts and emotions; (ii) Understanding the other's mind: the ability to assume about the thoughts and emotions of others; (iii) Decentration: the ability to understand that one is not the center of the world and people's lives go on when he/she is not around; (iv) Mastery: One's ability to make use of the three skills above to narrate psychological problems and deal with them effectively.

Using metacognition, people can comprehend their own mental states and other people's wishes and intentions. It also helps them to figure out the inner and social cues that cause psychological pain. Lysaker and his colleagues (2013) propose that this understanding

help people cope with and also solve complex social problems. In a larger scale metacognition help people make sense of their dilemma, find meaning in life and adapt to the ever changing environment.

Metacognition in mental health problem

Metacognition is well studied in psychiatric and psychology literature. Empirical studies have reported metacognition to be linked with various psychiatric disorders like depression, anxiety, stress, schizophrenia, bipolar disorder, multiple sclerosis, eating disorder etc.In a recent review of forty-seven studies (a total of 586 articles were selected, which were published between 1990 and August 2015, the participants included were 3772 patients and 3376 healthy normals) Sun and colleagues (2017) have found metacognition to be a common processes (transdiagnostic) across psychopathologies, where certain dimensions are more prevalent in particular disorders.

Deficit in metacognitive ability has found to be associated with, depression (Slife and Weaver, 1992); negative emotion and perceived stress (Spada et al., 2008); impaired decentration in individuals with personality disorder (Dimaggio et al., 2009); schizophrenia and related psychosis (Lysaker et al., 2013); severity of personality disorder (Semerari et al., 2014); pathological worry of the unipolar and bipolar depressive disorder (Sarisoy et al., 2014); eating disorder symptomatology (Olstadet al., 2015); depressive symptoms (Huntley et al., 2016); mental health (Rouault et al., 2017); anxiety and depression across physical illnesses (Capobianco et al., 2020) andimpairment in personality functioning (Pedone et. al.,2021).

Thus from the above reviews we have been informed that both attribution style and metacognition are strongly associated with different psychiatric disorders. But these two

constructs are also associated with BPD, and different sub-functions of them could influence different aspects of BPD specific behavior.

1.2.3 Attribution style in BPD

Following are a number of studies that have examined how differently attribution styles are associated with various aspects of BPD psychopathology. And also to understand what specific roles attribution styles might have played in BPD symptom generation and their perpetuation.

Early studies on attributional patterns in BPD suggest that there is inaccuracy of attributions in this clinical group, as a result, causal explanations are often illogical and imprecise (Silk, Lohr, Westen & Goodrich, 1989). Individuals with BPD attend to negative stimuli more often and visits negative memories disproportionately. They have a tendency to endorse BPD-consistent negative beliefs about themselves, the world, and other people. They also make negatively biased interpretations and evaluations of neutral or ambiguous stimuli. In the early nineties Westen (1991) described that inaccuracy in explaining situations is a characteristic attributional pattern in BPD and is an outcome of social learning history. For example, in an individual the development of the ability to arrive at differentiated and valid attributions would be hampered if she/he perceived his or her parents' behavior as whimsical and hard to predict (Westen, Ludolph, Block, Wixom, &Wiss, 1990). BPD patients have a propensity to consider themselves as the sole cause of events (Westen, 1991) which is a sign of "egocentrism." Moreover, they catastrophize relatively harmless events because only a narrow (univalent) representation can be activated.

Comparatively recent studies support Westen's findings. For example, Moritz and colleagues (2011) reported that compared to healthy controls BPD patients have tendency to

make them highly accountable for the cause of both positive and negative events to themselves.

Misjudging and misattributing benign social stimuli including facial expressions as malevolent is common among BPD. Scott and colleagues (2011) found that patients with high BPD traits have enhanced ability to detect negative emotions and a bias for attributing negative emotions to nonnegative social stimuli.Thus evaluating nonnegative social stimuli, for example neutral facial expression, as negative explains BPD's disrupted communication in social settings.

BPD has other biases too, for example they have psychotic like cognitive biases. Moritz and his colleagues (2011) investigated whether cognitive biases those are associated with and implicated for the pathogenesis of psychotic symptoms are also found in BPD. They administered some tasks to measure neuropsychological deficits and also the Cognitive Biases Questionnaire for Psychosis (CBQp) scale on 20 BPD patients and 20 healthy controls. BPD samples did not differ from the healthy controls on standard neuropsychological tests but they got high scores on CBQp (in four out of five subscales).

Schilling and his colleagues (2015) studied the nature of interpersonal attribution in BPD. They administered Internal, Personal and Situational Attributions Questionnaire (the revised version) on two groups and found that there is difficulty in considering alternative explanations of an event and getting stuck to mono-causal thinking is BPD characteristics that might impact their interpersonal relations. This thinking pattern nurtures impulsive behavior like harming own-self or others. Their self-blaming pattern might contribute to their depressive symptoms and lowering of self-esteem.

Self-referential processing is the cognitive process of relating information, often from the external world, to the self. Examples include being able to attribute personality traits to oneself or to identify recollected episodes as being personal memories of the past. Winterand colleagues (2015) found that BPD showed a negative evaluation bias for positive, self-referential information which implies that though the bias had little influence on storing of information in memory, but may be associated with self-attributions of negative events in everyday life in BPD.

To understand the mechanism of how causal attributions of social events and how the corresponding emotional responses vary from disorder to disorder, LeaGutz and colleagues (2016) conducted a study where they examined theappraisal processes in response to social exclusion in borderline personality disorder (BPD) and social anxiety disorder (SAD). BPD group reported higher hostile-intent attributions and more aggressive action tendencies than the healthy controls.

Attribution studies have established that in socialinteractions, people often instantly infer why other people do what they do and usually they infer that behavior is a result of personality rather than circumstances. But it is still unclear how this tendency to infer in a certain way contributes to psychopathology and interpersonal dysfunction. Considering that Borderline personality disorder (BPD) is characterized by severe interpersonal dysfunction Homana and colleagues (2017) investigated whether this dysfunction is related to the tendency to over-attribute behaviors to personality traits. The findings supported the assumptions.

The studies on attribution style inform us that compared to healthy controls; BPD patients have more attributional bias of making own-self accountable (internal attribution) for

negative events. This bias extends further to attributing negative emotions to nonnegative social stimuli. Thus both self-blame induced depression and other blame mediated aggression and hostility common in BPD get some explanation from the attribution perspective. This "mono-causal" thinking style perhaps contributes to their well-known interpersonal problems too. Added to the above, it is found that BPD patients' personality trait does not predict overall attribution style of them.

The above findings clearly shows that attribution style of the BPD has some distinctive features and those differ significantly from that of the normal population.The main features of the BPD attribution style suggest that, they have atendency to over-attribute behaviors to personality traits,have a propensity to consider themselves as the sole cause of negative events,havemono-causal and internal attributions,have higher hostile-intent attributions and due to that more aggressive action tendencies. Their self-blaming attribution stylemight contribute to their depressive symptoms and lowering of self-esteem.

1.2.4 Metacognitive process in BPD

Like attribution styles' contribution to BPD symptomatologycited above, metacognition deficits is also reported in personality disorders including BPD.

Elizabeth Reilly (2011) studied metacognition in both BPD and psychosis. Possible correlation of metacognition with measures of attachment, symptom experience and interpersonal problems were explored.Metacognition was assessed using Metacognitive Assessment Scale (MAS) which consisted of 3 subscales viz., understanding own mind (UM), understanding others' mind (UOM) and mastery (M). Co relational analysis revealed that poorer the metacognition greater the positive symptoms and attachment anxiety. Whereas metacognitive skills were associated with attachment avoidance. However, as Metacognition

was impaired in both groups it suggested that metacognition is a trans-diagnostic construct. And also the pattern in which metacognitive impairment was revealed suggested that metacognition was organised hierarchically.

Donkersgoed and colleagues (2014) conducted a pilot study on a sample of 10 BPD patients to see impairment in different dimensions of metacognition and their connections with BPD symptoms. Findings indicated low level of meta cognitve ability in BPD.

Based on the fact that mindreading capability, which is a metacognitive skill in BPD is impaired, Semerari and colleagues (2015) hypothesized that any number of its individual components can be selectively impaired. Two functions of mindreading, differentiation and integration were found to be impaired in BPD, even when the severity of psychopathology was controlled. The findings suggest specific mindreading impairment in BPD and strong connections between impairments and severity of psychopathology.

Lysaker and colleagues (2017) compared level of metacognitive deficits in BPD and in other serious psychiatric conditions. Multiple comparisons showed that, compared to schizophrenia group, the BPD group had significantly higher self-reflectivity and awareness of the other's mind but lesser mastery and decentration than substance use group, after controlling for self-report of psychopathology and overall number of PD traits.

Abate and colleagues (2020) in a review article reported that metacognition in BPD is compromised and there is indication of deficits in selective metacognitive domains. BPD patients had significant lower performances in differentiation and integration sub-domains. They got significantly lower score in decentration too only when the weight of symptoms and the severity of personality psychopathology were considered.

In the same review authors cited Outcalt and colleagues (2016) found that the levels of anxious attachment and higher number of BPD traits are closely linked only when there is deficit in the metacognitive mastery sub-domain.

Aiming to understand to what extent BPD individuals develop accurate perceptions of their self-regulatory everyday functioning, Vega and colleagues (2020) concluded that metacognitive deficits might play a key mediating role between the altered cognitive processes responsible for self-regulation and cognitive control and the daily-life consequences in BPD.

Cyrkot and colleagues (2021) investigated level of dysfunction of higher cognitions, viz., metacognition and mind reading in borderline personality disorder (BPD) and did confirmed the hypothesis that BPD group overestimated their confidence in incorrect answers indicating their dysfunctional patterns in both metacognition and mindreading.

The studies on metacognition suggest that BPD patients compared to healthy controls, have a general low level of metacognition skills and also report of impairment in selective domains of metacognition.

1.3 Rationale for the present study

The present study has considered exploring two cognitive variables, the attribution style and metacognitive process in BPD. We have already discussed that, these two cognitive variables are trans-diagnostic in nature, and thus have association with many other psychological problems as well as BPD signs and symptoms. However, significant gap in knowledge regarding the role of attribution style and metacognition in the BPD can be identified.

We can quote from a recent research observation to support the gap, "There is a lack of evidence that metacognitive impairments are more severe in patients with PDs. The relationship between severity of PD pathology and the extent of metacognitive impairment has not been explored, and there has not been any finding to support the linking of different PDs with specific metacognitive profiles" (Semerari, et al., 2014).

Besides the knowledge gap, cultural or contextual influences are another area that may have some relevance whenever any complex multifactorial disorder like BPD is studied other than in western context. The finding discussed above are suggestive of idiosyncrasy in attribution style and impairment of metacognition in BPD. Therefore, to achieve a comprehensive understanding of BPD symptomatology and its cognitive processes, it is necessary to explore these phenomena and synthesize findings from across different cultures. However, most of the studies are done on BPD patient from North America and Europe and Asian studies are scarce in this particular field.

In the midst of ongoing debate on cultural influence and culture specific presentation of psychiatric disorders, psychologist from various background have made strong arguments in favor of the idea that psychiatric disorders and as such, BPD and its signs and symptoms are influenced and shaped by cultural factors (Paris & Lis, 2012). However, it is to be noted that BPD is influenced by culture but is not culture bound. Most likely every culture produces people with BPD but symptom expression may vary from culture to culture. However, the specific nature of cultural influence in BPD symptoms is yet to be crystalized.

Mental health professionals working in Bangladesh has reported increasing prevalence of patients with BPD in their clinical practice (Shahid & Rahman, 2023). Lack of clarity of understanding the constructs and process involved in BPD made it difficult for the

clinicians to deal with these patients effectively. This necessitates the need for a detailed understanding of psychological process involved in BPD in Bangladeshi context.

1.4 The present study

The present study is conceived to address the generic knowledge gap regarding the relation between cognitive constructs (such as, metacognitive process, and attributional style) (see Semerari, et al., 2014) as well as contextual knowledge gap from a low resourced Asian culture that is Bangladesh. Besides strengthening and updating existing knowledge in BPD relating meta cognitive process, and attributional style, the findings from the present study is likely to have clinical implication as well. The majority of the qualified mental health professionals in Bangladesh practice cognitive based interventions (e.g., Cognitive behavior therapy), therefore, the findings will readily be useful in their existing process of case conceptualization.

1.5 Objectives of Present Study.

The present study aims to understand the attribution style and metacognitive process in borderline personality disorder. To achieve this overarching objective, several specific objectives were formulated as follows,

1) To assess metacognitive skills in BPD

2) To assess attribution styles in BPD

3) To explore relation between different metacognitive skills and four BPD sectors of psychopathology that is to say, affective, interpersonal, behavioral and cognitive/self;

4) To explore the relation between internal, personal and situational attribution style and four sectors of BPD psychopathology that is to say, affective, interpersonal, behavioral and cognitive/self;

5) To explore relation between different metacognitive skills and attribution styles in BPD.

Method

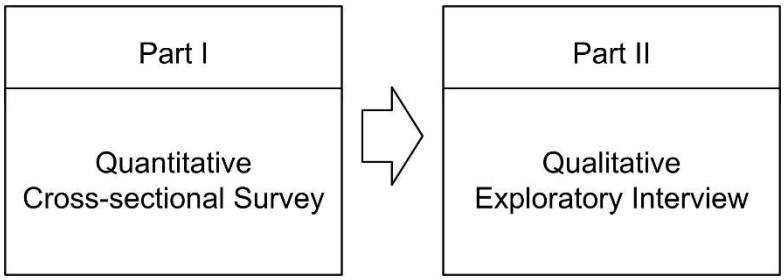
This chapter discuss about the study design, the participant characteristics and selection of them into study, rationale behind selecting the size of the sample, the flow chart of data collection, also about the measures used to screen participants and collect study data, ethical considerations and detailed data collection procedure. The type of quantitative and qualitative methods used to gather data has also been enumerated.

2.1 Design

Mixed method sequential approach using both quantitative and qualitative methods was employed to investigate the objectives of thepresent research (see Figure 2.1).A cross-sectional quantitative design was used to assess and understand the metacognitive skills and attributional style in BPD. The relation between these cognitive factors and BPD symptoms were studied using comparison between individuals with and without BPD diagnosis. While this quantitative part is expected to indicate the pattern of relation, the qualitative component was used to further understand this relationship by exploring the process of metacognitive skills and attributional style.

Figure 2.1.

Sequential mixed method design used in the present research.



2.2 Participants

Eighty adults from Bangladesh with and without Forty diagnosis of borderline personality disorder BPD patients and forty non bpd normalswere the study participants.Among them 40 had diagnosis of BPD while the other 40 did not have BPD.

2.2.1 Incusion & Exclusion criteria

Status of diagnosis of BPD was the key inclusion criteria for the two groups of participants. While to be included in the Group 1 i.e., the BPD patient, the participants needed to have a confirmed diagnosis of BPD while to be included in the Group 2 i.e., the normal control, the participants needed to be screened out of BPD. See Table 2.1. for the inclusion and exclusion criteria used for selection of the participants in the two groups.

Table 2.1

Inclusion and exclusion criteria for the two groups of participants

	Group 1. BPD patient	***Group 2.*** Normal control
Inclusion Criteria	Confirmed diagnosis of BPD	Confirmed to not have BPD
Exclusion criteria	▪ Current or history of diagnosis with Participants who had	▪ Participants who hadCurrent or history of of or currently

	history of or currently diagnosed having Bbipolar Mmood dDisorder, or sSchizophrenia. ▪ and who were cCurrentlyusing drugs/substance use. or not free of it for at least last 3 months were excluded. Also BPD individuals who were unwilling to participate in the study, ▪ illiteratIlliteracy or e and unable or hadinability to communicatedifficulty meaningfully. communicating meaningfully with the data collector were excluded.	diagnosedis having any with any psychiatric illness. ▪ Presence of substance use, childhood trauma, difficulty to stay in a relation, chaotic relationship pattern, anger problem, too much emotion, depressed mood, identity problem, impulsivity and self-harm.

2.2.2 Sample size

Accurate estimation of sample size requires prevalence data on the study population. Due to absence of data on the prevalence of BPD in Bangladesh, sample size estimation was done using the rule of thumb (Daniel, 2012) which suggested a sample size of 40 for each group as adequate for the study.

2.2.3 Demographic information

Table 2.2

Demographic information for with BPD and without BPD

	With BPD patient (N=40)Frequency (%)	Without BPD (N=40) Frequency (%)
Age		
18-30 yrs	32 (80.0)	32 (80.0)
31-40 yrs	05 (12.5)	05 (12.5)
41-50 yrs	03 (7.5)	03 (7.5)
Gender		
Female	31 (77.5)	31 (77.5)
Male	09 (22.5)	09 (22.5)
Education		
Primary (up to to Class-V)	1(2.5)	1(2.5)
Secondary (up to to Class-X)	7(17.5)	7(17.5)
SSC/HSC passed	7(17.5)	8(20)
Graduation (studying/passed)	14(35)	12(30)
Masters (studying/passed)	11(27.5)	12(30)
Religion		
Islam	34(85)	40(100)
Hinduism	6(15)	0(0)

The demographic characteristics of participants with BPD and without BPDgroup are presented here (see, Table 12.2). Age has been reported in three categories viz., 18-30 years, 31-40 years and 41-50 years. Average age of bpd and normal sample has found to be 25.96 years and 26.68 years respectively.As regards gender distribution both sample is comprised of 31 female and 9 male. The variable education has been reported in five categories, viz., primary, secondary, graduation and masters and average years of education for bpd and normal sample have found to be 13.72 years and 13.92 years respectively. The data on the variable religion shows that participants are from two major religious communities of the country, Islam and Hinduism and the bpd sample is comprised of 34 from Islamic and 6 from Hindu faith respectively whereas, the total normal sample (n=40)belongs tothe Islamic faith.

2.2.4 *Clinical Information*

Table 2.3

The clinical characteristics of participants with BPD and without BPD

		With BPD(N=40) Frequency(%)	Without BPD(N=40) Frequency(%)
Variables	Response		
Any Major Psychological illness	Yes	0(0)	0(0)
(Schizophrenia/BMD)	No	40(100)	40(100)
Receiving Psychiatric treatment	Yes	30(75)	0(0)
	No	10(25)	40(100)
Receiving Psychotherapy	Yes	7(42.5)	1(2.5)
	No	23(57.5)	39(97.5)
Current or past drug abuse	Yes	5(12.5)	0(0)
	No	35(87.5	40(100)
Childhood physical/psychological torture	Yes	27(67.5)	0(0)
	No	13(32.5)	40(100)

Note. BMD = Bipolar Mood Disorder

Results show (Table-2.3) that with BPD and without BPD have no major psychological illnesses like schizophrenia and bipolar mood disorder.As regards receiving psychiatric treatment 75% of BPD sample said “yes”, whereas for normal sample it was 100% no. On the other hand 42.5% of the BPD sample was found receiving psychotherapy whereas it was only 2.5% for normal sample. Status regarding current or past history of drug abuse shows that 87.5% of the clinical sample had no substance abuse history, and for normal sample this was 100% “no”.As for childhood physical or psychological torture 67.5% said yes and for normal sample 100% said they had no history of such abuse.

A profile of the BPD calculated on the frequency (and percentage) of participants met each of nine symptom have been presented in Table-2.4

Table 2.4

Profile of the participants with BPD as per SCID scores arranged in descending order

SCID Items	With BPD (N=40) Frequency (%)
Affective Instability	35(87.5)
Intense/difficulty controlling anger	34(85)
Unstable interpersonal relationship	33(82.5)
Fear of Abandonment	32(80)
Chronic feeling of emptiness	31(77.5)
Suicidal and self-mutilating behavior	28(70)
Identity Disturbance	27(67)

Impulsivity	24(60)
Paranoid /dissociative symptoms	22(55)

Note. N=40. Frequency = number of participants met the criteria in a particular SCID item

Table-2.5 present four different sectors of BPD psychopathology.Each sector is comprised of a number of SCID items. Thus *affective* sector includes: anger, affective instability and emptiness; *interpersonal* sector includes intense, unstable relationships, abandonment fears, and needy, fearful attachments;self-harm/suicidality, impulsivity comprise *behavioral* sector and self-image instability and distortions, dissociation and brief paranoid episodes are included in *self/cognitive* sector. As regards status of four sectors, Affective sector has scored highest (mean 6.4) followed by interpersonal (mean 3.38) behavioral (2.92) and self/cognitive (mean 2.75).

Table 2.5

Profile of the BPD group in four sectors of psychopathology as per SCID scores

	Mean	Std. Deviation
Sectors		
1. Affective	6.40	1.53
2. Interpersonal	3.38	1.21
3. Behavioral	2.92	1.09
4. Self/Cognitive	2.75	1.21

Note. N=40. Sectors = a number of similar symptoms of BPD (as per DSM-5) are grouped together to form a sector (Gunderson et al., 2018). Mean score (calculated by sum of all the scores of the symptoms in a sector divided by total number of responses) on each of the four sectors are presented.

The load of symptoms of the with BPD participants as indicated by aggregated SCID scores on each item has been drawn (Table-2.6) as well. Although meeting at least five out of nine symptoms in SCID-5-PD is necessary and sufficient condition to get a diagnosis of BPD, participants varied in the number of symptoms they met, for example some met with all 9 symptoms whereas some met with just 5 symptoms; which are exhibited as frequency as well as percentage in the table-5 and as bar-diagram in figure-1.

Table 2.6

Load of symptoms as per SCID score in BPD group

SCID Items	With BPD (N=40) Frequency (%)
Nine symptoms met	4(10)
Eight symptoms met	6(15)
Seven symptoms met	11(27.5)
Six symptoms met	10(25)
Five symptoms met	9(22)

Note: N=40. Load of Symptoms = Number of symptoms a participants meet out of 9 symptoms on a SCID scale – the more the symptoms the higher the load. The frequency is the number of participants out of 40 meets a particular number of symptoms.

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As per the load of BPD symptoms assessed in SCID-5-PD, the Table-2.6 shows that 4(10%) participants met all 9 symptoms which were followed by 6(15%) meeting 8

symptoms, 11(27.5%) meeting 7 symptoms, 10 (25%) meeting 6 symptoms and 9 (22.5%) meeting the minimum of 5 symptoms to be diagnosed as BPD.

2.3 Measures

A number of scales and semistructure questionnaire were used as tools measures for assessing study variables, which are as follows:

2.3.1 Composite Background socio-demographic and medical history Questionnaire

All participants completed a background socio-demographic**and medical history** questionnaire (see Appendix-7 & 8) detailing: (i) demographics (age, gender, education); (ii) psychiatric and psychological history (presence or absence of diagnosis of major mental illness, presence or absence of abusive or traumatic childhood history, previous psychological, psychiatric intervention, medication); and (iii) presence of drug and alcohol difficulties. Background The compositeQ questionnaire for with BPD and without BPD group were consisted of 10 and 18 items. First 10 items for each group were same. The additional 8 items for without BPD group were included to screen any BPD like symptoms. To be considered as without BPD participant had to mark "no" to item no "5" ("have you ever suffered from any major psychiatric disorder, like schizophrenia or bipolar mood disorder") – this was mandatory. And also from item no 11 to 18, i.e., among eight items at least five items had to be marked "no."

2.3.2 SCID-5-PD

The Structured Clinical Interview for DSM-5 Personality (SCID-5-PD, 2016) is asemistructuredsemi-structured diagnostic interview tool for assessing the 10 DSM-5 Personality Disorders in Clusters A, B, and C.In the present research this Structured Clinical

Interview has been used for making Borderline Personality Disorder (one of the cluster B Personality Disorders) diagnosis of the participants. SCID items for BPD measures all the 9 symptoms in a likert scale (? = Inadequate information,0 = Absent, 1= Sub-threshold, 2 = Threshold). Thus a global score as well as scores for individual symptoms can be elicited by it.It is to be noted that though, "ordinarily the entire SCID-5-PD is administered; however, it is also possible to evaluate only those Personality Disorders that are of particular interest to the clinician or researcher" (SCID-5-PD: Users Gide, 2016, p.2). In the user's guide item no. 77 to 91 comprises Borderline Personality Disorder (BPD). At least five criteria out 9 are to be rated "2" to get a diagnosis of BPD.

2.3.3 Internal Personal & Situational Attributions Questionnaire (IPSAQ)

The IPSAQ is a self-administered instrument designed to evaluate individuals' attributional style (AS). Developed by Kinderman and Bental (1996), IPSAQ is a causal reasoning assessment tool that focuses on the importance of interpersonal relations. The IPSAQ has 32 items which describe 16 positive and 16 negative social situations in the second person (e.g. "A friend tells you that she respects you" and "A friend thinks you are interesting"). Positive and negative events are randomly ordered in the questionnaire. For each item the respondent is required to write down a single, most likely, causal explanation for the situation described. The respondent is then required to categorize this cause as being either internal (something to do with the respondent), personal (something to do with another person or persons) or situational (something to do with circumstances or chance) by circling the appropriate choice. Three positive and three negative subscale scores are then generated by summing the number of internal attributions, the number of personal attributions and the number of situational attributions chosen for both the positive and negative items.

Two cognitive bias scores are also derived from these six subscale scores, viz., *Internalizing Bias,* which isthe number of 'internal' attributions for negative events minus the number of 'internal' attributions for positive events, and *Personalizing Bias,* which is the proportion of external attributions for negative events that are 'personal' as opposed to 'situational' and is calculated by dividing the number of personal attributions by the sum of both personal and situational attributions for negative events. A personalizing bias score of greater than 0.5 therefore represents a greater tendency to use personal rather than situational external attributions for negative events.

Kinderman and Bentall (Kinderman and Bentall, 1996) reported satisfactory internal reliability for this instrument, with a mean alpha of 0.675.

A translated Bangla versioin of IPSAQ was used in the present study.The forward-backward translation procedures were applied to translate the IPSAQ from English into the Bangla language. The bilingual study investigator translated the English version of the IPSAQ to Bangla. The Bangla translation was further refined by one bilingual Professor of Mass-Communication. Then another bilingual psychologist not associated with the measure translated it back from Bangla to English. Back translation was checked by one the authors (Peter Kinderman) of the original scale, who is a native English speaker. With minimum correction from the original author the IPSAQ Bangla was finalized. Cronbach's alpha for the IPSAQ Bangla from the current sample was 0.754.

2.3.4 Metacognitive Self Assessment Scale (MSAS)

The MSAS was developed from the MMFM i.e., Metacognitive Multi-Function Model (Semerari et al. 2003) and it is directly derived from two already validated instruments based on the same model, the Metacognition Assessment Scale (MAS), a rating scale for assessing metacognition in psychotherapy transcripts (Carcione et al. 2008, 2010; Semerari et al. 2003) and the Metacognition Assessment Interview (MAI), a semi-structured clinical interview (Semerari et al. 2012). MMFM regards metacognition as a set of skills intended as functions (Pedone et al., 2017). This model stresses the functional aspect of metacognition, where operations are necessary to (1) identify and describe mental states regarding self and others based on internal experience and observable behavior, (2) reflect and reasoning about diverse mental contents such as mental states, (3) use mental information for complex decision making, problem-solving and cope with suffering (Carcione et al., 2010).

The MSAS as described by Pedone and colleagues (2017), "..is an eighteen-item self-report measure specifically developed for the assessment of MMFM sub-functions. The MSAS is scored using a five-point Likert scale (1 = never, 2 = rarely, 3 = sometimes, 4 = frequently, 5 = almost always), which yields a raw score range of 18 to 90. High scores on the MSAS indicate better self-evaluation of metacognitive abilities than low scores. The MSAS is designed to measure five abilities of metacognition: 1) monitoring; 2) differentiation; 3) integration; 4) decentration and 5) mastery. Scores from the five subscales are summed to give a total score that represents the individual's overall level of metacognitive functioning.

Cronbach's alpha ranged between 0.72 and 0.87 for all MSAS subscales and for overall metacognitive function as measured by total MSAS score, exceeding the 0.70 criterion."

A translated Bangla versioin of MSAS was used in the present study.The forward-backward translation procedures were applied to translate the MSAS from English into the Bangla language. The bilingual study investigator translated the English version of the MSAS to Bangla. The Bangla translation was further refined by one bilingual Professor of Mass-Communication. Then another bilingual psychologist not associated with the measure translated it back from Bangla to English. Back translation was checked by one the authors (AntoninoCarcione) of the original scale.With a few corrections from the original author the MSAS Bangla was finalized. Cronbach's alpha ranged between 0.623 and 0.830 for all MSAS subscales and for overall metacognitive function as measured by total MSAS score was 0.898.

2.3.5 *Topic guide.*

A topic guide was used for conducting in-depth interview in the qualitative part of the research (annexure-14). The topic guide was developed through mind map exercise. The topic guide included questions regarding different aspects of metacognitive ability and attribution styles.

2.3.6 Ethical Approval

Ethical approval for the present study (Project Number: PH201201; December 24, 2020; see Appendix-1) was obtained first from the Ethics Committee of the Department of Clinical Psychology, University of Dhaka. Permission from the hospital authority was also needed for collecting patient data. An addendum was approved by the ethical approval

committee to extend the data collection period and allow qualitative interview with the patients (Project Number: PH201201; 24 December 2020 to 23 December 2023; see (Appendix-1).

Although initially planned to collect data from three Government run hospitals. Only two of them (National Institute of Mental Health - NIMH) allowed for data collection in the Covid-19 pandemic restrictions. Permission for data collection (Memo No. NIMH/2021/105; Date: 19/01/2021. See Appendix-2) was obtained from the ethical committee of the institute.

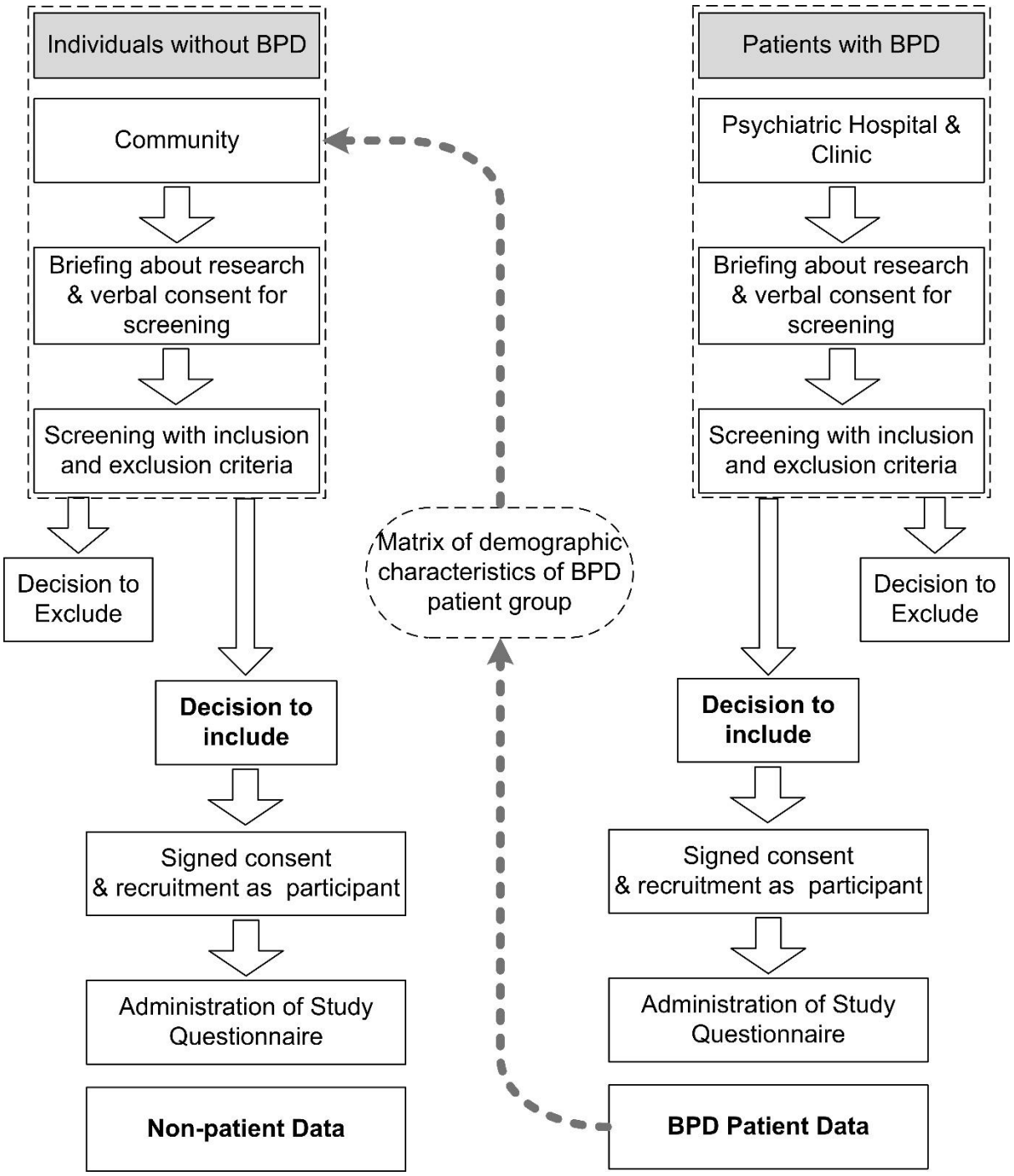
These ethical approval from the academic and hospital authority served as sufficient to allow data collection from the three clinics who did not have their own ethics approval community.

2.4 Procedure

Most of the ata from theof the BPD patient group were collected mainly from NIMH and only a few were collected from also from one privately run psychiatric clinic in Dhaka City and from private practice of the Clinical Psychologists too. From BPD participants, data were collected throughout the month of January and February, 2021. Two Masters level trainees of Clinical Psychology, University of Dhaka, assisted in data collection of both BPD and normal group. They were provided with detailed training on the research process, ethical considerations and data collection instruments. Special training was arranged on SCID-5-PD administration following the guidelines laid in the SCID-5-PD user's manual.

Figure 2.2

Flowchart on the process of recruitment of the participants.



The process of recruitment for the two groups of participants was almost identical except for the source where they were collected and the screening instrument though which they had gone through (see Figure 2.2 for details). The BPD patient sample were collected from medical setting while the non-patient sample were collected from the community. For both groups, the prospective participants were approached and explained about the purpose and process of research using verbal instruction as well as printed detailed explanatory note. The process of screening was explained and proceed with verbal consent form the participant. For BPD patient group SCID-5 and a Composite Background socio-demographic and medical history Questionnairewas used for screening. While for the non-patient community sample, a Composite Background socio-demographic and medical history Questionnairewere used.

Those who did not fulfill inclusion criteria or met the exclusion predetermined criteria (see section2.2.1) for the respective group were excluded from the study. The included participants were provided with further details and proceeded with signed informed consent to take part in the study. All the research instruments were administered subsequently. The time needed to complete the whole process varied from 60 to 90 minutes. There was no provision for providing any compensation to the participants. However, at the end of completion of filling out of two scales, each participant was provided with a brief psycho-education about BPD and informed about what more could be done (i.e., individual psychotherapy) besides medication to deal with her/his disorder. A good number of interested BPD participants were referred to psychological services for individual sessions.

A total of 50 provisionally diagnosed BPD patients were approached, however, after administration of SCID-5-PD, 43 were found to meet the diagnostic criteria of BPD. Out of these 43, data of 3 were later omitted due to meeting one exclusion criteria (currently or

having recent history of Bipolar Mood Disorder diagnosis). Finally, 40 BPD participants' (31 female and 9 male) data were accepted for statistical analysis.

A matrix was prepared where BPD participants were grouped as per their age sex and education level. For non-patient group, the matrix was used identify suitable participants. Prospective participants from the community were approached with participants were reached out through personal contact of the study researcher and two research assistants. Quantitative survey data from BPD patient, data were collected throughout the month of January and February, 2021. Data from non-patient group were collected throughout the month of March 2021.

For qualitative interview, participants form the BPD patient group were later contacted over cell phone and the purpose of the interview was made clear. Those who gave consent to this part of the study were reached at the places of their convenience. All participants were first given with a written "Information Sheet" narrating the purpose and procedure to follow for this part of the study. The interviews were conducted by the researcher with consent from the participants regarding in-depth interview.

Before advancing for data collection all the necessary tools and measures were made available to the research assistants. The tools were: (i) two "Information-Sheets" (see Appendix-3 & 4), one for participants with BPD and another for l participants without BPD (in the sheets the researcher invited and explained in lucid Bangla language what the study was about and what it aimed to explore and why, what could be some outcomes of the study and how that would help in understanding BPD and in its intervention, what the participant had to do if she/he agreed to participate and also what measures had been ensured for confidentiality of the data and personal security of the participants; (ii)two "Informed &

Understood Consent Forms" (see Appendix-4 & 6) - one for participants with BPD and another for participants without BPD; (iii) Photocopy of the "SCID-5-PD for BPD" diagnosis; (iv) two Composite Background socio-demographic and medical history Questionnaire ("Personal Background Information Collection Sheet") - one for participants with BPD (consists of 10 items) and another for participants without BPD (consists of 18 items); (iv) Printed copies of Bangla translated MSAS and IPSAQ; and (v) a confidential slip for collecting participants name, address, telephone/cell phone no.(meant to be used, if needed to further communicate with the participant).

As already mentioned, BPD participants were recruited mainly from National Institute of Mental Health (NIMH), and one Private Psychiatric Clinic in Dhaka City. Maximum numbers of participants (32) were from the psychotherapy unit of NIMH. This unit is supervised by a clinical psychologist and patients are referred from the OPD (out patient department) who are deemed in need of psychotherapeutic intervention by the attendant psychiatrists. This unit hosts a clinical placement for Masters and M.Phil level trainees of Clinical Psychology from the University of Dhaka.Psychometric assessment and Psychotherapeutic (mainly Cognitive Behavior Therapy) services are provided by the trainees six days in a week from 8am to 2.30pm. Besides individual sessions, this unit conducts four group therapy sessions in a week. So, there are Depression group, OCD (Obsessive Compulsive Disorder) group, mixed group (all sorts of disorder) and a group for parenting training. The researcher himself and the research assistants regularly attended the group therapy sessions and checked all the prescriptions of patients attending the sessions. The prescriptions which patients obtained from the out-door, had either a diagnosis or symptoms written on it. Beforehand all the psychiatrist of the OPD were requested to refer any BPD or patients with some symptoms of BPD to the psychotherapy unit. The researcher and the

research assistants approached all diagnosed and potential BPD patients and then, first orally told about the present research. If interest was shown by any patient then she/he was provided with the "Instruction Sheet" and asked to read carefully. After reading of the sheet, the patient was again briefed in detail about the study and all her/his queries and concerns were answered with patience. If she/he had consented orally to take part in the research then she/he was given with the "Informed and understood consent form". If she/he tick marked all 10 boxes and put her/his sign blow as an expression of her/his consent, then the data collector counter signed the form and the next steps followed through.

Attrition/Refusal: In case of the participants without BPD only three refused to take part in the study and among the participants with BPD, two refused to take part in the study. There was no event of attrition.

2.5 Analysis of Data

2.5.1 Quantitative data.

Descriptive and inferential analyses of data were performed using the software package SPSS, version-21 (IBM Corporation, New York). Necessary assumptions (normality and homogeneity of variance) for parametric test were checked where applicable. Several variables violated normality (Kolmogorov Smirnov test), while a few violated the assumption of equality of variance (Levene's test). Due to the well-reported robustness of t-test (for equal-sample size especially) against the violation of normality (Boneau, 1960; Posten, 1978; Guiard & Rasch, 2004; Rasch et al., 2007), the non-normality has been ignored in these analyses. To quote from Posten, "…the equal-sample size two-sample *t*-test is quite robust with respect to departures from normality, perhaps even more so than most people realize."(p.295) and to quote Rasch & Guiard, ".the *t*-test is so robust against non-normality that there is nearly no need to use the Wilcoxon test in comparing expectations." (p.2706)

2.5.2 Qualitative data

Analysis consisted of three steps: open/initial coding followed by focused coding and finally abstracting themes by fusing focused codes.

Open/initial coding. For coding purpose only those parts of the verbatim was considered which had relevance to the objective of the exploration. Open/initial coding consisted of labeling a significant chunk of data with a single word or a brief sentence that conveyed a meaningful cognition, emotion, action or any internal external process of the participant. This was an ongoing inductive empirical process where no preexisting category was applied to the data. To code, data of one interview under a question were compared with the data of the other interviews. Following this procedure ninety one (91) initial or open codes were generated.

Focused coding. In focused coding a number of similar open codes which seemed to bear a strong conceptual category are grouped together and then those are subsumed under a single focused code. These way large segments of data are sorted through. Following this procedure we got sixteen (16) focused codes.

Abstracting t**hemes.** In this phase analysis consisted of abstracting common themes or patterns in several focused codes or selecting any focused code as a theme that had immense significance. In the final analysis sixteen focused codes could be grouped and fused into five major themes, viz., (i) Prioritization of emotion; (ii) Thought emotion fusion; (ii) Failed subtle-communication; (iii) Primacy of personal view; and (iv) Loop of self-criticism.

Result

3.1. Result of the quantitative part:

The findings have been presented in order of the objectives of the present study. The findings from quantitative study and qualitative study have been used together to explain the result.

3.1.1 Metacognitive profile in BPD

Metacognitive profile comprised of a composite score (Mean value) and scores on five subscales. Results (Table 3.1 and Fig 3.1) showed that total the score of metacognitve ability of the participants with BPD (M = 31.40, SD = 8.136) was found to be lesser than the total metacognitve ability score of the participants without BPD (M = 42.07, SD = 5.070). Independent t-test conducted with the two sample, showed that the difference between metacognitve ability scores was significant (t = 7.042; df=65.326, $p < 0.01$), with a large effect size (Cohen d = 0.80).

Similarly, subscale scores (presented in Table 3.1 & Fig 3.1) clearly shows that in all subscale scores of participants with BPD were low compared to the of participants without BPD. Independent t-test indicated that all these differences were significant.

Table 3.1

Metacognitive ability of the participants with BPD and without BPD on MSAS Scale scores

Scale scores	with BPD		without BPD		*t*	df	*p*	Cohen's *d*
	M	SD	M	SD				
MSAS total	31.40	8.13	42.07	5.070	7.042	65.32	0.000	0.80
Monitoring	19.17	5.53	24.87	5.02	4.822	78	0.000	0.539
Integration	6.50	2.35	8.22	2.31	3.305	78	0.001	0.348
Differentiation	6.80	2.25	9.17	1.61	5.414	70.67	0.000	0.613
Decentration	5.40	1.15	5.87	1.15	1.840	78	0.070	0.205
Mastery	12.70	4.92	18.80	3.15	6.595	66.39	0.000	0.754

*Note.*N=40 for each of BPD and Normal groups. MSAS total = Total score in Metacognitive Self Assessment Scale. Mean values for each subscale scores, the total value as well as the results of *t*-tests comparing the parameter estimates of the two groups are present.

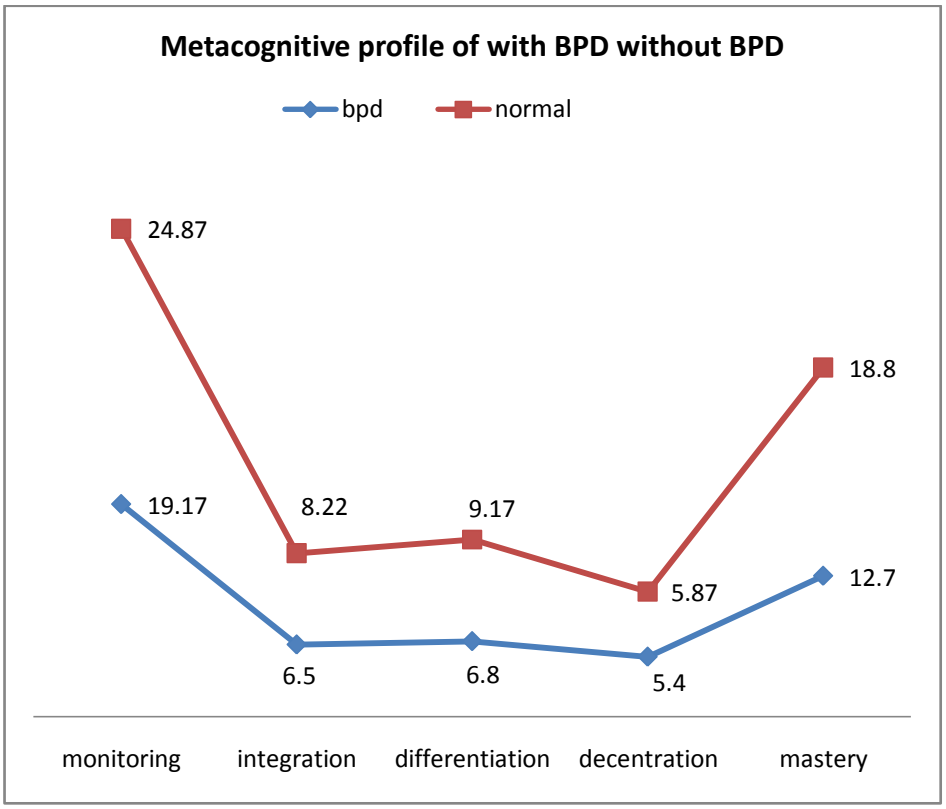
Monitoring ability of the participants with BPD (M=19.175, SD=5.537) was less than the monitoring ability of the participants without BPD (M=24.875, SD=5.023). An independent *t*-test showed that the difference between ability score was significant and effect size was moderate (t = 4.822; df=78 ,p = 0.000, two-tailed, d =0.539)

Integration ability of the BPD (M=6.50, SD=2.353) was less than the integration ability of the Normals (M=8.225, SD=2.314). An independent *t*-test showed that the

difference between ability score was significant and effect size was small (t = 3.305; df=78 ,p = 0.001, two-tailed, d =0.348)

Figure 3.1

Metacognitive profile of with BPD and without BPD participants



Differentiation ability of the with BPD (M=6.80, SD=2.255) was less than the Differentiation ability of the without BPD (M=9.175, SD=1.615). An independent t-test showed that the difference between ability score was significant and effect size was moderate (t = 5.414; df=70.677 ,p = 0.000, two-tailed, d =0.613).

Decentration ability of the with BPD (M=5.40, SD=1.150) participants was slightly less than the Decentration ability of the without BPD (M=5.8750, SD=1.158) participants. But an independent *t*-test showed that the difference between ability score was not significant and effect size was small (t = 1.840; df=78, p = 0.070, two-tailed, d =0.205).

Mastery ability of the participants with BPD (M=12.70, SD=4.926) was less than the Mastery ability of the participants without BPD (M=18.80, SD=3.155). An independent *t*-test showed that the difference between ability score was significant and effect size was moderate (t = 6.595; df=66.397, p = 0.000, two-tailed, d =0.754).

Qualitative data from in-depth interviews indicated '***prioritization of emotion***' among the BPD patients. They experience frequent flooding of emotion for which they find emotion as their dominant inner state, and that's why they tend to trust more on emotion than thoughts i.e., prioritize emotion over thinking. Which often led them making decision and acting consequently guided by therir emotion. This priority over emotional state is reflected in the following quotation from a BPD patient participant

> *"I think thoughts are infinite. One can think any time, but feelings really matters because my choice of anything is guided by my feelings. I believe if a person take a decision influenced by emotions that not necessarily would be a bad decision, …"*

Additionally, the qualitative data indicated that there is a fusion of thought and emotion among the BPD patients which has been substantiated as ***'thought emotion fusion'***. In any fusion two or more elements get entangled or mixed up. Borderline patients have difficulty differentiating between feeling and cognition. It sometimes feels like thought and

feelings are entangled, they are difficult to separate. Some of them are not at all aware that these two can be differentiated or separated – they experience it as a composite.

"Feel like my emotion and thoughts are inseperable"

Such thought emotion fusion and over emphasis on emotion (leading limited attention to cognition) can be contributing to the limited metaconitve ability of the patients with BPD.

We found ***'failed subtle-communication'*** as a major theme for the participants with BPD. It is known that interpersonal communication seems always a big issue for patients with BPD (REF). They often fail to understand other people's thoughts and feelings. Metacognitive ability is a major contributor in enhanced interpersonal communication with others. Thus 'failed subtle-communication' found among them can be an indicator of their limited metacognitive ability. When people are not enough expressive individuals with BPD find it difficult to track other people's thoughts. Sometimes they can trace feelings a little bit but not the thoughts.

"I seldom understand what people want to say beyond words, it is so confusing"

'***Primacy of personal view***' was also observe among the BPD patient group. Though the bpd thinks that they are aware and respectful about other's perspective and feelings, but in practice it is very difficult for them to accept other's view. They try hard to understand others perspective but they find that they are limited in that skill. They regularly think that their own view is correct as reflected in the theme 'primacy of personal view' which is represented in the following quotation.

"Whtever the situation I think I'am always right"

3.1.2 Attribution Style in BPD

Table 3.2 and Fig 3.2 present scores on attribution style measures of bpd with BPD and normal without BPD sample for both positive and negative events - and also shows the pattern of internal, personal and situational attributions in both conditions/events. To test our 2nd investigate the second objective hypothesis an Independent*t*independent-test was run for checking whether there was any significant difference between corresponding scores obtained by BPD and not BPD sample.It is clearly indicated that with BDP group has greater tendency towards internal attribution style for negative events than normalsnot .BPD group.

Compared to participants without BPD (with BPD:M=7.40, SD= 3.848; non-bpdwithout BPD: 3.825, SD=2.697) the participants with BPD attributed the cause of negative events to themselves significantly more, (t = 4.811; df=69.87, p = 0.000, two-tailed, with moderate effect size, d =0.546) and attributed the cause of negative events to others (with BPD: M= 5.80, SD=3.589; without BPD: M=7.70, SD=3.081) and situational factors (with BPD: M=2.80, SD=2.919; without BPD:M= 4.475, SD=2.207) significantly less (Others: t=2.54, df=78, p=.013, two tailed, small effect size, d= 0.284*;* Situational: t=2.895, df=78, p=.005, two tailed, with moderate effect size, d=.326).

Table 3.2

Attribution style of with and without BPD participants

Scale scores	With BPD		Without BPD		*t*	df	*p*	Cohen's *d*
	M	SD	M	SD				
Negative Internal	7.40	3.84	3.82	2.69	4.811	69.87	0.000	0.546
Negative Personal	5.80	3.58	7.70	3.08	2.54	78	0.013	0.284
Negative Situational	2.80	2.91	4.47	2.20	2.895	78	0.005	0.326
Internal Bias	-2.37	4.99	-6.85	3.91	4.463	78	0.000	0.546
Personal Bias	0.68	.26	0.61	.20	1.296	78	0.199	0.1458

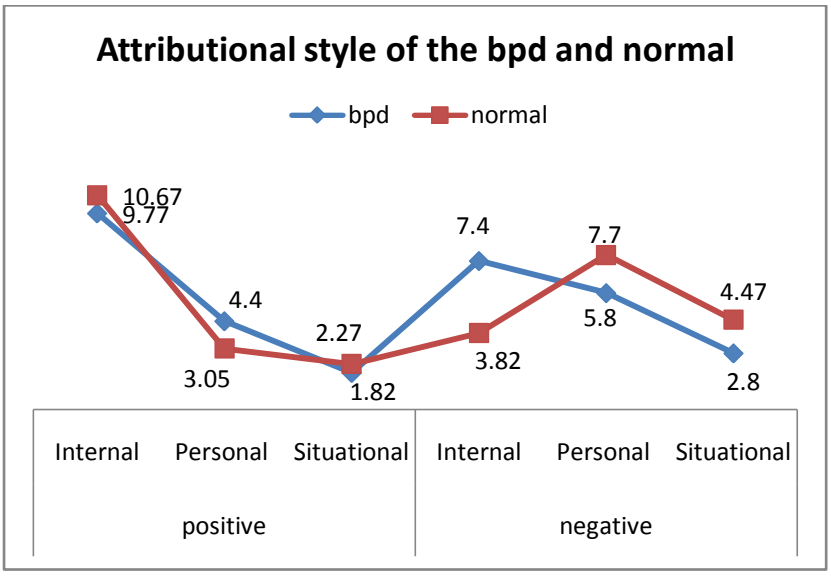
*Note.*N=40 for each of with BPD and without BPD groups. Mean values for three subscale scores and Internal and Personal Bias scores of both BPD and non-bpd are compared, as well as the results of *t*-tests comparing the parameter estimates of the two groups are presented.

That participants with BPD have a tendency to internal attribution style for negative events more than the participants without BPD have some explanation in our exploration. Often time the mind of the BPD is filled with worry, rumination and self criticism and excessive self-blame (***loop of self-criticism & rumination***). They look like self-absorbed in the sense that their mind is mostly internally busy. They worry too much about others judgment of them, real or imagined. If in any interpersonal exchange any wrong is occurred, however trivial it might be, they make themselves accountable for it. One participant expressed like this: *"Making ownself accountable makes me a better person."*

Though their tendency to exaggerated self devaluation drowns them in guilt, and making own-self accountable feels emotionally unsettling too, still they cannot refrain from making them accountable.

Figure 3.2

Attribution style of the participants with and without BPD



As regards *internalizing bias* BPD scored more (M= -2.375, SD= 4.99) than the non bpd (M= -6.85, SD= 3.912). An independent *t*-test showed that the difference between the scores was significant and effect size was moderate (t = 4.463; df=78, p = 0.000, two-tailed, d =0.546).

As regards *personalizing bias*, for both with BPD (0.6887) and without BPD (0.6199), on average more than half the attributions for negative events were made to other people which in other words isblaming others for negative events. Though with BPD participants seemed to have a slight higher score than the non bpd samples, an independent *t*-test showed

no significant difference between PB scores (t = 1.296; df=78, p = 0.199, two-tailed, small effect size, d = 0.1458)

3.1.3 Correlations between BPD, MC and AS

Pearson Correlation among SCID, Metacognition and Attributional Style scores were calculated. The correlations those reached significance with moderate and strong *r* values are presented in the table 8, 9 and 10

Table 3.3

Pearson correlation between SCID scores and Metacognitive ability score

	SCID Total	SCID Affect	SCID Interpersonal	SCID Behavior	SCID Self/Cognition
MSAS Total	-.182	-.161	-.122	-.092	-.112
Monitoring	-.314*	-.141	-.193	-.218	-.153
Integration	-.195	-.142	-.112	-.144	-.081
Difference	-.117	.016	-.047	-.183	-.094
Decent	-.368*	-.326*	-.294	-.037	-.239
Mastary	-.067	-.130	-.058	.010	-.047

Note. N=40.

As the table-3.3 shows, total score on SCID of the BPD group has a significant negative correlation with Monitoring (*r*= -.314, N=40, p< .05, two tailed; and 9.45% of the variation is explained by this correlation) and Decentration (r = –.368, N = 40, p < .05, two-tailed; and 13.54% of the variation is explained by this correlation), and Affective sectorhas a significant negative correlation with Decentration (*r*= -.326, N=40, p< .05, two tailed; and 10.62% of the variation is explained by this correlation)

Table 3.4

Pearson correlation between BPD sectors and Attribution Style

	SCID Total	SCID Affect	SCID Interpersonal	SCID Behavior	SCID Self/Cognition
Positive Internal	.104	.106	-.063	.165	.119
Negative Internal	-.134	.029	-.055	-.145	-.154
Negative Personal	.204	.099	.188	.081	.094
Negative Situational	-.075	-.159	-.159	.091	.087
Internal Bias	-.184	-.060	.007	-.240	-.211
Personal Bias	.278	.267	.351*	-.013	.000

Note. N=40.

Table-3.4 shows that only Interpersonal Sector (SCID Interpersonal) has significant positive correlation with Personal Bias (r = .351, N=40, p< 0.05, two tailed; 12.32% variation is explained).

Table 3.5

Pearson correlation between Attribution Style and Metacognitve Scale scores

	Positive Internal	Negative Internal	Negative Personal	Negative Situational	Internal Bias	Personal Bias	Monitoring	Integration	Difference	Decent	Mastary
Negative Internal	.164	1									
Negative Personal	-.263	-.694**	1								
Negative Situational	.107	-.465**	-.315*	1							
Internal Bias	-.649**	.643**	-.331*	-.442**	1						
Personal Bias	-.108	.124	.568**	-.861**	.179	1					
Monitoring	-.157	-.088	-.152	.302	.054	-.354*	1				
Integration	.044	-.057	-.097	.194	-.078	-.110	.387*	1			
Difference	.012	.060	-.271	.255	.036	-.272	.325*	.348*	1		
Decent	-.238	-.483**	.107	.505**	-.188	-.523**	.403**	.133	.170	1	
Mastary	-.188	-.367*	.117	.340*	-.137	-.222	.503**	.352*	.495**	.488**	1
MSAS Total	-.131	-.290	-.017	.404**	-.122	-.315*	.564**	.617**	.702**	.522**	.913**

Note. N=40.

As the table-3.5 shows, a number of attribution style subscale scores have significant correlation with metacognition subscale scores. Thus Negative-internal has negative correlation with Decentration (r = -.483, N=40, p<0.01, two tailed; and 23.32% variation is explained) and Mastery (r= -.367, N=40, *p*<0.05, two tailed; and 13.46% variation is explained)andNegative-situational has positive correlation with Decentration(*r*= .505, N=40,

p<0.01, two tailed; 25.50% variation is explained) and Mastery (*r*= .404, N=40, *p*<0.01, two tailed; and 16.32% variation is explained). On the other handPersonal Bias have significant negative correlation with Monitoring (*r* = -.354, N=40, *p*< 0.05, two tailed; and 12.53% variation is explained), Decentration (*r* = -.523, N=40, *p*< 0.01, two tailed; 27.35% variation is explained) and Mastery (*r* = -.315, N=40, *p*< 0.05, two tailed; 9.92% variation is explained).

Discussion

The aim of the present study was to explore attribution style and metacognitve process in Borderline Personality Disorder (BPD). To do this it was necessary to assess and understand the performance of the group with BPDagainst some criterion and in this study it was a group of participantswithout BPD who were matched to the group with BPD on age, sex and education.Three scales were mainly used in this study. First scale was used to screen/diagnose the BPD group. Besides screening, scores obtained were later used to analyze some features of BPD. To explore attributional style and metacognitve process two psychometric tools were administered on both with BPD and without BPD group. Obtained scores were then analyzed to test the research hypotheses.

The demographic data shows that two groups were nearly matched in terms of three major criteria set – age, education and sex. There was a slight difference regarding one demographic variable i.e., "religion" between two groups, as in normal group all participants was from one religion. But so far religion has not been indicated in severity of BPD.On the other hand clinical data shows that normal group is free from any psychiatric illness and BPD group has scored on illness indicators.

As per occurrence of symptoms of the BPD psychopathology, the present sample shows highest frequency to "affective instability" and close to it were "difficulty controlling anger", "troubled relationship", "fear of abandonment" , and then come the "chronic feeling of emptiness", "suicidality or self-injury", "identity disturbance, impulsivity" and lastly "paranoid ideation/dissociative" symptom.The same symptoms list presented by DSM-5 of American Psychological Association (APA, 2013) shows some similarities and also some dissimilarity in rank order with the BPD sample of the present study.As per APA, the order of the

symptoms arranged in descending order of frequency, are: affective instability, inappropriate anger, impulsivity, unstable relationships, chronic feelings of emptiness, paranoia or dissociation, identity disturbance, abandonment fears and suicidality or self-injury. This difference may be due to gap in population characteristics of two different contexts. But interestingly affective instability has secured top of the order, which may indicate that, this particular symptom has high diagnostic value in BPD diagnosis.

As has mentioned earlier that Gunderson (2018) conceptualized of BDP psychopathology in four sectors and each sector comprises of relevant DSM symptoms. Present study indicates that as per severity affective domain tops the list followed by interpersonal, behavioral and self/cognitive respectively. This makes sense why treating BPD has ever been reported to be difficult, because therapeutically handing with emotion is always more difficult than behavior and cognition.There yet to have strong evidence based psychotherapeutic model/s that can directly handle complex BPD emotion. Existing major psychotherapies (CBT, DBT etc.) treats emotion via behavior or cognition route.

Another noteworthy data is that more than fifty percent of the participants met seven to nine symptoms of BPD indicating high illness severity in this population. This perhaps has implication for intervention, because clinical experience with BPD patients shows that the more the number of symptoms traced in any individual BPD patient, the more severe would be the illness and certainly more difficult would be the treatment and management of it. However, this finding needs to be supported by big data.

Result of this study tallies with earlier findings and thus the group with BPD performed significantly low in overall metacognitive ability compared to the group without BPD. And also their subscale scores were all significantly low compared to not BPD group.However, one subscale score, “Decentration,” though was less than the not BPD group

but difference was not significant. These findings are consistent with previous studies (Elizabeth, 2011; Donkersgoed et al., 2014; Maillard et al., 2017). And the finding on "Decentration" is supported by Dimaggio and others (2009) study on Decentration ability among PDs where the findings hinted that PDs feature a poor decentration ability.

How metacognitive skills might be related with overall and sector-wise BPD psychopatholgy has been answered by showing that only two metacognitive ability viz., Monitoring and Decentration have significant negative correlation with overall BPD psychopathology. Rest of the metacognitive abilities are also found negatively correlated, though failed to meet significance.On the other hand among four different sectors of BPD psychopathology only Affective sector showed significant negative correlation with Decentration. Remaining correlations are all negative (except Differentiation and Affect with a very low correlation) but very week and did not meet significance. This findings is consistent with the conceived role of metacognition, which affirms that lower metacognition predicts BPD psychopathology.

Existing literature regarding attribution style do not provide any consistent trend in BPD, however, the results came with most frequently observed directions, and thus, BPD group was found to be attributing the cause of negative events to themselves significantly more and attributed the cause of negative events to others and situational factors significantly less than the not BPD group. Some previous studies (Moritz et al, 2011; Schilling et al., 2015) support this findings and which points that BPD suffer from "Mono-causal reasoning" trap. As has been suggested by previous studies that this internal attribution style promotes depressive symptoms (Hu et al., 2015) and low self-esteem (Pillow et al.,1991)and also fosters self-harm behavior (Hirsch et al., 2009; Buser& Hackney, 2012) and may have contribute to interpersonal problem (Joiner & Rudd, 1995).

In case of two other attribution measures namely, “internalizing bias” and “personalizing bias” BPD scores show that they are high in both biaswhich implies that on average theytook a little more credit than blame and on average about half the external attributions for negative events were made to other people.

In case of Attribution Style, only Personalizing Bias has been found to have significant positive correlation with affective sector of BPD psychopathology. This implies that higher the affective impairment the more the BPD people blaming others for negative events which is very consistent with BPD’s proneness to blaming people in relationship with them.

It is already mentioned that separately both MC and AS are related to BPD psychopathology but what is the relation between these two would be worth mentioning.We could not however, calculate the joint effect of MC and AS on BPD due to some design related limitations. Result shows that all categories of MC and all categories of AS are related though just a few have meet significance. Thus Decentration is negatively correlated with negative internal attribution style and Personalizing Bias, whereas positively correlated with Negative situational attributional style.

Now, to recapitulate about Decentration-- it is basically the ability to infer relationships among the separate components of others’ mental states and between their mental states and their behavior and also the ability to recognize, define and verbalise others’ cognitive and alsoemotional inner state. It is quite understandable that this complex skill needs ample focus on others as well on ownself.But with a proneness to negative internal

attribution style, the person will lack this particular skill and this explains negative correlation with Decentration.

Apparently reverse but actually same logic fit for negative relation between Decentration and Personalizing Bias. In personalizing bias people blames others instead of trying to understand others cognitive and emotional states – and thus fails to fulfill the requirement of Decentration and thus explains the relationship. But what it means when Decentration is positively correlated with Negative situational attributional style? One explanation maybe like this: in negative situational attributional style the person is over focusing in the situation not overfocusing in ownself, which is why ability to Decentration does not appear as a barrier rather it may give person some ability to see the cause in ourter world and so the correlation comes positive. However, further exploration on the single domains of MC and AS may give plausible explanations of the above findings.

Monitoring is negatively correlated with personalizing bias. Mastery on the other hand is negatively correlated with negative internal attribution style. And overall metacognition score is positively correlated with negative situational attribution style and negatively correlated with personalizing bias.How to interpret all these findings?

Some tentative explanations may be as follows: to start with Monitoring, which is the ability to understand and verbalize one's own and other's mental states would probably get impaired if the individual most of the time holds other accountable for any negative event because in those mode mind seldom can focus in one's own mind. So the aforementioned negative correlation is understood.

Next comes Mastery; in MC skill-set, it is the highest possible MC ability that includes strategies which the individuals use to exploit their knowledge of themselves and of others to solve psychological and interpersonal problems. Such a higher reflexive state of mind would be compromised when the individual is trapped in a mono-causal attribution mode caused due to negative internal attribution style, and as such our findings of negative correlation are explained.

Above findings hints that with a higher metacognitve ability, negative internal attribution style and negative internalizing bias would be corrected, in a reverse way we can say that if these two cognitive style and bias can be arrested there is a possibility of better metacognitve functioning, that means an overall better prognosis for the BPD patients.However, these are some issues for future research.

All the above findings and tentative explanations regarding compromised metacognitive ability of the participants with BPD can be complemented with the findings of the qualitative exploration.

The exploration in this part of the study was to have an understanding about why participants with BPD have low metacognitive ability compared to the participants without BPD. Quantitative studies so far have shown that usually BPD individuals' metacognitive abilities can be selectively damaged (Semerari et al., 2015). Our present study has also confirmed this observation. Thus composite score on metacognitive assessment scale for participants with BPD was significantly lower than that of the without BPD participants. And five different metacognitive abilities varied in different ways compared to without BPD participants. However, there is hardly any study that tries to know why this difference might

have been occurring. The present exploratory exercise has given us with some clue to the issue.

All six themes contributed to explain why scores of the participants with BPD are significantly low in metacognition. From the first theme ('prioritization of emotion') it is to be noted that participants with BPD have a natural bias to emotion and this has given them an unique feature in interpreting and responding to daily life events. As they prioritize emotion over thinking so automatically sharpness of thought will be compromised resulting to weakening of metacogntion. From the second theme ("thought emotion fusion"), we can see that emotion has immense role in a BPD individual's life and as there is often a fusion of thought and emotion so they can seldom separate thought from emotion, rather they have a innate affinity and preference towards emotion driven decision making. Whereas, all metacognitive ability at its core demands understanding of own mind and others mind, but this function would be compromised if emotion overrules the individual's judgment which is a cognitive capability. Understanding own mind certainly demands a calm inner state which is hampered when mind is boiling or clouded in emotion. No doubt, to understand others mind this calm of inner state is needed more. Added to this deficit the BPD has, as reflected in theme three (failed subtle communication), difficulty in understanding subtle cues and signals from others in interpersonal interaction. It is well established that success of interpersonal relation depends largely on effective communication, which is a combination of innumerable direct and subtle exchanges, the later being body language, posture, gaze, tonal variation, pitch and frequency of voice etc. We need to decipher these non verbal cues or elements efficiently to make a communication meaningful. As BPD participants have deficit in these aspects so they fail to understand others perspective and reciprocate accordingly. Things become more complex when they believe that their judgment is correct even if their experience tells the opposite. Due to this primacy of personal view, the third theme, scope of

an alternative explanations of a communication is compromised, as a result perspectives of other people are not seen and heard and hence the failure in metacognitive ability. As the participants with BPD is not truly eager to understand others view or perspective so there is no question of metacognitive ability to be higher than the without BPD

The fourth theme of the exploration help us to understand both attribution style and metacognitive difficulty of the BPD individuals. When in a loop, individuals with BPD is filled with worry, rumination, self-criticism and excessive self-blame. That is they are mostly self-absorbed and this is another reason why they cannot focus on the subtleties of others' mind and behavior - and this contributes to their low metacognitive ability. Moreover, as BPD individual is constantly in a loop of self-criticism so there is a possibility that this loop acts as a schema. Whenever this schema is activated it interprets all data in self-critic mode. This implies that in attributing cause of any negative event the BPD ascribes it to own-self. So, no wonder that bpd's attribution style is predominantly internal - the logical consequence of this style is guilt, depressed mood etc.

4.1 Limitations and future direction

The present study has a few of methodological and tools related limitations which may have ramification on the findings and its interpretations. First, sample source and sample size and sample characteristics. Due to Covid-19 related complex situation at most hospital settings, maximum portion of the sample had been drawn from the same service facility, which was National Institute of Mental Health and Hospital (NIMH) -- thus automatically other potential sources throughout the countrywasomitted. Added to this, for the present study the sample could only be drawn from the treatment seeking BPD patients – there remained those who had not yet come to hospital or properly diagnosed and hence their

representation was missing. All this creates a bias in the sample characteristics and thus deter it from being representative of the BPD population in Bangladesh.

Most of the participants in the BPD sample was educated (avg. year of education is 13), and so valuable information of the non-educated BPD was missing in the data. Though established for more than two decades that female are reported more, 3:1 or 75% (Skodol, 2003; DSM-5, 2013) in BPD diagnosis but Grant and colleagues (2008) suggests that men and women have similar prevalence for the disorder (5.6% among men, 6.2% among women), our sample is mostly comprised of female participants (77.5%), so the findings here may suffer from error of gender disparity. As the sample of the present study is small (N=40) it may fail to overcome the risk of acceptable sampling error (for 5% sampling error to be accepted, N=76), Vaus (2002, p82). And due to small size, the generalizability of the findings will be compromised. However, it is to be noted that lots of clinical research with BPD have used small sample size for many practical reasons like: limited-access, time and funding constraint, getting truly clean-samples free of confounding co-morbidities, etc.

The main tools of the study, MSAS and IPSAS have been translated but not adapted against a valid norm, i.e., for not establishing any culture specific reliability and validitytheir psychometric properties are certainly compromised. Future research can address this issue to develop a couple of truly efficient psychometric tools for assessing metacognition and attribution style.

As the present study did not include any clinical comparison group/s so it is not clear whether the findings are unique to BPD only or those are transdiagnostic in nature.On the other hand due to a number of probable co-morbidities in BPD it difficult to diagnose a so called “cleaner” BPD sample. Though the present study has excluded cases that had dual

diagnosis of schizophrenia, active substance abuse or bipolar mood disorder, but there may have other conditions, which could not be excluded or effect arrested in analysis, that can confound the obtained data. Though question remains, if BPD is made clean of all the comorbidities then does it remain BPD at all? Because all the symptoms of BPD are some way or other indicative of various psychiatric conditions or disorders. Future research can address all these issues by including multiple clinical comparison group especially other PDs, using more rigorous diagnostic system to have "cleaner" sample, using statistical procedures to control effect of probable confounders respectively.

Findings of the present study needs to be checked/validated on larger sample especially to see whether the subscale scores of both metacognition and attribution style align or differ consistently compared to findings from other cultures.

4.2 Conclusion and clinical implications

In summary, the sample of the individuals with BPD in this study showed evidence of significant deficit in two important cognitive processes, metacognition and attribution style compared to a normal sample. The most anticipated consequences of these two deficits among others, are trouble maintaining positive relationship and unending self-blaming. Consistent with some previous research, these findings clearly hint why this clinical group suffers from interpersonal relationship difficulty and exhibit a depressive demeanor which most likely contribute to develop and/or maintain different emotional and behavioral sequel distinctive of BPD.However, due to a relatively small sample drawn from a treatment seeking BPD subgroup the findings may lack adequate representativeness. Considering the fact that Bangladesh has no similar empirical data, it would be rational if future research repeats this study with a larger sample comprised of various clinical and non-clinical participant groups, employing more efficient measures in order to create a solid evidence base.

The present findings have some clinical implications too, both in terms of assessment and psychotherapeutic intervention. Eliciting of a five part metacognitive and six part attributional style and two part attributional bias profile can add valuable data in the conceptualization and formulation of a BPD case besides other existing assessment data. Identification of particular negative style and skill deficit would give the therapist a scope for targeted intervention in BPD. Training for enhancing metacognitive skill and correcting negative attribution style are expected to bring faster positive change in patients' problem areas. Clinical and intervention research in BPD can gauge efficacy of such interventions and thus create evidence base for further work.

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Appendix-2

Government of the People's Republic of Bangladesh
Office of the Director-cum-Professor
National Institute of Mental Health & Hospital
Sher-e-Bangla Nagar, Dhaka-1207

Memo No.NIMH/2021/ 105 Date : 19/1/21

To

Prof. Dr. Mohammad Mahmudur Rahman
Department of Clinical Psychology
University of Dhaka.

Subject: Permission to collect research data.

Thank you for your letter. The Research Proposal **"Exploring Attribution Style and Metacognitive Process in Borderline Personality Disorder"** has been reviewed and approved by the ethical committee of this institute.

I am happy to permit your student **Tarun Kanti Gayen** to collect data for her study from this institute.

(Prof. Dr. Bidhan Ranjan Roy Podder)
Director-cum-Professor
National Institute of Mental Health
Sher-e-Banga Nagar, Dhaka

Memo No. NIMH/2021/ Dated :

Copy forwarded for information and necessary action to :-

1. Tarun Kanti Gayen, PhD researcher, Dept. of Clinical Psychology, University of Dhaka.
2. Office Copy.

(Prof. Dr. Bidhan Ranjan Roy Podder)
Director-cum-Professor
National Institute of Mental Health
Sher-e-Banga Nagar, Dhaka

Student/N/441

তথ্য-পত্র : ১

গবেষণার শিরোনামঃ Exploring Attribution Style and Meta Cognitive Process In Borderline Personality Disorder

আমন্ত্রণ

আপনাকে একটি গবেষণা কার্যক্রমে অংশগ্রহনের জন্য আমন্ত্রন জানাচ্ছি যা আমাদের **বর্ডার লাইন পার্সোনালিটি ডিসঅর্ডার**-কে আরও ভালোভাবে বুঝতে সাহায্য করবে। এই গবেষণার উদ্দেশ্য হচ্ছে যারা বর্ডার-লাইন পার্সোনালিটি ডিসঅর্ডার-এ ভুগছেন তারা কীভাবে তাদের সাথে ঘটা বিভিন্ন বিষয়কে ব্যাখ্যা করেন এবং কিভাবে নিজের এবং অন্যের মনের অবস্থা অনুধাবন করেন এবং এসবের সঙ্গে তাদের রোগের বিভিন্ন উপসর্গের কোন সম্পর্ক আছে কী-না তা অনুসন্ধান করা।

কোন বিষয়ে এই গবেষণা?

বর্ডার-লাইন পার্সোনালিটি ডিসঅর্ডার একটি অত্যন্ত জটিল মানসিক রোগ। বিজ্ঞানীরা এর কারণ বোঝার জন্য নিরলস প্রচেষ্টা চালিয়ে যাচ্ছেন। আমরা জানি যে, ব্যক্তি বিভিন্ন বিষয়ে যেভাবে চিন্তা করে তার প্রভাব সরাসরি তার আচরনের ওপর পড়ে, বিভিন্ন মানসিক-আচরণিক জটিলতা এমনকি মানসিক রোগ তৈরীতেও তা ভূমিকা রাখে। বর্তমান গবেষণায় বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ে ব্যক্তির দুটি গুরুত্বপূর্ণ জ্ঞানীয় প্রক্রিয়ার (কগনিটিভ প্রসেস্) কোন সম্পর্ক আছে কী-না তা বোঝার চেষ্টা করা হবে। এর মধ্যে একটি হচ্ছে, **এ্যাট্রিবিউশন স্টাইল,** অর্থাৎ ব্যক্তি তার নিজের সঙ্গে ঘটা কোন ঘটনার কারণ হিসেবে নিজেকে, অন্যকে বা পরিস্থিতিকে কতটা দায়ী করে তা বোঝা । আর অন্যটি হচ্ছে, **মেটা-কগনিটিভ প্রসেস্** , অর্থাৎ ব্যক্তি কতটা তার নিজের ও অন্যের মনের অবস্থা বুঝতে সক্ষম এবং যেকোন ব্যক্তিগত মানসিক যন্ত্রনা বা পারস্পরিক সম্পর্কের জটিলতা নিরসনে ভূমিকা রাখতে সক্ষম তা বোঝা। বিভিন্ন গবেষণায় দেখা যাচ্ছে যে, এই দুই জ্ঞানীয়-প্রক্রিয়ায় দুর্বলতা বা সীমাবদ্ধতা ব্যক্তির মধ্যে বিভিন্ন মানসিক রোগ সংগঠনে ভূমিকা রাখে। বর্তমান গবেষণায় আমরা দেখতে চাইব, এরা বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ের ক্ষেত্রে কি ভূমিকা পালন করে।

ঢাকা বিশ্ববিদ্যালয়স্থ ক্লিনিক্যার সাইকোলজি বিভাগের গবেষণা বিষয়ে **এথিকস্-কমিটি** এই গবেষণার অনুমোদন প্রদান করেছেন।

এই গবেষণায় অংশগ্রহণ কি উপকার নিয়ে আসতে পারে?

এই গবেষণায় অংশগ্রহণের ফলে প্রাপ্ত ফলাফল বিশ্লেষণ করে বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ের পেছনে আক্রান্ত ব্যক্তির চিন্তার ধরণের (এক্ষেত্রে, **এ্যাট্রিবিউশন স্টাইল** এবং **মেটা-কগনিটিভ প্রসেস**) সংশ্লিষ্টতা বিষয়ে আমরা আরও জানতে পারব। ফলে, ভবিষ্যতে এ বিষয়ে মনোবৈজ্ঞানিক পরিমাপন ও চিকিৎসায় আরও কার্যকরী পথ পাওয়া যাবে।

আপনি যদি এই গবেষণায় অংশগ্রহণে সম্মত হন তাহলে কি হবে?

যদি আপনি এই গবেষণায় অংশগ্রহণে সম্মত হন তাহলে আপনাকে একটি সম্মতিপত্রে স্বাক্ষর দিতে হবে। যেহেতু আপনার অংশগ্রহন সম্পূর্ণ স্বেচ্ছাধীন সেহেতু গবেষণার যেকোন পর্যায়ে আপনি কোন কারণ দর্শানো ছাড়াই নিজেকে প্রত্যাহার করতে পারেন। আপনি যদি এতে অংশগ্রহণ করেন তবে তা কোন ভাবেই আপনার চলমান চিকিৎসাকে ব্যহত করবে না।

এই গবেষণায় আপনাকে যা করতে হবে

আপনাকে চারটি(৪) প্রশ্নপত্র দেয়া হবে। প্রথমটিতে আপনার ব্যক্তিগত বিষয়ে কিছু প্রশ্ন করা হবে। দ্বিতীয়টিতে বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ের কিছু উপসর্গ বিষয়ে আপনাকে প্রশ্ন করা হবে এবং আপনি আপনার ক্ষেত্রে প্রযোজ্য উত্তর দিবেন। তৃতীয় ও চতুর্থ প্রশ্নপত্র আপনি নিজেই পুরন করতে পারবেন। তবে কোন প্রশ্ন বুঝতে সমস্যা হলে গবেষককে জিজ্ঞাসা করবেন। সবকটি প্রশ্নপত্রের উত্তর দিতে আপনাকে ৩০-৪০মি: সময় ব্যয় করতে হতে পারে।

গবেষণায় প্রাপ্ত তথ্য নিয়ে কী করা হবে?

প্রাপ্ত সকল তথ্যের গোপনীয়তা রাখার জন্য তা তালা-চাবি দিয়ে যত্নসহকারে সংরক্ষন করা হবে। কোন তথ্যেই ব্যক্তির নাম থাকবে না। উপাত্ত বিশ্লেষন দলগতভাবে করা হবে, কোন একক ব্যক্তির তথ্য বিশ্লেষণের কোন সুযোগ থাকবে না। প্রাপ্ত ফলাফল প্রকাশের ক্ষেত্রে, যেমন জার্নাল আর্টিকেল,নিবন্ধ, পাওয়ার-পয়েন্ট উপস্থাপনা ইত্যাদিতে, গবেষণায় অংশগ্রহণকারী কোন ব্যক্তির নামই উল্লেখ করা হবে না। যদি আপনি এই গবেষণার ফলাফল জানতে আগ্রহী হন তাহলে প্রধান গবেষকের সাথে যোগাযোগ করতে পারবেন, তাঁর ঠিকানা নিচে দেয়া আছে।

ব্যক্তিগত সুরক্ষার কী ব্যবস্থা আছে

আমরা মনে করি বর্তমান গবেষণায় অংশগ্রহণে আপনার শারীরিক বা মানসিক ক্ষতির কোন ঝুঁকি নাই। তবে গবেষণায় অংশগ্রহণ করাকালীন আপনার কোনরকম মানসিক যন্ত্রনা বা অস্বস্তি হলে আপনাকে প্রয়োজনীয় সাইকোলজিক্যাল সহায়তা (কাউন্সেলিং/সাইকোথেরাপী) প্রদানের ব্যবস্থা করা হবে। এই গবেষণা বিষয়ে আপনার আরও জানার প্রয়োজন থাকলে আপনি নীচে দেয়া মোবাইল নম্বরে ফোন করে জানতে পারবেন।

যোগাযোগ

যদি এই গবেষণায় অংশগ্রহণে সিদ্ধান্ত গ্রহণের জন্য আপনার আরও কিছু জানা প্রয়োজন হয় তাহলে নীচের ই-মেইল বা মোবাইলে যোগাযোগ করুন।

আপনার মূল্যবান সময় ব্যয় করে এই নির্দেশনাটি পড়ার জন্য আপনাকে ধন্যবাদ।

তরুণ কান্তি গায়েন
ক্লিনিক্যাল সাইকোলজিস্ট।
ই-মেইলঃ gayencp@gmail.com
মোবাইলঃ ০১৭১১১৫৩১৯৭

Appendix-4

অংশগ্রহণকারীর সনাক্তকরণ নম্বর: . . . . . .

অবহিত ও অনুধাবনকৃত-সম্মতিপত্র-১

(Informed & Understood Consent-Form)

গবেষণার শিরোনাম: Exploring Attribution Style and Meta Cognitive Process In Borderline Personality Disorder

গবেষক: তরুণ কান্তি গায়েন, ক্লিনিক্যাল সাইকোলজিষ্ট

যদি আপনি এই গবেষণায় অংশগ্রহণ করতে চান তাহলে অনুগ্রহ করে নীচের বক্সগুলোতে টিক (√) চিহ্ন দিন এবং সবশেষে আপনার নাম ও স্বাক্ষর দিন।

১) আমি গবেষণাসংক্রান্ত তথ্য-পত্রটি পড়েছি এবং তা বুঝতে পেরেছি। ☐

২) আমি বুঝতে পেরেছি আমার অংশগ্রহণ সম্পূর্ণ স্বেচ্ছাপ্রণোদিত এবং যেকোন সময় আমি এই গবেষণাকর্ম থেকে নিজেকে প্রত্যাহার করে নিতে পারি। ☐

৩) আমি বুঝতে পেরেছি এই গবেষণায় অংশগ্রহণ বা নিজেকে প্রত্যাহার করা কোনটাই আমার চলমান চিকিৎসা কার্যক্রমকে বিঘ্নিত করবে না। ☐

৪) আমাকে চিহ্নিত করা যায় না এভাবে আমার তথ্যাদি গবেষণাকর্ম শেষ হবার পর ১০ বছর পর্যন্ত সংরক্ষণ করার অনুমতি প্রদান করছি ☐

৫) আমি গবেষককে আমার তথ্যাদি ব্যবহার করে রিপোর্ট আকারে (জার্নাল ইত্যাদি) প্রকাশ করার অনুমতি প্রদান করছি এবং বুঝতে পেরেছি যে, আমার নাম বা পরিচয় সবসময়ই গোপন রাখা হবে। ☐

৬) আমি এই গবেষণায় অংশগ্রহণ করতে সম্মত। ☐

গবেষণায় অংশগ্রহণকারীর নাম	*তারিখ*	*স্বাক্ষর*
গবেষকের/ সহকারী গবেষকের নাম	*তারিখ*	*স্বাক্ষর*

তথ্য-পত্র : ২

আমন্ত্রণ

আপনাকে একটি গবেষণা কার্যক্রমে অংশগ্রহনের জন্য আমন্ত্রন জানাচ্ছি যা আমাদের **বর্ডার লাইন পার্সোনালিটি ডিসঅর্ডার**-কে আরও ভালোভাবে বুঝতে সাহায্য করবে। এই গবেষণার উদ্দেশ্য হচ্ছে যারা বর্ডার-লাইন পার্সোনালিটি ডিসঅর্ডার-এ ভুগছেন তারা কীভাবে তাদের সাথে ঘটা বিভিন্ন বিষয়কে ব্যাখ্যা করেন এবং কিভাবে নিজের এবং অন্যের মনের অবস্থা অনুধাবন করেন এবং এসবের সঙ্গে তাদের রোগের বিভিন্ন উপসর্গের কোন সম্পর্ক আছে কী-না তা অনুসন্ধান করা। *উপর্যুক্ত বিষয়ে বর্ডার লাইন পার্সোনালিটি ডিসঅর্ডার-এ ভোগা ব্যক্তিদের তুলনায় স্বাভাবিক ব্যক্তিদের কতটুকু পার্থক্য রয়েছে তা নির্ণয়ের ভেতর দিয়ে বর্ডার লাইন পার্সোনালিটি ডিসঅর্ডার সম্পর্কে ধারণালাভ করা এই গবেষণার একটি অন্যতম লক্ষ্য।*

কোন বিষয়ে এই গবেষণা?

বর্ডার-লাইন পার্সোনালিটি ডিসঅর্ডার একটি অত্যন্ত জটিল মানসিক রোগ। এই রোগে আক্রান্ত ব্যক্তি আবেগ ও আচরন নিয়ন্ত্রণে দূর্বলতা এবং আন্তর্ব্যক্তিক সম্পর্কের জটিলতাসহ বিভিন্নধরণের কষ্টকর অভিজ্ঞতার ভেতর দিয়ে জীবন অতিবাহিত করেন। বিজ্ঞানীরা এসবের কারণ বোঝার জন্য নিরলস প্রচেষ্টা চালিয়ে যাচ্ছেন। আমরা জানি যে, ব্যক্তি বিভিন্ন বিষয়ে যেভাবে চিন্তা করেন তার প্রভাব সরাসরি তার আচরনের ওপর পড়ে, বিভিন্ন মানসিক-আচরণিক জটিলতা এমনকি মানসিক রোগ তৈরীতেও তা ভূমিকা রাখে। বর্তমান গবেষণায় বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ে ব্যক্তির দুটি গুরুত্বপূর্ণ জ্ঞানীয় প্রক্রিয়ার (কগনিটিভ প্রসেস্) কোন সম্পর্ক আছে কী-না তা বোঝার চেষ্টা করা হবে। এর মধ্যে একটি হচ্ছে, **এ্যাট্রিবিউশন স্টাইল,** অর্থাৎ ব্যক্তি তার নিজের সঙ্গে ঘটা কোন ঘটনার কারণ হিসেবে নিজেকে, অন্যকে বা পরিস্থিতিকে কতটা দায়ী করে তা বোঝা। আর অন্যটি হচ্ছে, **মেটা-কগনিটিভ প্রসেস্**, অর্থাৎ ব্যক্তি কতটা তার নিজের ও অন্যের মনের অবস্থা বুঝতে সক্ষম এবং যেকোন ব্যক্তিগত মানসিক যন্ত্রনা বা আন্তর্ব্যক্তিক সম্পর্কের জটিলতা নিরসনে ভূমিকা রাখতে সক্ষম তা বোঝা। বিভিন্ন গবেষণায় দেখা যাচ্ছে যে, এই দুই জ্ঞানীয়-প্রক্রিয়ায় দুর্বলতা বা সীমাবদ্ধতা ব্যক্তির মধ্যে বিভিন্ন মানসিক রোগ সংগঠনে ভূমিকা রাখে। বর্তমান গবেষণায় আমরা দেখতে চাইব, এরা বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ের ক্ষেত্রে কি ভূমিকা পালন করে।

উপর্যুক্ত বিষয়দুটিতে (অর্থাৎ, এ্যাট্রিবিউশন স্টাইল এবং মেটা-কগনিটিভ প্রসেস্) বর্ডার লাইন পার্সোনালিটি ডিসঅর্ডার-এ ভোগা ব্যক্তিদের তুলনায় স্বাভাবিক ব্যক্তিদের কতটুকু পার্থক্য রয়েছে তা নির্ণয় করতে পারলে বর্ডার লাইন পার্সোনালিটি ডিসঅর্ডার সম্পর্কে আমাদের ধারণা আরও পরিষ্কার হবে।

ঢাকা বিশ্ববিদ্যালয়স্থ ক্লিনিক্যার সাইকোলজি বিভাগের গবেষণা বিষয়ে **এথিকস্-কমিটি** এই গবেষণার অনুমোদন প্রদান করেছেন।

এই গবেষণায় অংশগ্রহণ কি উপকার নিয়ে আসতে পারে?

এই গবেষণায় অংশগ্রহণের ফলে প্রাপ্ত ফলাফল বিশ্লেষণ করে বর্ডারলাইন ব্যক্তিত্ব বিপর্যয়ের পেছনে আক্রান্ত ব্যক্তির চিন্তার ধরণের (এক্ষেত্রে, **এ্যাট্রিবিউশন স্টাইল** এবং **মেটা-কগনিটিভ প্রসেস**) সংশ্লিষ্টতা বিষয়ে আমরা আরও জানতে পারব। ফলে, ভবিষ্যতে এ বিষয়ে মনোবৈজ্ঞানিক পরিমাপন ও চিকিৎসায় আরও কার্যকরী পথ পাওয়া যাবে। আপনার অংশগ্রহণ এই প্রক্রিয়ায় গুরুত্বপূর্ণ অবদান রাখবে।

আপনি যদি এই গবেষণায় অংশগ্রহণে সম্মত হন তাহলে কি হবে?

যদি আপনি এই গবেষণায় অংশগ্রহণে সম্মত হন তাহলে আপনাকে একটি সম্মতিপত্রে স্বাক্ষর দিতে হবে। যেহেতু আপনার অংশগ্রহন সম্পূর্ণ স্বেচ্ছাধীন সেহেতু গবেষণার যেকোন পর্যায়ে আপনি কোন কারণ দর্শানো ছাড়াই নিজেকে প্রত্যাহার করতে পারেন। আপনি যদি এতে অংশগ্রহণ করেন তবে তা আপনার দৈনন্দিন কার্যক্রমকে কোনভাবে বিঘ্নিত করবে না।

এই গবেষণায় আপনাকে যা করতে হবে

আপনাকে মোট তিনটি (৩) প্রশ্নপত্র দেয়া হবে। প্রথমটিতে আপনার ব্যক্তিগত বিষয়ে কিছু প্রশ্ন করা হবে। পরের দুটি (২) প্রশ্নপত্র আপনি নিজেই পুরন করতে পারবেন। তবে কোন প্রশ্ন বুঝতে সমস্যা হলে গবেষককে জিজ্ঞাসা করবেন। সবকটি প্রশ্নপত্রের উত্তর দিতে আপনাকে ২০-৩০মি: সময় ব্যয় করতে হতে পারে।

গবেষণায় প্রাপ্ত তথ্য নিয়ে কী করা হবে?

প্রাপ্ত সকল তথ্যের গোপনীয়তা রাখার জন্য তা তালা-চাবি দিয়ে যত্নসহকারে সংরক্ষন করা হবে। কোন তথ্যেই ব্যক্তির নাম থাকবে না। উপাত্ত বিশ্লেষন দলগতভাবে করা হবে, ফলে কোন একক ব্যক্তির তথ্য বিশ্লেষণের সুযোগ থাকবে না। প্রাপ্ত ফলাফল প্রকাশের ক্ষেত্রে, যেমন জার্নাল আর্টিকেল, প্রবন্ধ-নিবন্ধ, পাওয়ার-পয়েন্ট উপস্থাপনা ইত্যাদিতে, গবেষণায় অংশগ্রহণকারী কোন ব্যক্তির নামই উল্লেখ করা হবে না। যদি আপনি এই গবেষণার ফলাফল জানতে আগ্রহী হন তাহলে ভবিষ্যতে প্রধান গবেষকের সাথে যোগাযোগ করতে পারবেন, তাঁর ঠিকানা নিচে দেয়া আছে।

ব্যক্তিগত সুরক্ষার কী ব্যবস্থা আছে

আমরা মনে করি বর্তমান গবেষণায় অংশগ্রহণে আপনার শারীরিক বা মানসিক ক্ষতির কোন ঝুঁকি নাই। তবে গবেষণায় অংশগ্রহণ করাকালীন আপনার কোনরকম মানসিক যন্ত্রনা বা অস্বস্তি হলে আপনাকে প্রয়োজনীয় সাইকোলজিক্যাল সহায়তা (কাউন্সেলিং/সাইকোথেরাপী) প্রদানের ব্যবস্থা করা হবে। এই গবেষণা বিষয়ে আপনার আরও জানার প্রয়োজন থাকলে আপনি নীচে দেয়া ই-মেইল বা মোবাইল নম্বরে ফোন করে জানতে পারবেন।

যোগাযোগ

যদি এই গবেষণায় অংশগ্রহণে সিদ্ধান্ত গ্রহণের জন্য আপনার আরও কিছু জানা প্রয়োজন হয় তাহলে নীচের ই-মেইল বা মোবাইলে যোগাযোগ করুন।

আপনার মূল্যবান সময় ব্যয় করে এই নির্দেশনাটি পড়ার জন্য আপনাকে ধন্যবাদ।

তরুণ কান্তি গায়েন

ক্লিনিক্যাল সাইকোলজিস্ট।
ই-মেইল: gayencp@gmail.com
মোবাইল: 01711153197
অংশগ্রহণকারীর সনাক্তকরণ নম্বর: . . . . . .

Appendix-6

অবহিত ও অনুধাবনকৃত-সম্মতিপত্র-২

(Informed & Understood Consent-Form)

গবেষণার শিরোনাম: Exploring Attribution Style and Metacognitive Process In Borderline Personality Disorder

গবেষক: তরুণ কান্তি গায়েন, ক্লিনিক্যাল সাইকোলজিষ্ট

যদি আপনি এই গবেষণায় অংশগ্রহণ করতে চান তাহলে অনুগ্রহ করে নীচের বক্সগুলোতে টিক (√) চিহ্ন দিন এবং সবশেষে আপনার নাম ও স্বাক্ষর দিন।

১) আমি গবেষণাসংক্রান্ত তথ্য-পত্রটি পড়েছি এবং তা বুঝতে পেরেছি। ☐

২) আমি বুঝতে পেরেছি আমার অংশগ্রহণ সম্পূর্ণ স্বেচ্ছাপ্রণোদিত এবং যেকোন সময় আমি এ গবেষণাকর্ম থেকে নিজেকে প্রত্যাহার করে নিতে পারি। ☐

৩) আমি বুঝতে পেরেছি এই গবেষণায় অংশগ্রহণ বা নিজেকে প্রত্যাহার করা কোনটাই আমার দৈনন্দিন কার্যক্রমকে বিঘ্নিত করবে না। ☐

৪) আমাকে চিহ্নিত করা যায় না এভাবে আমার তথ্যাদি গবেষণাকর্ম শেষ হবার পর ১০ বছর পর্যন্ত সংরক্ষণ করার অনুমতি প্রদান করছি ☐

৫) আমি গবেষককে আমার তথ্যাদি ব্যবহার করে রিপোর্ট আকারে (জার্নাল ইত্যাদি) প্রকাশ করার অনুমতি প্রদান করছি এবং বুঝতে পেরেছি যে, আমার নাম বা পরিচয় সবসময়ই গোপন রাখা হবে। ☐

৬) আমি এই গবেষণায় অংশগ্রহণ করতে সম্মত। ☐

_____	_____	_____
গবেষণায় অংশগ্রহণকারীর নাম	*তারিখ*	*স্বাক্ষর*
_____	_____	_____
গবেষকের/ সহকারী গবেষকের নাম	*তারিখ*	*স্বাক্ষর*

গবেষণায় অংশগ্রহণকারীর সনাক্তকরণ নম্বর: . . . . . .

Appendix-7

ব্যক্তিগত তথ্যাবলি -(ক)

অনুগ্রহ করে নীচের প্রশ্নগুলিতে লিখে এবং প্রযোজ্য ক্ষেত্রে বৃত্ত (O) চিহ্ন দিয়ে উত্তর দিন

১) আপনার বয়স (বৎসর এবং মাস) . . . . . ।

২) আপনার লিঙ্গ . . . . . ।

৩) আপনার ধর্ম . . . . . , , ।

৪) আপনার শিক্ষাগত যোগ্যতা অর্থাৎ আপনি মোট কত বছরের প্রাতিষ্ঠানিক লেখাপড়া সম্পন্ন করেছেন? . . . . . ।

৫) আপনি কি কখনও কোন বড় ধরণের মানসিক রোগে ভুগেছেন? (যেমন, স্কিজোফ্রেনিয়া বা বাইপোলার মুড ডিসঅর্ডার) হ্যাঁ - না

৬) আপনি কি কখনও মানসিক জন্য রোগের চিকিৎসা গ্রহন করেছেন? হ্যাঁ - না
দয়া করে বর্ণনা করুন . . . . . .
. . . . . .

৭) আপনি কি বর্তমানে কোন ধরণের ওষুধ খাচ্ছেন? হ্যাঁ - না
খেয়ে থাকলে তা কী ওষুধ এবং তা কতদিন ধরে খাচ্ছেন. . . . . .
. . . . . .

৮) আপনি কি কখনও কোন ধরণের সাইকোলজিক্যাল চিকিৎসা (কাউন্সেলিং/সাইকোথেরাপী) গ্রহন করেছেন? হ্যাঁ - না
নিয়ে থাকলে তার বর্ণনা দিন. . . . . .

৯) আপনি কি বর্তমানে বা কখনও মাদকদ্রব্য সেবনজনিত সমস্যায় ভুগেছেন? . . . . . হ্যাঁ - না

১০) শৈশবে আপনি কি অত্যন্ত শারীরিক এবং/অথবা মানসিক নির্যাতনের শিকার হয়েছেন? হ্যাঁ - না

১১) আপনার কি অন্যদের সাথে সম্পর্ক করতে সমস্যা হয়? হ্যাঁ - না

১২) অন্যদের সাথে আপনার সম্পর্ক কি প্রায়ই খুব ঝামেলাযুক্ত হয়? হ্যাঁ - না

১৩) আপনার কি রাগ নিয়ন্ত্রনে সমস্যা হয়? হ্যাঁ - না

১৪) আপনার পরিবারের সদস্যগণ বা বন্ধুরা কি বলেন যে আপনি অতিরিক্ত আবেগপ্রবণ হ্যাঁ - না

১৫) আপনার কি প্রায়ই খুব মন খারাপ থাকে? হ্যাঁ - না

১৬) আপনি কি বিভিন্ন পরিস্থিতিতে এতটাই বদলে যান যে নিজেকে চিনতে সমস্যা হয়? হ্যাঁ - না

১৭) আপনি কি প্রায়ই ঝোঁকের বশে কিছু করে ফেলেন? হ্যাঁ - না

১৮) আপনি কি প্রায়ই নিজেকে আঘাত করেন (হাত-পা কাটা) বা আত্মহত্যার চিন্তা করেন হ্যাঁ - না

উত্তর দেবার জন্য আপনাকে ধন্যবাদ। আপনার দেয়া সকল তথ্য অত্যন্ত গোপনীয় হিসেবে বিবেচিত ও রক্ষিত হবে।

Appendix-8

গবেষণায় অংশগ্রহণকারীর সনাক্তকরণ নম্বরঃ . . . . . .

ব্যক্তিগত তথ্যাবলি-(খ)

অনুগ্রহ করে নীচের প্রশ্নগুলিতে লিখে এবং প্রযোজ্য ক্ষেত্রে বৃত্ত (O) চিহ্ন দিয়ে উত্তর দিন

১) আপনার বয়স (বৎসর এবং মাস) . . . . . ।

২) আপনার লিঙ্গ . . . . . ।

৩) আপনার ধর্ম . . . . . ,, ।

৪) আপনার শিক্ষাগত যোগ্যতা অর্থাৎ আপনি মোট কত বছরের প্রাতিষ্ঠানিক লেখাপড়া সম্পন্ন করেছেন? . . . . . ।

৫) আপনি কি কখনও কোন বড় ধরণের মানসিক রোগে ভুগেছেন? (যেমন, স্কিজোফ্রেনিয়া
বা বাইপোলার মুড ডিসঅর্ডার) হ্যাঁ - না

৬) আপনি কি কখনও মানসিক জন্য রোগের চিকিৎসা গ্রহন করেছেন? হ্যাঁ - না

দয়া করে বর্ণনা করুন . . . . . .

. . . . . .

৭) আপনি কি বর্তমানে কোন ধরণের ওষুধ খাচ্ছেন? হ্যাঁ - না

খেয়ে থাকলে তা কী ওষুধ এবং তা কতদিন ধরে খাচ্ছেন. . . . . .

. . . . . .

৮) আপনি কি কখনও কোন ধরণের সাইকোলজিক্যাল চিকিৎসা (কাউন্সেলিং/সাইকোথেরাপী)
গ্রহন করেছেন? হ্যাঁ - না

নিয়ে থাকলে তার বর্ণনা দিন. . . . . .

৯) আপনি কি বর্তমানে বা কখনও মাদকদ্রব্য সেবনজনিত সমস্যায় ভুগেছেন? . . . . . হ্যাঁ - না

১০) শৈশবে আপনি কি অত্যন্ত শারীরিক এবং/অথবা মানসিক নির্যাতনের শিকার হয়েছেন? হ্যাঁ - না

উত্তর দেবার জন্য আপনাকে ধন্যবাদ। আপনার দেয়া সকল তথ্য অত্যন্ত গোপনীয় হিসেবে বিবেচিত ও রক্ষিত হবে।

Appendix-9

I.P.S.A.Q.

Name: _____ Sex:

Age: _____ Occupation:

Date Completed:

INSTRUCTIONS

Please read the statements on the following pages. For each statement please try to vividly imagine that event happening to you. Then try to decide what was the main cause of the event described in each statement. Please write the cause you have thought of in the space provided. Then tick the appropriate letter (a,b or c) according to whether the cause is :

a) Something about you

b) Something about another person (or a group of people)

c) Something about the situation (circumstances or chance)

It might be quite difficult to decide which of these options is exactly right. In this case, please pick **one option**, the option which **best** represents your opinion. Please pick **only one** letter in each case.

Thank you for your time and co-operation.

1. A friend gave you a lift home.

What caused your friend to give you a lift home?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

2. A friend talked about you behind your back.

What caused your friend to talk about you behind your back?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

3. A friend said that he(she) has no respect for you.

What caused your friend to say that he(she) has no respect for you ?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

4. A friend helped you with the gardening.

What caused your friend to help you with the gardening?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

5. A friend thinks you are trustworthy.

What caused your friend to think you are trustworthy?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

6. A friend refused to talk to you.

What caused your friend to refuse to talk to you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

7. A friend thinks you are interesting.

What caused your friend to think you are interesting?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

8. A friend sent you a postcard.

What caused your friend to send you a postcard?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

9. A friend thinks you are unfriendly.

What caused your friend to think that you are unfriendly?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

10. A friend made an insulting remark to you.

What caused your friend to insult you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

11. A friend bought you a present.

What caused your friend to buy you a present .
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

12. A friend picked a fight with you.

What caused your friend to fight with you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

13. A friend thinks you are dishonest.

What caused your friend to think you are dishonest?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

14. A friend spent some time talking to you.

What caused your friend to spend time talking with you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

15. A friend thinks you are clever.

What caused your friend to think you are clever?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

16. A friend refused to help you with a job.

What caused your friend to refuse to help you with the job?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

17. A friend thinks you are sensible.

What caused your friend to think that you were sensible?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

18. A friend thinks you are unfair.

What caused your friend to think that you are unfair?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

19. A friend said that he(she) dislikes you.

What caused your friend to say that he(she) dislikes you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

20. A friend rang to enquire about you.

What caused your friend to ring to enquire about you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

21. A friend ignored you

What caused your friend to ignore you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

22. A friend said that she(he) admires you.

What caused your friend to say that she(he) admired you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

23. A friend said that he(she) finds you boring.

What caused your friend to say that he(she) finds you boring?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

24. A friend said that she(he) resents you.

What caused your friend to say that she(he) resents you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

25. A friend visited you for a friendly chat.

What caused your friend to visit you for a chat?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

26. A friend believes that you are honest

What caused your friend to believe that you are honest?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

27. A friend betrayed the trust you had in her.

What caused your friend to betray your trust?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

28. A friend ordered you to leave.

What caused your friend to order you to leave?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

29. A friend said that she(he) respects you.

What caused your friend to say that she(he) respects you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

30. A friend thinks you are stupid.

What caused your friend to think that you are stupid?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

31. A friend said that he(she) liked you.

What caused your friend to say that he(she) liked you?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

32. A neighbour invited you in for a drink.

What caused your friend to invite you in for a drink?
(Please write down the one major cause)

. . . . . .

Is this :

a. Something about you ?
b. Something about the other person or other people ?
c. Something about the situation (circumstances or chance) ?

Appendix-10

INTERNAL, PERSONAL, AND SITUATIONAL ATTRIBUTION QUESTIONNAIRE SCORING KEY

Each item describes the action of an actor towards a target person. Subjects have to choose one of three possible explanations for each action.

a. An internal attribution
b. An external, personal, attribution
c. An external, situational, attribution

Positive :	1, 4, 5, 7, 8, 11, 14, 15,	17, 20, 22, 25, 26, 29, 31, 32
Negative:	2, 3, 6, 9, 10, 12, 13, 16,	18, 19, 21, 23, 24, 27, 28, 30

IPSAQ Scoring

The IPSAQ is a measure of 'causal attribution'; how we explain important things in our lives. It has 32 items, 16 positive and 16 negative. For each item, one choice can be made, to an internal, an external personal or an external situational explanation.

The most important scores are; i) the number of 'internal' attributions for negative events, ii) the number of 'personal' (other-blaming) attributions for negative events, but also a couple of 'bias' scores;iii) the number of 'internal' attributions for negative events minus the number of 'internal' attributions for positive events, and iv) the proportion of external attributions for negative events that are 'personal' as opposed to 'situational'.

Norms from earlier research (Kinderman &Bentall, 1996) suggest that the average number of negative internal attributions is 5.88 (± 3.24), so any scores above 9 would indicate a depressive, self-blaming tendency. The average number of negative personal attributions was 5.15 (± 2.77), so scores above 8 would imply an element of paranoia or hostility. Average internalising bias was -2.32 (±4.56), so on average people took a little more credit than blame. Average personalising bias was (.54 ± .26), so on average about half the external attributions for negative events were made to other people.

Negative items			Positive items			Internalising Bias	Personalising Bias
Internal	Personal	Situational	Internal	Personal	Situational	In –Ip	Pn /(Pn +Sn)

Name								
ADAM	10	2	4	2	12	2	8	.33
BEN	0	15	1	14	1	1	-14	.9375
CHRIS								
DAVE								
EMMA								
FAIRUZ								
GEMA								
HARRY								
ISA								
JENNY								
KASHIA								

ADAM has a 'depressive' but not a 'paranoid' outlook (as far as these scores can inform us). The number of internal attributions for negative events is high – 10/16 and he is using more internal attributions for negative events than for positive events (10-2=8). But his personalising bias is low – only 2/6 external attributions for negative events are those that blame other people.

BEN has an extreme paranoid, but not depressive, style. He's taking almost all the credit for positive events (14/16) and none of the blame for negative events (0/16). He's also blaming other people (15/16) for those negative events.

Appendix-11

ইন্টারনাল, পারসোনাল এ্যান্ড সিটিউশনাল অ্যাট্রিবিউশনস্ প্রশ্নমালা

The Internal, Personal and Situational Attributions Questionnaire (I.P.S.A.Q)

সনাক্তকরণ নম্বর: বি- . . . . নাম: লিঙ্গ: বয়স: পেশা:

তারিখ:

নির্দেশনা

অনুগ্রহ করে পরের পৃষ্ঠাগুলোর বিবৃতিসমূহ পড়ুন। দয়া করে প্রতিটি বিবৃতির ক্ষেত্রে পরিস্কারভাবে কল্পনা করুন যেন ঘটনাটা আপনার ক্ষেত্রেই ঘটছে। এরপর নির্ণয় করার চেষ্টা করুন বিবৃতিতে বর্ণিতঘটনার মূল কারণ কী ছিল। কারন হিসেবে আপনি যা ভেবেছেন তা নীচে দেয়া জায়গাটিতে লিখুন।
এরপর সম্ভাব্য কারণটিতে (ক, খ, গ, ঘ) টিক চিহ্ন দিন:

ক) এটা আপনার সাথে সম্পর্কিত কোন বিষয়
খ) অপরকোন ব্যক্তি (বা একদল ব্যক্তি) সংক্রান্ত
গ) কোন পরিস্থিতি সংক্রান্ত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)

এগুলোর মধ্যে থেকে কোনটি সম্পূর্ণ সঠিক সেটি নির্ধারণ করা বেশ কঠিন হতে পারে। এরকম ক্ষেত্রে যে বিবৃতিটি আপনার মতামত সবচেয়ে বেশী প্রকাশ করে সেটি বেছে নিন। অনুগ্রহকরে প্রতিটি ক্ষেত্রে কেবল একটি উত্তর দিন।

আপনার সময় ও সহযোগিতার জন্য ধন্যবাদ।

১) একজন বন্ধু আপনাকে তার গাড়িতে করে আপনার বাসায় পৌঁছে দিল।

কী কারণে আপনার বন্ধু আপনাকে আপনার বাসায় পৌঁছে দিল?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২) একজন বন্ধু আপনার পেছনে আপনাকে নিয়ে কথা বলেছে।

কী কারণে আপনার বন্ধু আপনার পেছনে আপনাকে নিয়ে কথা বলেছে?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৩) একজন বন্ধু বললেন যে আপনার প্রতি তার কোন শ্রদ্ধাবোধ নেই।

কী কারণে আপনার বন্ধু বললেন যে আপনার প্রতি তার কোন শ্রদ্ধাবোধ নেই?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৪) একজন বন্ধু আপনাকে বাগান চর্চায় সাহায্য করলেন।

কী কারণে আপনার বন্ধু আপনাকে বাগান চর্চায় সাহায্য করলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৫) একজন বন্ধু মনে করেন যে আপনি বিশ্বাসভাজন।

কী কারণে আপনার বন্ধু আপনাকে বিশ্বাসভাজন মনে করেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৬) একজন বন্ধু আপনার সাথে কথা বলতে চাইলেন না।

কী কারণে আপনার বন্ধু আপনার সাথে কথা বলতে চাইলেন না?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৭) একজন বন্ধু মনে করেন আপনি একজন মজার মানুষ।

কী কারণে আপনার বন্ধু আপনাকে মজার মানুষ মনে করেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৮) একজন বন্ধু আপনাকে একটা পোস্টকার্ড পাঠালেন।

কী কারণে আপনার বন্ধু আপনাকে এইপোস্টকার্ড পাঠালেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৯) একজন বন্ধু মনে করেন আপনি অবন্ধুসুলভ ।

কী কারণে আপনার বন্ধু মনে করেন যে আপনি অবন্ধুসুলভ?
(অনুগ্রহ করে প্রধান কারণটিলিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১০) একজন বন্ধু আপনাকে একটি অপমানজনক মন্তব্য করলেন।

কী কারণে আপনার বন্ধু আপনাকে অপমানজনক মন্তব্যটি করলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১১) একজন বন্ধু আপনাকে একটা উপহার কিনে দিলেন।

কী কারণে আপনার বন্ধু আপনাকে উপহারটি কিনে দিলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১২) একজন বন্ধু আপনার সাথে একটা মারামারিতে লিপ্ত হলেন।

কী কারণে আপনার বন্ধু আপনার সাথে মারামারিতে লিপ্ত হলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৩) একজন বন্ধু মনে করেন আপনি অসৎ।

কী কারণে আপনার বন্ধু মনে করেন আপনি অসৎ?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৪) একজন বন্ধু আপনার সাথে কিছুসময় গল্প করে কাটালেন।

কী কারণে আপনার বন্ধু আপনার সাথে কিছুসময় গল্প করে কাটালেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৫) একজন বন্ধু মনে করেন আপনি সুচতুর/বুদ্ধিমান।

কী কারণে আপনার বন্ধু মনে করেন আপনি সুচতুর?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৬) একজন বন্ধু আপনাকে একটি চাকুরীতে সহায়তা করতে অস্বীকার করেছিল।

কী কারণে আপনার বন্ধু আপনাকে একটি চাকুরীতে সহায়তা করতে অস্বীকার করেছিল?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৭) একজন বন্ধু মনে করেন আপনি একজন কান্ডজ্ঞানসম্পন্ন ব্যক্তি।

কী কারণে আপনার বন্ধু মনে করেন যে আপনি একজন কান্ডজ্ঞানসম্পন্ন ব্যক্তি?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৮) একজন বন্ধু মনে করেন আপনি ন্যায়বিচারহীন অসৎ

কী কারণে আপনার বন্ধু এমন মনে করেন?
(অনুগ্রহ করে একটি প্রধান কারণ লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

১৯) একজন বন্ধু আপনাকে বললেন তিনি আপনাকে অপছন্দ করেন।

কী কারণে আপনার বন্ধু বললেন তিনি আপনাকে অপছন্দ করেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২০) একজন বন্ধু আপনার খোজঁখবর নিতে আপনাকে ফোন করলেন।

কী কারণে আপনার বন্ধু আপনার খোজঁখবর নিতে আপনাকে ফোন করলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২১) একজন বন্ধু আপনাকে অগ্রাহ্য করলেন।

কী কারণে আপনার বন্ধু আপনাকে অগ্রাহ্য করলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২২) একজন বন্ধু বললেন যে তিনি আপনার প্রশংসা করেন।

কী কারণে আপনার বন্ধু বললেন যে তিনি আপনাকে প্রশংসা করেন?
(অনুগ্রহ করে প্রধান কারণটিলিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৩) একজন বন্ধু বললেন যে তিনি আপনাকে বিরক্তিকর মনে করেন।

কী কারণে আপনার বন্ধু বললেন যে তিনি আপনাকে বিরক্তিকর মনে করেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৪) একজন বন্ধু বললেন যে তিনি আপনার ওপর অসন্তুষ্ট/বিরক্ত।

কী কারণে আপনার বন্ধু বললেন যে তিনি আপনার ওপর অসন্তুষ্ট/বিরক্ত?
(অনুগ্রহ করে প্রধান কারণটিলিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৫) একটি বন্ধুসুলভ খোশগল্প করতে আপনার কাছে একজন বন্ধুএসেছিলেন।

কী কারণে আপনার বন্ধু একটি বন্ধুসুলভ খোশগল্প করতে আপনার কাছে এসেছিলেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৬) একজন বন্ধু বিশ্বাস করেন যে আপনি সৎ।

কী কারণে আপনার বন্ধু বিশ্বাস করেন যে আপনি সৎ?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৭) একজন বন্ধু তার প্রতি আপনার বিশ্বাস ভঙ্গ করেছেন।

কী কারণে আপনার বন্ধু তার প্রতি আপনার বিশ্বাস ভঙ্গ করেছেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৮) **একজন বন্ধু আপনাকে স্থান ত্যাগ করতে হুকুম দিলেন।**

কী কারণে আপনার বন্ধু আপনাকে স্থান ত্যাগ করতে হুকুম দিলেন?
(অনুগ্রহ করে প্রধান কারণটিলিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

২৯) একজন বন্ধু বললেন তিনি আপনাকে শ্রদ্ধা করেন।

কী কারণে আপনার বন্ধু বললেন তিনি আপনাকে শ্রদ্ধা করেন?
(অনুগ্রহ করে একটি প্রধান কারণ লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৩০) একজন বন্ধু মনে করেন আপনি নির্বোধ।

কী কারণে আপনার বন্ধু আপনাকে নির্বোধ মনে করেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৩১) একজন বন্ধু বললেন তিনি আপনাকে পছন্দ করেন।

কীকারণে আপনার বন্ধু বললেন তিনি আপনাকে পছন্দ করেন?
(অনুগ্রহ করে প্রধান কারণটি লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

৩২) একজন প্রতিবেশী আপনাকে চা পানে আমন্ত্রণ জানালেন।

কী কারণে আপনার প্রতিবেশী আপনাকে চা পানে আমন্ত্রণ জানালেন?
(অনুগ্রহ করে একটি প্রধান কারণ লিখুন)

. . . . . .

কারণটি কি:

ক) আপনার সাথে সম্পর্কিত?

খ) অপর কোন ব্যক্তি বা ব্যক্তিদের সাথে সম্পর্কিত?

গ) পরিস্থিতির সাথে সম্পর্কিত (কোন উদ্ভূত পরিস্থিতি বা হঠাৎ সুযোগ)?

Table 4. *Metacognition Self-Assessment Scale (MSAS)*

Note. For reporting the scale, English version of the MSAS was translated by two of the authors (A. C. and R. P.). The adequacy of the English version compared with the original Italian version was iteratively checked through back-translation by a professional English mother-tongue translator and by the MSAS authors.

The following questionnaire regards what people think about their ability to identify and describe their thoughts, emotions and the social relationships in which they are involved. Following the statements listed below you can indicate your judgment on what they are descriptive of yourself. Please answer to each statement marking a cross in the appropriate box. Thanks for your cooperation!

A	*RESPECT TO MYSELF, USUALLY…*	Never	Rarely	Sometimes	Frequently	Almost always
1. UM_MON_ID1	I can distinguish and differentiate my own mental abilities (e.g. remembering, imagining, having fantasies, dreaming, desiring, deciding, foreseeing and thinking).	1	2	3	4	5
2. UM_MON_ID 2	I can define, distinguish and name my own emotions.	1	2	3	4	5
3. UM_MON_RV	I am aware of what are the thoughts or emotions that lead my actions.	1	2	3	4	5
4. UM_DIF1	I am aware that what I think about myself is an idea and not necessarily true. I realize that my opinions may not be accurate and may change.	1	2	3	4	5
5. UM_DIF2	I am aware that what I wish or what I expect may not be realized and that I have a limited power to influence things.	1	2	3	4	5
6. UM_INT1	I can clearly perceive and describe my thoughts, emotions and relationships in which I am involved.	1	2	3	4	5
7. UM_INT2	I can describe the thread that binds my thoughts and my emotions even when they differ from one moment to the next.	1	2	3	4	5

Table 4. *Continue*

B	***RESPECT TO OTHERS, USUALLY …***	Never	Rarely	Sometimes	Frequently	Almost always
1. UOM_MON_ID1	I can understand and distinguish the different mental activities as when they are, for example, remembering, imagining, having fantasies, dreaming, desiring, deciding, foreseeing and thinking.	1	2	3	4	5
2. UOM_MON_ID2	I can identify and understand the emotions of people I know.	1	2	3	4	5
3. UOM_MON_RV	I can describe the thread that binds thoughts and emotions of people I know, even when they differ from one moment to the next.	1	2	3	4	5

C	***RESPECT TO "PUT YOURSELF IN SOMEBODY SHOES", USUALLY …***	Never	Rarely	Sometimes	Frequently	Almost always
1. DEC1	I'm aware that I am not necessarily at the centre of the other's thoughts, feelings and emotions and that other's behaviours arise from reasons and goals that can be independent from my own perspective and from my own involvement in the relationship.	1	2	3	4	5
2. DEC2	I am aware that others may perceive facts and events in a different way from me and interpret them differently.	1	2	3	4	5
3. DEC3	I am aware that age and life experience can touch other's thoughts, emotions and behaviour.	1	2	3	4	5

D	***RESPECT TO SOLVING PROBLEMS, USUALLY …***	Never	Rarely	Sometimes	Frequently	Almost always
1. M1	I can deal with the problem voluntarily imposing or inhibiting a behaviour on myself.	1	2	3	4	5
2. M2	I can deal with the problems voluntarily trying to follow my own mental order.	1	2	3	4	5
3. M3	I can deal with the problems trying to challenge or enrich my views and my beliefs on problems themselves.	1	2	3	4	5
4. M4	When problems are related to the relationship with the other people, I try to solve them on the basis of what I believe to be their mental functioning.	1	2	3	4	5
5. M5	I can deal with the problems, recognizing and accepting my limitations in managing myself and influencing events.	1	2	3	4	5

Appendix-13

MSAS – Item Details

The MSAS as decribed by Pedone et al.(2017), "..is an eighteen-item self-report measure specifically developed for the assessment of MMFM sub-functions. The MSAS is scored using a five-point Likert scale (1 = never, 2 = rarely, 3 = sometimes, 4 = frequently, 5 = almost always), which yields a raw score range of 18 to 90. High scores on the MSAS indicate better self-evaluation of metacognitive abilities than low scores. The MSAS is designed to measure five abilities of metacognition: 1) monitoring; 2) differentiation; 3) integration; 4) decentration and 5) mastery. Scores from the five subscales are summed to give a total score that represents the individual's overall level of metacognitive functioning. The five abilities are assessed as follows:

a) Monitoring is evaluated with six items divided into two groups, depending on whether they relate to monitoring of Self (see section A of the scale in the Appendix) or Others (section B). (A.1): the ability to recognize one's own representations such as thoughts and beliefs (Identification; UM_MON_ID1); (A.2): the ability to recognise and verbalise one's own emotions (Identification; UM_MON_ID2); (A.3): the ability to establish relations among the separate components of a mental state (Relating Variables; UM_MON_RV); (B.1): the ability to recognize others' representations such as thoughts and beliefs (Identification; UOM_MON_ID1); (B.2): the ability to recognize and verbalize others' emotions (Identification; UOM_MON_ID2); (B.3): the ability to form ideas about what social or psychological factors generate to others' mental states (Relating Variables; UOM_MON_RV);

b) Integration is assessed with two items, (A.6): the ability to describe the cognitive and emotional aspects of an agent's mental state and the temporal and social or interpersonal dynamics of change (UM_INT1); (A.7): the ability to merge multiple potentially implausible or incoherent mental scenarios into a fluent narrative (UM_INT2).

c) Differentiation is evaluated with two items, (A.4): the awareness that representations are subjective and not a perfect reflection of reality (UM_DIF1) and (A.5): the ability to perceive that thoughts do not directly influence reality, e.g. understanding that thinking about a catastrophe does not cause it (UM_DIF2). Having the ability to Differentiate means that one is aware that a memory could be false, and it is not an omen for the future;

that a goal will not realise simply because one has expressed it and one's predictions about the future are only one of many possible scenarios that may come to pass.

d) Decentration (section C) is evaluated with three items. (C.1): the ability to infer relationships among the separate components of others' mental states and between their mental state and their behavior (DEC1); (C.2): the ability to recognize, define and verbalise others' cognitive inner states (DEC2); (C.3) the ability to recognize, define and verbalise other's emotional inner state (DEC3).

e) Mastery (section D) is evaluated with five items and assessed in terms of the strategies which individuals use to exploit their knowledge of themselves and of others to solve psychological and interpersonal problems. These strategies are divided into categories according to the complexity of the metacognitive operations involved. In ascending order of complexity these are (D.1): dealing with a problem by voluntarily changing one's own behaviour (M1); (D.2): dealing with the problem through the regulation and management of one's mental states, e.g. distracting oneself from ideas and emotions causing suffering (M2); (D.3): drawing on one's beliefs, evaluations or general knowledge of one's own mental functioning to deal with the problem operating on underpinning (M3); (D.4) using one's own knowledge of other people's mental functioning to manage the interpersonal dimension of a problem (M5); (D.5) Mature acceptance of the limits to one's capacity to change one's inner states and influence events (M5).

Appendix-14

Topic Guide

1. What runs in your mind most of the time of a day?

2. Can you understand your feelings and thoughts separately? Do feel difficulty to differentiate? If yes, why do you think it is?

3. How much do you understand other people's thoughts and feelings? Do you feel difficulty to understand? If yes, why do you think it is?

4. Have any one taught you about the importance of understanding other's mind and attitude in social transactions? What is your opinion about this?

5. After occurance of any event with you do you reflect back about ownself and others? What do you usually think , why do you do that? If not why not?

6. How much time do you need to calmdown once you get emotionally disturbed? How calmly can you think of your self and others clearly?

7. Do you face any difficulty solving problems by understanding own and other's mind?Why is that?

8. How much you make yourself accountable after occurance of any event that has relation with you? Why do you do that"

9. Why do you make yourself accountable for occurance of any incidence.even if another person is accountable?

10. How do you feel to blame ownself?