



The How I Think questionnaire: Assessing its psychometric properties in Bangladeshi culture



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ABSTRACT

There is growing importance of the How I Think (HIT) questionnaire in clinical practice and cognitive research. Since the development of the HIT (Barriga and Gibbs, *Aggress. Behav.*, 1996; 22: 333–343), a number of validation studies have been done in various cultures. The aim of the present study was to translate the instrument into Bangla and validate in Bangladeshi culture. A total of 200 adolescents participated in the study. Exploratory factor analysis (EFA) of the data from 191 participants (88 girls and 103 boys; who provided complete responses) identified a four-factor structure of the HIT with 27 items. The four factors namely 'Catastrophizing and mislabeling', 'Emotional reasoning', 'Self-centeredness and blaming' and 'Overgeneralization' together explained 39.611% of the total variance. In line with the original scale we also defined four types of antisocial behavior. The HIT and its factors showed acceptable to good internal consistency (Cronbach's $\alpha = .83$ for the HIT, and .40–.77 for its factors), and strong construct validity as revealed by the evidence of convergent and discriminant validity. Thus the Bangla version HIT appears to be valid and reliable, and therefore may be used in further research on cognitive distortions and antisocial behaviors in Bangladesh.

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1. Introduction

Psychologists, clinicians and mental health professionals have given much attention to the understanding of cognitive distortions in recent decades. Cognitive distortions are exaggerated and irrational thoughts that are believed to perpetuate the effects of psychopathological state (Beck, 1972). Because the way a person feels intervenes with how she/he thinks, these distorted thoughts can feed negative emotions and lead to the formation of an overall negative outlook on the world. If left unchecked and untreated cognitive distortions can take a serious toll on the person's mental health, paving the way to mood and anxiety disorders (Beck, 1972). In order to design effective intervention programs it is necessary to measure, diagnose and study the level and nature of cognitive distortions a person may have. One such popular measure is the How I Think (HIT) questionnaire developed by Barriga and Gibbs

(1996). This psychometric instrument was designed on the basis of a four category typological model of self-serving cognitive distortions: self-centered, blaming others, mislabeling/minimizing and assuming the worst (Gibbs et al., 1995). The HIT items were formulated covering both covert and overt behavioral dimensions. The 'covert' items were generated on the basis of cognitive distortions related to stealing and lying and the 'overt' items were generated on the basis of cognitive distortions related to oppositional defiance and physical aggression. The preliminary English version of the HIT questionnaire showed high test-retest reliability and good internal consistency across its cognitive and behavioral subscales (Barriga and Gibbs, 1996). Validation studies of the HIT questionnaire revealed an association between self-serving cognitive distortions and specific externalizing behaviors, such as aggression and antisocial behavior (Barriga, Hawkins et al., 2008; Barriga, Landau et al., 2000). Other studies also confirmed such an association while comparable psychometric properties were obtained in the course of validation of the instrument with different samples of English- and French-speaking adolescents (Barriga et al., 2001; Nas et al., 2008; Plante et al., 2012).

The HIT can be useful to measure and evaluate the effects of cognitive-behavioral programs which aim to reduce antisocial

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behavior by correcting self-serving cognitive distortions in juvenile delinquents (Nas et al., 2005). Because of its growing importance in clinical practice and cognitive research, a number of validation studies have been attempted on the Dutch (Nas et al., 2008; Rahim et al., 2013), and Spanish (Fernández et al., 2013) versions of the scale. These studies have shown moderate-to high-internal consistency of the HIT, with convergent and discriminate validity in Dutch culture (Nas et al., 2008), content and face validity in Malaysia (Rahim et al., 2013) and convergent validity in Spain (Fernández et al., 2013). All these versions have further demonstrated factorial validity. Although, they demonstrated identical factor structure the factor contents were more or less different from one version to another. For example, through confirmatory factor analysis the Dutch and the Spanish versions have shown to fit for both a four-factor model and a six-factor model. The four-factor model comprises a 'Primary cognitive distortion' factor, a 'Secondary cognitive distortion' factor, an 'Anomalous response' factor and a 'Positive filler' factor whereas the six-factor model comprises four cognitive distortion factors, such as 'Self-centered', 'Blaming others', 'Mislabeling/Minimizing' and 'Assuming the worst', an 'Anomalous response' factor and a 'Positive filler' factor (Fernández et al., 2013; Nas et al., 2008). The 'Self-centered' factor of the six-factor model represents the first factor (Primary distortion) of the four-factor model. On the other hand, 'Blaming others', 'Mislabeling/Minimizing' and 'Assuming the worst' together represent the second factor (Secondary distortion) of the four-factor model. These two versions of the HIT are widely different from each other in factor contents even though they comprise the same number of factors. Unlike the Dutch and Spanish versions, Malay version of the HIT demonstrated only a four-factor model (Rahim et al., 2013). However, this version is also widely different from the original domains of the instrument, at least, in terms of its factor contents. Thus factor structure of the HIT varies from culture to culture, and from study to study within the same culture, and therefore it requires a validation study to be usable in a new culture. Examining factor structure or dimensionality of such an instrument in a new culture is also important for accurate specifications of theories (Smith and McCarthy, 1995) and theory driven research (Rezaul Karim and Nigar, 2014).

However, to our knowledge, there is no suitable psychometric instrument to assess self-serving cognitive distortions in Bangladesh. Given that the HIT has a theoretical basis that has been empirically tested with promising results (Nas et al., 2008), and has also been used for diagnosing cognitive distortions in adolescents (Gibbs et al., 2009), it would be really useful to extend the use of this instrument in Bangladesh, to measure self-serving cognitive distortions and evaluate the effects of the intervention programs designed for adolescents with externalizing behaviors. Therefore, the present study was designed to validate the HIT in Bangladeshi culture. We used here an exploratory factor analysis (EFA) to examine the psychometric properties, and establish our culture-based factor structure of the HIT for adolescents in Bangladesh. We were interested in this particular group because relative to other periods of the lifespan susceptibility to a number of psychiatric or mental disorders is greatest during adolescence, and the disorders which emerge during this period appear to be more enduring and serious than those with a later onset (for a review, see Fairchild, 2011).

2. Method

2.1. Participants

A total of 200 adolescents (boys = 106, girls = 94) voluntarily participated in this study. Participants were selected purposively from different colleges of Dhaka city. At first, four colleges were

selected conveniently. From each selected college the 11th grade students attending the class were included in the sample. However, because of incomplete responses nine participants (three boys and six girls) were dropped. Among the remaining 191 participants, 103 were boys and 88 were girls. The age of these participants ranged from 15 to 18 years, with a mean of 16.61 and standard deviation of 0.614. Participants' self reported data indicate that 3.14% of them came from higher socioeconomic class, 91.62% from middle socioeconomic class and 5.24% from lower socioeconomic class.

2.2. Measures

2.2.1. The How I Think questionnaire

The HIT was developed to provide a reliable and valid measure of self-serving cognitive distortion in adolescents (Barriga and Gibbs, 1996; Barriga et al., 2001). It contains 54 6-points Likert items, ranging from '1' (totally disagree) to '6' (totally agree). 39 of these items can be clustered in four types of cognitive distortions: Self centered, Blaming others, Mislabeling/Minimizing and Assuming the worst. Each of the 39 items refers to one of the four antisocial behavioral categories as defined in the DSM-IV (American Psychiatric Association, 1994). These are Opposition-defiance; Physical aggression; Lying; and Stealing. The sum of the 'Oppositional defiance' and the 'Physical aggression' scales forms the 'Overt' scale which refers to direct confrontation with the victim in contrast to the 'Covert' scale which is the sum of the 'Lying' and 'Stealing' scales. Of the remaining 15 items, 8 are 'Anomalous response' items and 7 are 'Positive filler' items which are used to camouflage the 39 main distortion questions. The HIT exhibits high test-retest reliability, good internal consistency and good construct validity (Barriga and Gibbs, 1996). The English version of this instrument has been evaluated on four validation samples and exhibited good validity on every validity measure (Barriga et al., 2001).

2.2.2. The Parental Bonding Instrument

The Bangla version of the Parental Bonding Instrument (PBI) was used to examine the convergent and discriminant validity of the Bangla version HIT questionnaire. The original PBI developed for both mother and father (Parker et al., 1979) is a 25-item self-report measure of two parenting styles (Care and Overprotection). The 'Care' subscale comprises 12 items (6 positive and 6 negative) which represent a continuum of parental style from coldness and neglect to affection and emotional warmth. The 'Overprotection' subscale comprises 13 items (7 positive and 6 negative) representing a continuum ranging from independence to control and intrusion. Each of the items is rated on a 4-point scale, ranging from 'very unlikely' to 'very likely'. For a positive item participant's responses are scored as 0 = very unlikely and 3 = very likely, and for a negative item, responses are scored in an opposite fashion. The original PBI demonstrated high construct validity in correlation with other measures of parental behavior which ranges from .69 to .85, with a test-retest reliability of .63 to .76 (Parker, 1983). The Bangla version PBI comprises 17 items; 11 items to assess the 'Care' and 6 items to assess the 'Overprotection' of parental bonding (Begum, 2013). The psychometric properties of the Bangla version PBI support that it is a reliable and valid measure of parental bonding in Bangladesh (Begum, 2013).

2.3. Procedure

2.3.1. Translating the HIT into Bangla

The HIT items were first translated into Bangla, called the first draft. It was then given to four judges, including one expert in Bangla, one expert in English and two experts in Psychology/Psychometrics. Their native language was Bangla, but being

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