



Hopelessness and Perceived Burdensomeness: Psychometric properties of Cognitive Factors Questionnaire.

Rakshanda Ahad

Child Counsellor

RPS International School

Karnal, Haryana

Dr. Shawkat Ahmad Shah

Professor

Dept. Of Psychology

University of Kashmir

Abstract

Cognitive factors questionnaire was developed, that can be used for adolescents and youth. Response was sought from 1069 adolescents from various higher secondary schools on an initial item pool of 10 items selected on basis of strong theoretical evidence and then exploratory was carried out to check the factor structure. The findings revealed a two factor structure comprising of hopelessness and perceived burdensomeness dimensions and explained 63.27% of the variance. A confirmatory factor analysis also revealed an acceptable model fit. Cronbach's alpha of the standardized items was found to be 0.82 for hopelessness and 0.87 perceived burdensomeness. The construct reliability is also high and satisfactory. The indigenously and psychometrically developed scale with ten items only is hoped to prove beneficial in the circumstances when tools with a large number of items are not feasible to use.

Key words: Adolescents, Hopelessness, perceived burdensomeness.

Introduction

The cognitive factors for the present study includes hopelessness and perceived burdensomeness. The brief discussion of the above mentioned factors is as follows:

1) Hopelessness

Hopelessness is also thought to effect the creation of suicidal thoughts. Within the cognitive model of psychopathology, hopelessness is defined as a cognitive characteristic that is both "a determinant and a component of the depressive condition" (Beck, Steer, Kovacs, & Garrison, 1985). Traditionally, hopelessness has been studied as a cognitive or affectively loaded concept having an important an role in the development

of depression (e.g., Melges & Bowlby, 1969; Stotland, 1969). Hopelessness has been defined as adverse anticipations toward the future (Beck, Weissman, Lester, & Trexler, 1974b), as a state of negative anticipations (Weishaar & Beck, 1992), and as negative anticipations about changing the likelihood of events (Alloy, Abramson, Metalsky, & Hartlage, 1988). The negative expectations associated with hopelessness are considered maladaptive and abnormal. For instance, many people do not have a hopeless, pessimistic view of their future; instead, most people tend to be optimistic regarding their ability to meet challenges (Janoff-Bulman & Hecker, 1988; Weinstein, 1980). The thoughts and beliefs that are expressed through the "hopelessness" construct are sometimes hypothesized to be part of a larger depressive condition. However, hopelessness can be thought of as a separate set of beliefs that influences how a person perceives and interprets information, as well as behaves in the world. It is suggested that hopeless thoughts can be long-lasting and persistent in certain individuals, activated in acute, specific situations in other individuals, or activated differentially in some individuals under certain conditions (Alloy et al., 1988; Weishaar & Beck, 1992). The activation of the hopeless schema is thought to influence the development of depression. Suicidal persons in particular tend to have depressive cognitions and negative anticipations regarding their future. For instance, they may see no possibility of resolving their crises, no future happiness nor contentment, and no end to their suffering. Because they see no end to their psychological pain and forecast that nothing will help them, hopeless persons are likely to see only death as their solution to this forecasted unhappy existence. In previous research, hopelessness was expected to moderate the relationship between depression and suicidal ideation, as hopeless cognitions were often present in depressive states. Moreover, since some suicide attempters and completers might not be depressed, but most were expected to be influenced by hopelessness, hopelessness was expected to have a stronger association with suicidal ideation and behavior than depression (Beck, Schuyler, & Herman, 1974). Investigations of young adult clinical populations have supported this framework as hopelessness correlated more strongly with suicidal ideation (Beck, Steer, Beck, & Newman, 1993; Dyer & Krietman, 1984; Silver, Bohnert, Beck, & Marcus, 1971; Wetzell, Margulies, Davis, & Karam, 1980) and with eventual suicide than with depression (Beck et al., 1985; Beck, Brown, Berchick, Stewart, & Steer, 1990; Bedrosian & Beck, 1979; Fawcett et al., 1987; Weishaar & Beck, 1992).

It is a feeling that conditions will never improve, that there is no solution to a problem, and, for many, a feeling that dying by suicide would be better than living. The hopeless person expects bad things will happen in important areas of his/her life (pessimism) and/or that hoped for good things will not happen, and he/she doesn't expect anything to change that miserable situation. Considerable research has supported parts of the hopelessness theory (Abramson, Metalsky, & Alloy (1989)). For example, Metalsky & Joiner (1992) found that three cognitive views and this concept of hopelessness is latter used for the tool development: (a) attributing bad events to unavoidable and far-reaching causes, (b) drawing negative conclusions about yourself from a negative event ("it means I'm worthless"), and (c) assuming one bad event will lead to others in the future, when combined with high stress, are associated with depression.

Hopelessness may not simply be considered an indirect means of mood and research has supported hopelessness as a moderator between depression and suicidal ideation and behavior. Empirical support for the cognitive model of depression, hopelessness, and suicidal ideation in younger adults has been demonstrated in many studies (Weishaar& Beck, 1992). For instance, patients with primary depression were noticed to have hopeless thoughts frequently, and an increase in these thoughts was associated with an increase in suicidal wishes (Nekanda-Trepka, Bishop, & Blackburn, 1983).

2) Perceived burdensomeness

Perceived burdensomeness is a mental state characterized by feeling that others would “be better off if I were gone,” which manifests when the need for social competence is unmet (Ryan & Deci, 2000). Different theory proposes that family discord (Duberstein, Conwell, Conner, Eberly, & Caine, 2004; Heikkinen, et al., 1994), unemployment (Brown, G. K. Beck, Steer, & Grisham, 2000; Heikkinen, et al., 1994), and functional impairment (Conwell et al., 2010; Conwell et al., 2000) are associated with suicide across the lifespan because these factors are likely to engender perceptions of burdensomeness on others.

The concept of Joiner has been used in the present study and Perceived burdensomeness corresponds to the self-perception that an individual does not contribute meaningfully to important life domains such as work, academics, and social domains. In colloquial terms, these individuals feel like they do not pull their own weight (Joiner's, 2005).

Perceived burdensomeness is comprised primarily of the belief that one's self has become a burden on others (Van Orden et al., 2010) or that one's existence is a drain on the resources of others or on society as a whole (Joiner, 2005). Van Orden and colleagues (2010) also described an aspect of affectively laden cognitions of self-hatred, though this facet is not found in existing measures of perceived burdensomeness and has not yet been investigated empirically.

The burdensomeness construct has been found to predict suicidal ideation and suicide attempt status above and beyond age, gender, personality disorder status, depressive symptoms, and hopelessness (Van Orden et al., 2006).

Methodology

For the present study the target population was school going youth of district Srinagar. As per the govt. records presently there are 58 higher secondary schools (30 govt. and 29 private) in Srinagar district. Keeping in view the prevailing circumstances of the valley and its effect on schools it was decided to go for purposive sampling as randomization was not possible under these circumstances. Out of 58 higher secondary schools, eight (5 govt. & 3 private) higher secondary schools were purposively selected for the present study, besides

students from two coaching centers were also included as participants of the present study. A screening test was administered to 1100 students of these schools and coaching centers to identify suicide ideators, out of which 1069 were found to provide appropriate and complete information. Out of 1069 respondents, 612 were males and 457 were females. The following criteria was adopted while selecting the student as participant for the present study:

- Must be enrolled in Higher Secondary or Coaching Centre of district Srinagar,
- Must fall within the age range of 15-18 years,
- Must be willing to participate in the study and provide consent for the same.

Cognitive Factors

The research instrument framed to measure cognitive constructs comprised of 10 items measuring facets namely hopelessness and perceived burdensomeness. The items of the hopelessness facet were formulated on the concept of Metalsky and Joiner, 1992 and concept of Van Orden, 2010 and Joiner, 2005 was used to construct items of perceived Burdensomeness. While framing items the research focused on maximizing content validity of the proposed short measure by enhancement of the bandwidth of the items. The items of perceived Burdensomeness and hopelessness were measured on a seven point likert scale with 1= Very untrue and 7=Very true.

Table 1.1: Items codes of measuring instruments

Constructs	No. of Items	Item codes
Hopelessness	5	Hp1, hp2, hp3, hp4, hp5
Perceived Burdensomeness	5	Pb1, pb2, pb3, pb4, pb5

Validation of measurement Models

To establish measurement models of the understudy constructs, the scale development procedures were followed. Initially reliability statistics were explored and this was followed by exploratory factor analysis and confirmatory factor analysis with a focus on various fit indices like chi-square statistic, root mean square error of approximation (RMSEA), goodness of fit index (GFI) and comparative fit index (CFI). This approach is in line with research carried out by Malhotra & Hair et al. (2006).

Reliability test

A reliability test was conducted to assess the degree of consistency among the multiple measurement of the variable and the same involved the calculation of Cronbach's alpha, inter item and item-total correlations. If an item was found to have poor inter-item or item total correlation, it was deleted from subsequent analysis. The picture gets clearer by analyzing the tables that follow.

Table 1.2: Reliability test Results of the measure of Cognitive Construct

Dimension	Item-total correlation	Inter-total correlation						Cronbach's Alpha
		Items	Hp1	hp2	hp3	hp4	hp5	
Hopelessness	.501	Hp1	1					0.82
	.639	hp2	.50	1				
	.664	hp3	.39	.50	1			
	.619	hp4	.36	.47	.55	1		
	.652	hp5	.35	.50	.60	.55	1	
			Items	pb1	pb2	pb3	pb4	
Perceived burdensomeness	.653	pb1	1					0.87
	.735	pb2	.64	1				
	.735	pb3	.53	.64	1			
	.721	pb4	.50	.59	.67	1		
	.641	pb5	.49	.52	.54	.58	1	

Hp1-hp5=hopelessness; pb1-pb5=perceived burdensomeness

Exploratory factor Analysis

It involves understanding and application of statistical techniques to a single set of variable so as to find out coherent subsets that are relatively independent of each other. In this technique the variable that correlate with each other but independent of other subsets are combined into factors. The items measuring all the four understudy constructs were subject to exploratory factor analysis so as to get the factor structure.

Table 1.3: Rotated Component matrix after carrying exploratory factor Analysis of the items Cognitive constructs measure. KMO= .91; Bartlets test of sphericity = 5.201, Significance=.0001

Rotated Component Matrix^a

	Component	
	1	2
pb1		.548
pb2	.	.677
pb3		.814
pb4		.831
pb5		.763
hp1	.634	
hp2	.779	
hp3	.727	
hp4	.704	
hp5	.722	

Pb1-pb5=Perceived burdensomeness, hp1-hp5=Hopelessness

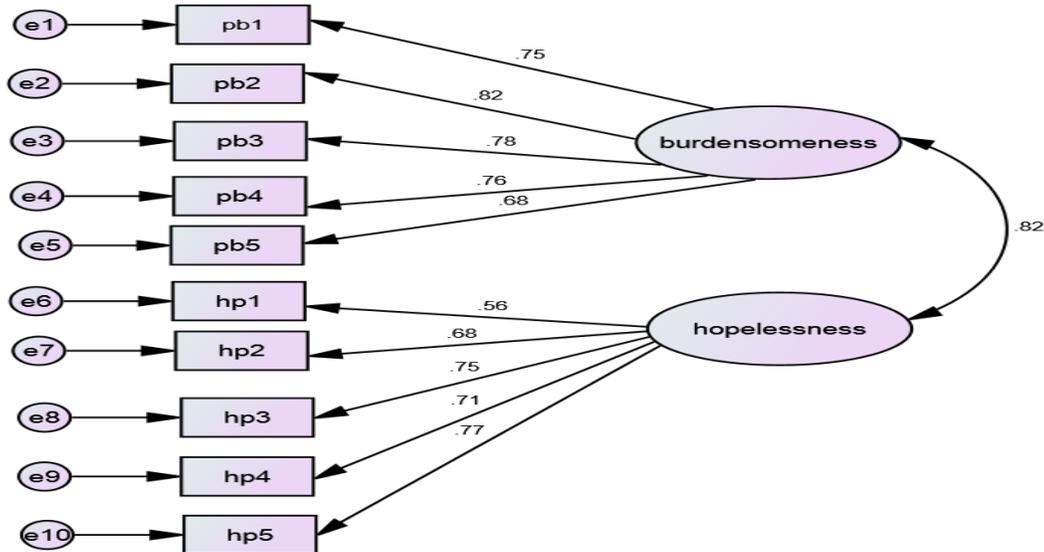
The table depicts adequate sampling adequacy & significant Bartlet's test of sphericity at 0.0001 level of significance along with the factor loadings of each factor. A varimax rotation with method of principle component analysis & Kaiser's criteria subsequently revealed two factor structure of cognitive factors with factor loading highly in the specific component. The factors were named perceived burdensomeness and hopelessness as per theoretical guidelines & represented 63.27% of the variance which is deemed sufficient in terms of total variance explained.

Confirmatory Factor Analysis

Confirmatory factor analysis is a multivariate technique used to test the prior relationships between the manifest and latent variables. It testifies the major theory and as per Demirbag (2006). It tests how well the latent constructs are represented by majored variables. In the present study confirmatory factor analysis was carried out to establish the measurement models of all the understudy constructs. A focus was given to the various global fit indices namely goodness of fit index (GFI), comparative fit index (CFI), route mean square error of approximation (RMSEA) and CMIN/df. (Minimum discrepancy/degree of freedom). As per hair, et

al. (2006) a model fit is satisfactory if it meets the criteria of at least the one absolute fit index and one incremental fit index.

Fig. 3.1 Measurement Model of Cognitive factor



Key:pb1-pb5=perceived burdensomeness, hp1-hp5=hopelessness, e1-e10= error terms of manifest variables

The above figure represents the two factor model of cognitive model. The factor loadings depicted in the figure range from 0.56 to 0.82 and fall above the acceptable factor loadings of 0.4.

Table 1.4: AMOS generated Model fit indices of Cognitive model

Index	Reported Value
Chi square divided by degree of freedom(CMIN/df)	2.80
Goodness of fitness index (GFI)	0.91
Comparative fit index (CFI)	0.92
Root mean square error of approximation (RMSEA)	0.07

The model fit indices that were calculated by application of confirmatory factor analysis as highlighted in the table include the value of CMIN/DF= 2.80; GFI = .91 & CFI = .92 are both higher than the cut-off value of 0.07 and RMSEA = 0.09 are both higher than the cut-off value of 0.90 and RMSEA = .06 which is same as the stringent upper limit of 0.07 as stated by Steiger(2007).

Table 1.5 Discriminant Validity

Dimension	Perceived Burdensomeness	Hopelessness
Perceived Burdensomeness	0.75	
Hopelessness	0.67	0.69

In the above discriminant validity analysis table, values on the diagonal axis represent average variance extracted (AVE) and squared correlation between the two factors is given below the diagonal axis. Using AMOS, AVE has been assessed by the estimations of Standardized Regression Weights of each item to its latent construct by using approach of Jyoti and Sharma (2012).The discriminant validity of the child abuse dimensions is established as the variances extracted for the constructs(0.75, 0.69,) are higher than the squared correlation between them. It is also evident from the above table that AVE is well above the conventional threshold of 0.5, thus establishing the convergent validity.

Table 1.6. Showing Construct reliability

Dimension	Construct Reliability(C.R.)
Perceived Burdensomeness	0.86
Hopelessness	0.89

CR was computed from squared sum of standardized factor loadings divided by squared sum of standardized factor loadings plus sum of indicator measurement error for the construct. The values are well beyond the minimum threshold of 0.60 to 0.70 recommended by Peter (1979).The construct reliability thus is high and satisfactory.

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