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Validity and Reliability of the Core Beliefs Questionnaire in a Sample of Individuals with Generalized Anxiety Disorder and Non-Clinical Samples

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ABSTRACT

Background: Core beliefs are cognitive structures that shape one's fundamental assumptions about the self, the external environment, and the future. They play a pivotal role in the development of numerous mental pathologies. The Core Beliefs Questionnaire (CBQ) is one of the inventories developed to evaluate core beliefs. It is comprised of 3 versions: "Trait (CBQT)," "Contingent (CBQC)," and "Others (CBQO)." This study aims to examine the validity and reliability of the CBQ in a Turkish sample.

Methods: The study included 2 groups: a group of individuals diagnosed with generalized anxiety disorder (GAD) (n=150) and a group of healthy individuals (n=150). A "Socio-demographic Data Form," the "CBQ," the "Social Comparison Scale (SCS)," the "State-Trait Anxiety Inventory (STAI)," the "Beck Depression Inventory (BDI)," and the "Beck Anxiety Inventory (BAI)" were administered to the participants.

Results: Confirmatory factor analysis confirmed the construct validity of all 3 versions of the CBQ. Furthermore, Cronbach's *α* analyses showed that all three versions were highly reliable (GAD group: CBQTα=0.93, CBQCα=0.96, and CBQOα=0.96, control group: CBQTα=0.95, CBQCα=0.98, and CBQOα=0.94). The GAD group had significantly higher negative core beliefs compared to the healthy control group.

Conclusion: Our research findings indicate that the CBQ is a valid and reliable measure for assessing core beliefs in clinical and non-clinical samples. While the majority of research on GAD has concentrated on particular cognitive processes, such as worry and uncertainty, this study demonstrated that individuals with GAD may have a multitude of negative core beliefs.

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INTRODUCTION

Core beliefs are cognitive structures formed as a result of past experiences. They determine how the individual will organize personal and environmental information, and they include basic assumptions about oneself, others, and the outside world. Core beliefs formed through personal experiences and associations with important experiences in early life are reinforced by similar experiences and learning later in life. Beck classified core beliefs into 3 main groups: helplessness, unlovability, and worthlessness.[1,2] According to cognitive theory, these core beliefs are key factors in the development and maintenance of psychopathology.[3]

Core beliefs have been the focus of attention in cognitive theories of anxiety disorders.[4] Cognitive models of anxiety disorders are based on central features, such as a cognitive schema or belief, which make people tend to process information in a biased way, direct their full attention to the threat, and handle an ambiguous stimulus with a catastrophic misinterpretation.[4,5] In changing environments, different clinical pictures may appear as a result of cognitive distortions, dysfunctional beliefs, and erroneous or incomplete evaluations.[4,5] Such dysfunctional assumptions and rules bring forth core beliefs, the deepest

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cognitive structure. Although schemas only consist of core beliefs in some sources, core beliefs can be considered as a subgroup of schemas.[1]

It is natural for people to become anxious when faced with situations that seem to end in uncertainty. In individuals with generalized anxiety disorder (GAD), this anxiousness turns into excessive and persistent anxiety about daily events, the future, and other uncontrollable matters. GAD is characterized by excessive, uncontrollable worry about a variety of topics. The worry leads to impaired functionality and distress.[6] It was extremely difficult to identify factors contributing to excessive and uncontrollable anxiety before GAD was recognized as a research problem of clinical importance. Over the past 50 years, exploratory models of anxiety have been developed. The models that have received the most empirical attention to date reveal certain dysfunctional beliefs about chronic concerns.[7]

Individuals with GAD report similar dysfunctional beliefs about the outcomes of both worry and uncertainty and these beliefs appear to play a role in both the initiation and/or the maintenance of worry. Individuals diagnosed with GAD believe that they are weak and powerless and that the world is dangerous. They believe that worry is useful in preventing a negative outcome, and they use worry as a strategy to cope with anxiety.[8] Their core beliefs underpin all of these. Dysfunctional core beliefs are activated as negative events are encountered. Revealing core beliefs is very important in creating treatment formulations. Uncovering dysfunctional core beliefs, building functional beliefs, and ensuring their continuity through practices are among the goals of cognitive behavioral therapy (CBT) in both GAD and other mental disorders.[9]

In GAD theoretical models, beliefs such as intolerance of uncertainty and positive and negative beliefs about worry have been the focus of attention; however, individuals with GAD may have many other maladaptive thoughts or beliefs.[7,10] Dysfunctional attitudes, early maladaptive schemas (EMSs), and self-focused and other-focused beliefs can be considered among these beliefs. In their studies, Dugas et al.[11] demonstrated that dysfunctional attitudes in GAD are associated with excessive worry that extends beyond intolerance of uncertainty. The concept of EMSs has been defined in guidelines for the treatment of GAD, yet it has been the subject of only a limited number of studies and has received minimal attention in the literature.[12,13] Koerner et al[7] suggested that EMSs and other-oriented beliefs contribute to GAD, over and above unhelpful beliefs about uncertainty and worry. There are also reports that individuals with high levels of anxiety endorse nonself-focused beliefs about others.[14] While GAD treatment guidelines suggest that these maladaptive beliefs may contribute to excessive worry, few studies have focused on positive and negative self-focused and other-focused beliefs.[7-10]

Extending the research on existing scales assessing core beliefs, Wong et al.[15] developed 3 versions of the Core Beliefs Questionnaire (CBQ): Trait, Contingent, and Other. They examined the psychometric properties of the CBQ in a sample of individuals with social anxiety disorder (SAD), validated all 3 versions, and obtained excellent results. Exploratory factor analysis revealed 1 factor for all versions. Trait, Contingent, and Other versions of the scale had excellent internal consistency (Cronbach's α for the Trait v 's α for the Trait version = 0.96, the Contingent version = 0.97, and Other versions = 0.96). Also, Soltani et al[16] evaluated the psychometric properties of CBQ in the clinical group (individuals with depression, n = 60) and the non-clinical group (a student sample, n = 289). In both samples, a 17-item 1-factor model emerged for all CBQ versions, and each version had good internal consistency in the Iranian population (the Cronbach's α for the Trait version = 0.94, the Contingent version = 0.96, and Other version = 0.96)

Although validity and reliability studies of various schema scales have been carried out using a Turkish sample, scale validity and reliability studies on core beliefs are insufficient. This study aimed to establish the validity and reliability of the Turkish version of the CBQ in patients with GAD. The study also aimed to examine the relationship of core beliefs, which have been relatively less researched compared to other cognitive structures, with anxiety and depressive symptoms in patients with GAD who had not yet received treatment. This study hypothesized that core beliefs would be more prominent in GAD patients than in healthy controls. Additionally, it was hypothesized that there would be a positive correlation between core belief scores and levels of depression and anxiety.

MATERIAL AND METHODS

Participants

A random sampling method was used to select the participants. The clinical group consisted of 150 individuals diagnosed with GAD according to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) criteria who were admitted to the psychiatry outpatient clinic. The control group consisted of 150 healthy individuals, medical faculty, psychology, nursing students, and social workers. The inclusion criteria of the study were as follows: being between 18 and 65 years of age, being sufficiently literate to fill in the scales used in the study, and agreeing to participate in the study. The study included participants diagnosed with GAD who had never received psychotherapy before and who had not yet received pharmacotherapy in the last 3 months or who had never used psychotropic medications. The exclusion criteria were defined as having a mental disorder other than GAD for the clinical group and having any known mental disorder for the control group. Receiving psychiatric

treatment and having a neurocognitive disorder were accepted as exclusion criteria for both groups.

Data Collection Tools

Core Beliefs Questionnaire: The questionnaire has 3 versions: "Trait" (CBQT), "Contingent" (CBQC), and "Others" (CBQO). The CBQT includes basic absolute statements about the self; the CBQC includes statements about oneself in certain social situations; and the CBQO includes statements about how other people see one. The definitions and requested information are different in the 3 versions. The "Trait" version asks individuals to rate how much they believe each item (e.g., I am foolish). The "Contingent" version asks individuals to rate how much they believe each item when they realize they have been negatively evaluated by someone they respect (e.g., I am unacceptable). For each item, the "Others" version asks participants to rate what other think and believe about them in social situations (e.g., Others think I am defective). Each version of the questionnaire consists of 17 items ranked on a 6-point Likert scale (1=Strongly disbelieve - 6=Strongly believe). Higher scores on the questionnaire indicate a greater approval of negative core beliefs about the self.[15]

Social Comparison Scale: The scale was developed by Allan and Gilbert to evaluate how individuals perceive themselves compared to others. It is bipolar and consists of 11 items. The items are ranked between 1 and 10.[17] High scores on the scale indicate positive self-schemas. The Turkish validity and reliability study was carried out by Öksüz and Malhan.[18]

Structured Clinical Interview for DSM-5: The interview was developed by First et al[19] and is used in the investigation of mental disorders according to DSM-5. The interview is comprised of open-ended questions that have been designed to reflect the sequence of inquiries that would typically be posed by an experienced clinician with a background in psychopathology during the process of differential diagnosis. During the interview, the interviewer does not have to accept every answer as correct, and the information can also be obtained from external sources. Structured Clinical Interview for DSM-5 (SCID) is organized in a systematic way to prevent problems from being overlooked and to make the diagnosis more reliable. The Turkish adaptation of the form was developed by Elbir et al.[20]

State-Trait Anxiety Inventory: It is a self-report inventory developed by Spielberger et al.[21] The inventory consists of 2 subscales that measure state (STAI-S) and trait (STAI-T) anxiety. The Turkish validity and reliability study was carried out by Oner and Le Compte.[22]

Beck Depression Inventory: It is a self-report scale developed to evaluate the identified symptoms of depression.[23] Its Turkish validity and reliability study was carried out by Hisli.[24]

Beck Anxiety Inventory: The scale was developed by Beck et al[25] in 1988 and aims to determine the severity of the symptoms of anxiety experienced by an individual. The Turkish validity and reliability study was carried out by Ulusoy.[26]

Procedure

The study has a cross-sectional design with a control group. A socio-demographic information form, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Social Comparison Scale (SCS), State-Trait Anxiety Inventory (STAI), and the CBQ were administered to the participants for the psychological evaluation. The diagnosis of GAD was evaluated according to DSM-5 criteria. All participants were informed about the study, and they signed the informed consent form. This study was carried out following the Declaration of Helsinki, and an approval dated 03.11.2017 and numbered 277 was received from the Ethics Committee of the University of Afyon Kocatepe.

Translation

Permission was received from the authors of the original scale for the use of the CBQ and Turkish translation. The Turkish version of the guidelines, which are widely used in cross-cultural studies, were followed. The scale was translated into Turkish by 3 independent physicians who are experts in their fields. The common questionnaire text was translated back into English. In the original version of CBQ, 3 items were dropped because of similar content (item 6: "I am boring" for Trait and Contingent versions/"Others think I am boring" for Other version; item 13: "I am odd/peculiar" for Trait and Contingent versions/"Others think I am odd/peculiar" for Other version; item 17: "I am undesirable" for Trait and Contingent versions/"Others think I am undesirable" for Other version). Therefore, items 6, 13, and 17 were included in the translation phase to maintain the integrity of the original version and after the translation phase, these items were excluded during the statistical analysis.

Statistical Analysis

The data obtained in the research were analyzed using the IBM SPSS AMOS 26 (IBM SPSS Corp.; Armonk, NY, USA) program. Confirmatory factor analysis (CFA) was performed to test the construct validity of CBQT, CBQC, and CBQO. In the CFA, a single-factor model was used based on the previous single-factor structure of the questionnaires. Although it is expected that a suitable model would have a *P*-value of >.05 under normal conditions,[27,28] it was stated that the χ^2 test, which produces biased significant results in samples of 150 and above, misled researchers in the analysis results due to this tendency.

According to Kline, 0 ≤ χ^2/standard deviation (SD) ≤ 2 is accepted as the perfect fit, and 2 ≤ χ^2/SD ≤ 3 is reasonable.[29] Additionally, Browne and Cudeck[30] stated that the standardized root mean square residual (SRMR) value is reasonable in-between 0.05 ≤ SRMR ≤ 0.10 and is accepted as the perfect fit in-between 0.00 ≤ SRMR ≤ 0.05, root mean square error of approximation (RMSEA) ≤0.05 to ≤0.08 is reasonable, though Fitzgerald et al[31] also defined RMSEA values between 0.05 and 0.1 to indicate mediocre fit. Lastly, the Tucker–Lewis index (TLI) and comparative fit index (CFI) are reasonable when these values are between ≤0.90 and ≤0.1.[32-35] In this context, to correct the goodness-of-fit values, primarily, the effect of each observed variable on the latent variable should be examined, and the observed insignificant variable should be removed in order, starting from the most insignificant one. To increase the goodness-of-fit values, whether all observed variables significantly predicted the latent variable as a result of the analysis and the factor loadings of the items were examined. Item factor loadings are expected to be above 0.4.[36] Finally, to increase the goodness of fit, modification values are examined, and error terms of observed variables are linked, starting from the highest.[37]

Cronbach's α test was performed for the reliability analysis of the scales, which were finalized after the CFA. Categorical variables were reported as numbers and percentages (n [%]), and continuous variables were reported as mean ± SD. The conformity of the continuous variables to a normal distribution was evaluated according to whether the skewness and kurtosis values were between −2 and +2. A chi-square test was used to compare categorical data. Fisher–Freeman–Halton test was used to compare categorical data when the contingency table is larger than 2 × 2. An independent sample *t*-test was performed to examine whether the scales (CBQT, CBQC, CBQO, BAI, BDI, STAI, and SCS) distinguished clinical and non-clinical cases. Finally, the Pearson correlation coefficient was used to examine the correlation between all these scales in clinical and non-clinical cases. The level of significance is given as $\alpha = 0.05$

RESULTS

Demographic Data

There were no significant differences between the groups in terms of socio-demographic characteristics, but there were significant differences in terms of duration of education, employment status, history of psychiatric treatment, and history of suicide attempt (Table 1).

Clinical Sample Analyses

Factor Analysis: For validity and reliability, a CFA was conducted separately for each CBQT, CBQC, and CBQO.

The CBQT consists of a single factor and 17 items. Prior to the CFA, normality analysis was performed on the data, and it was concluded that it was suitable for multiple normality distribution. All observed variables predicted the latent variable significantly, and the item factor loadings were above 0.40. By examining the modification values, the error terms were linked and presented as a model (Table 2). It was seen that the model achieved the necessary goodness-of-fit values (χ^2/SD = 1.634, SRMR = 0.06, TLI = 0.90, CFI = 0.92, and RMSEA = 0.085).

The CBQC consists of a single factor and 17 items. Prior to the CFA, normality analysis was performed on the data, and it was concluded that it was suitable for multiple normality distribution. All observed variables predicted the latent variable significantly, and the item factor loadings were above 0.40. By examining the modification values, the error terms were linked and presented as a model (Table 2). It was seen that the model achieved the necessary goodness-of-fit values (χ^2/SD = 1.709, SRMR = 0.06, TLI = 0.90, CFI = 0.90, and RMSEA = 0.10).

The CBQO consists of a single factor and 17 items. Prior to the CFA, normality analysis was performed on the data, and it was concluded that it was suitable for multiple normality distribution. All observed variables predicted the latent variable significantly, and the item factor loadings were above 0.40. By examining the modification values, the error terms were linked and presented as a model (Table 2). It was determined that the model achieved the necessary goodness-of-fit values (χ^2/SD = 1.734, SRMR = 0.05, TLI = 0.88, CFI = 0.90, and RMSEA = 0.10).

Reliability

The construct validity of the models was confirmed with the CFA for the 3 scales. After the CFA, item analysis was performed with item-total correlation. As a result of the item total correlation analysis, it was found that all items have in each of the 3 scales significant positive item-total correlation (Pearson ≥ 0.40, $P < .01$). In addition, a reliability analysis was performed for all 3 scales. Cronbach's α reliability test revealed that all 3 versions were highly reliable (CBQTα = 0.93, CBQCα = 0.96, and CBQOα = 0.96). Also, reliability indicators including item-total correlation and Cronbach's α if item deleted values are given in Table 3. Item-total correlations in all scales are positive and greater than 0.30. Removing an item from any of the scales does not significantly increase the reliability of the overall scale.

Concurrent Validity

All 3 versions of the CBQ demonstrated significant positive correlations with both anxiety and depression levels (Table 4).

Non-Clinical Sample Analyses

Factor Analysis: For validity and reliability, a CFA was conducted separately for each CBQT, CBQC, and CBQO.

In regard to the CBQT, the results of the CFA conducted with data collected from the control group (n = 150) indicated

Table 1. Socio-demographic Variables in Clinical and Non-Clinical Groups

	Clinical n (%)	Non-Clinical n (%)	χ^2	*df*	*P*
Sex					
Female	99 (52.9)	88 (47.1)	1.718	1	.190*
Male	51 (45.1)	62 (54.9)			
Marital status					
Married	83 (48.3)	89 (51.7)	0.491	1	.484*
Single	67 (52.3)	61 (47.7)			
Employment status					
Unemployed	**58 (76.3)**	**18 (23.7)**	**34.577**	**4**	**<.001****
Student	**36 (35)**	**67 (65)**			
Housewife	**1 (100)**	**0 (0)**			
Employed	**52 (47.7)**	**57 (52.3)**			
Retired	**3 (27.3)**	**8 (72.7)**			
Household income (Turkish Liras/monthly)					
0-10000	35 (49.3)	36 (50.7)	3.837	4	.376**
10001-30000	75 (54.3)	63 (45.7)			
≥30001	40 (44.9)	49 (55.1)			
Additional medical disease comorbidity					
Yes	32 (21.3)	24 (16.0)	1.405	1	.236*
No	118 (78.7)	126 (84.0)			
History of psychiatric treatment					
Yes	**57 (93.4)**	**4 (6.6)**	**57.802**	**1**	**<.001***
No	**93 (38.9)**	**146 (61.1)**			
Smoking					
Yes	66 (55.9)	52 (44.1)	2.738	1	.098*
No	84 (46.2)	98 (53.8)			
Alcohol use					
Yes	28 (40.6)	41 (59.4)	3.181	1	.075*
No	122 (52.8)	109 (47.2)			
History of suicide attempt					
Yes	**19 (79.2)**	**5 (20.8)**	**8.877**	**1**	**.003***
No	**131 (47.5)**	**145 (52.5)**			
	Clinic (Mean ± SD)	**Non-Clinic (Mean ± SD)**	***P***		
Age	31.75 ± 9.31	31.50 ± 10.79	.832***		
Education (Year)	**12.08 ± 3.47**	**6.10 ± 3.88**	**<.001*****		

SD, standard deviation.
*Chi-square test.
**Fisher-Freeman-Halton test.
***Independent sample *t*-test.

that all of the regression coefficients of the latent variable on the items were statistically significant. Additionally, the variables "I am inferior" and "I am a weird person," which exhibited item factor loadings below 0.40, were excluded from the scale.[34] In order to increase the goodness of fit of the model to an acceptable level, the item "I am dumb/stupid" with covariance values of standardized residuals above ±2 was removed from the scale, and covariance matrices (modification) were drawn between the error terms of the items. In this context, to obtain the values for goodness of fit, the error terms were linked and presented as a model starting from the highest value and connecting only 1 error term with the other each time (Table 2). It was seen that the model achieved the necessary goodness-of-fit values (χ^2/SD = 1.634, SRMR = 0.05, TLI = 0.90, CFI = 0.92, and RMSEA = 0.10).

Table 2. Confirmatory Factor Analysis Factor Loadings for the Three Versions of the CBQ in the Clinical and Non-Clinical Samples

Clinical Sample									
Original Item Number	Factor Loading	Item Description	Covariance Estimate	Factor Loading	Item Description	Covariance Estimate	Factor Loading	Item Description	Covariance Estimate
1	0.66	I am unlikeable	I am foolish (0.52) I am not a worthwhile person (0.26)	0.81	I am unlikeable	I am uninteresting (0.23) I am a weak person (0.13)	0.82	Others think I am unlikeable	Others think I am foolish (0.34) Others think I am incompetent (0.26)
2	0.65	I am foolish	I am a weird person (0.43)	0.80	I am foolish		0.77	Others think I am foolish	Others think I am uninteresting (0.34) Others think I am a weird person (0.39)
3	0.68	I am inadequate	I am inferior (0.66) I am uninteresting (0.37) I am defective (0.27)	0.82	I am inadequate		0.75	Others think I am inadequate	Others think I am inferior (0.49) Others think I am defective (0.35)
4	0.68	I am inferior		0.83	I am inferior		0.81	Others think I am inferior	
5	0.68	I am uninteresting	I am a weird person (0.74)	0.80	I am uninteresting	I am a weird person (.26)	0.82	Others think I am uninteresting	Others think I am a weird person (0.55)
7	0.86	I am dumb/stupid	I am unacceptable (0.32)	0.84	I am dumb/stupid	I am unacceptable (0.53)	0.84	Others think I am dumb/stupid	Others think I am unacceptable (0.28)
8	0.57	I am a weak person	I am incompetent (2.08)	0.68	I am a weak person	I am incompetent (0.79) I am a failure (0.16)	0.60	Others think I am a weak person	Others think I am incompetent (1.47)
9	0.43	I am incompetent		0.57	I am incompetent		0.59	Others think I am incompetent	
10	0.80	I am unacceptable		0.77	I am unacceptable		0.85	Others think I am unacceptable	
11	0.57	I am not a worthwhile person		0.79	I am not a worthwhile person		0.70	Others think I am not a worthwhile person	
12	0.69	I am a weird person		0.74	I am a weird person		0.75	Others think I am a weird person	
14	0.70	I am unimportant	I am a failure (0.66)	0.71	I am unimportant	I am a failure (0.54)	0.65	Others think I am unimportant	Others think I am a failure (0.79)
15	0.65	I am physically unattractive		0.71	I am physically unattractive	I am inept (0.25)	0.68	Others think I am physically unattractive	Others think I am inept (0.57) Others think I am defective (0.53)
16	0.70	I am inept		0.76	I am inept		0.75	Others think I am inept	Others think I am defective (0.54)
18	0.72	I am unlovable		0.74	I am unlovable	I am a failure (0.31)	0.69	Others think I am unlovable	Others think I am a failure (0.49)

19	0.67	I am a failure	I am defective (0.20)	0.64	I am a failure		0.65	Others think I am a failure	
20	0.57	I am defective		0.53	I am defective		0.56	Others think I am defective	
Non-Clinical Sample									
1	0.73	I am unlikeable	I am foolish (0.18)	0.87	I am unlikeable			Others think I am unlikeable	
2	0.52	I am foolish	I am inadequate (0.12) I am inept (0.11)	0.70	I am foolish	I am a weird person (0.25) I am unlovable (0.54)		Others think I am foolish	
3	0.61	I am inadequate		0.70	I am inadequate	I am unacceptable (0.14)	0.74	Others think I am inadequate	
4		I am inferior		0.70	I am inferior			Others think I am inferior	
5	0.73	I am uninteresting	I am a weird person (0.15)	0.87	I am uninteresting	I am a weird person (0.27)		Others think I am uninteresting	
7		I am dumb/stupid		0.72	I am dumb/stupid	I am inept (0.21)	0.69	Others think I am dumb/stupid	
8	0.70	I am a weak person		0.81	I am a weak person	I am incompetent (0.38)	0.79	Others think I am a weak person	
9	0.80	I am incompetent		0.78	I am incompetent		0.81	Others think I am incompetent	
10	0.79	I am unacceptable		0.89	I am unacceptable		0.85	Others think I am unacceptable	
11	0.67	I am not a worthwhile person		0.88	I am not a worthwhile person		0.73	Others think I am not a worthwhile person	
12		I am a weird person		0.64	I am a weird person	I am unlovable (0.31)		Others think I am a weird person	
14	0.86	I am unimportant		0.85	I am unimportant	I am a failure (0.29)	0.76	Others think I am unimportant	
15	0.74	I am physically unattractive	I am inept (0.20) I am a failure (0.13)	0.84	I am physically unattractive		0.66	Others think I am physically unattractive	Others think I am not a worthwhile person (0.31)
16	0.79	I am inept		0.79	I am inept		0.82	Others think I am inept	Others think I am incompetent (0.54)
18	0.83	I am unlovable		0.92	I am unlovable		0.79	Others think I am unlovable	Others think I am unimportant (0.47)
19	0.67	I am a failure		0.76	I am a failure			Others think I am a failure	
20	0.61	I am defective		0.88	I am defective		0.58	Others think I am defective	

Table 3. Item Analysis for the Three Versions of the CBQ in the Clinical and Non-Clinical Samples

	CBQT			CBQC			CBQO		
Original Item Number	Mean	Item-Total Correlation	Cronbach's α If Item Deleted	Mean	Item-Total Correlation	Cronbach's α If Item Deleted	Mean	Item-Total Correlation	Cronbach's α If Item Deleted
Clinical Sample									
1	51,767	0,542	0,937	59,767	0,540	0,961	51,253	0,597	0,955
2	52,013	0,651	0,935	60,220	0,677	0,959	51,693	0,675	0,954
3	50,793	0,684	0,934	59,273	0,747	0,958	51,087	0,676	0,954
4	52,373	0,426	0,938	60,540	0,638	0,960	52,080	0,590	0,955
5	51,180	0,681	0,934	59,453	0,759	0,958	50,980	0,743	0,953
7	51,213	0,616	0,936	59,400	0,710	0,959	50,920	0,693	0,954
8	52,153	0,686	0,935	60,380	0,720	0,959	51,820	0,666	0,954
9	50,933	0,607	0,936	59,513	0,717	0,959	51,047	0,633	0,954
10	51,467	0,676	0,935	59,427	0,721	0,959	51,173	0,751	0,953
11	51,060	0,576	0,936	59,427	0,764	0,958	51,120	0,700	0,953
12	51,300	0,769	0,933	59,180	0,757	0,958	51,267	0,812	0,952
14	50,860	0,463	0,939	59,760	0,604	0,960	50,993	0,614	0,955
15	50,873	0,595	0,936	59,633	0,697	0,959	50,907	0,623	0,955
16	51,273	0,813	0,932	59,300	0,829	0,957	51,153	0,806	0,952
18	50,893	0,624	0,936	59,507	0,725	0,959	50,973	0,622	0,955
19	51,207	0,674	0,935	59,460	0,783	0,958	51,087	0,807	0,952
20	51,687	0,663	0,935	59,513	0,795	0,958	51,333	0,770	0,952
Non-Clinical Sample									
1	23,527	0,664	0,945	36,420	0,855	0,973			
2	23,967	0,567	0,947	36,802	0,737	0,974			
3	23,587	0,630	0,946	36,313	0,728	0,974	20,373	0,701	0,938
4				36,933	0,716	0,975			
5	23,380	0,801	0,942	36,107	0,855	0,973			
7	23,313	0,723	0,944	36,793	0,750	0,974	20,607	0,650	0,940
8	23,560	0,705	0,944	36,553	0,799	0,974	20,467	0,761	0,937
9	23,747	0,764	0,943	36,473	0,790	0,974	20,353	0,773	0,936
10	23,387	0,783	0,942	36,280	0,867	0,973	20,247	0,818	0,935
11	23,820	0,634	0,946	36,420	0,857	0,973	20,340	0,720	0,938
12				36,527	0,639	0,975			
14	23,860	0,793	0,943	36,207	0,835	0,973	20,453	0,770	0,937
15	23,327	0,753	0,943	36,360	0,807	0,974	20,013	0,684	0,940
16	23,720	0,754	0,943	36,587	0,791	0,974	20,393	0,798	0,935
18	23,820	0,797	0,943	36,467	0,892	0,973	20,473	0,789	0,936
19	23,673	0,703	0,944	36,453	0,782	0,974			
20	23,460	0,620	0,947	36,393	0,864	0,973	20,380	0,578	0,941

CBQC, core beliefs questionnaire contingent; CBQO, core beliefs questionnaire others; CBQT, core beliefs questionnaire trait.

The CBQC consists of a single factor and 17 items. Prior to the CFA, normality analysis was performed on the data, and it was concluded that it was suitable for multiple normality distribution. All observed variables predicted the latent variable significantly, and the item factor loadings were above 0.40. By examining the modification values, the error terms were linked and presented as a model (Table 2). It was seen that the model achieved the necessary goodness-of-fit values (χ^2/SD = 1.709, SRMR = 0.04, TLI = 0.91, CFI = 0.93, and RMSEA = 0.10).

For the CBQO, according to the results of the CFA conducted with the data collected from the control group (n = 150), all of the regression coefficients of the latent variable on the items were found to be significant; the variable "I am a weird person" with item factor loading below 0.40 were removed from the scale.[34] In order to increase the goodness

Table 4. Concurrent Validity of the CBQ in Individuals with GAD and Healthy Controls

			BAI	*BDI*	*SCS*	*STAI-S*	*STAI-T*	$\bar{x}$	*SD*
Clinical group (n = 150)	CBQT	*r*	0.330	0.543	−0.569	0.449	0.593	45.65	19.54
		P	<.001**	<.001**	<.001**	<.001**	<.001**		
	CBQC	*r*	0.225	0.425	−0.458	0.356	0.428	53.01	23.14
		P	.006**	<.001**	<.001**	<.001**	<.001**		
	CBQO	*r*	0.295	0.422	−0.580	0.389	0.469	45.31	21.02
		P	<.001**	<.001**	<.001**	<.001**	<.001**		
Non-clinical group (n = 150)	CBQT	*r*	0.277	0.348	−0.383	0.047	0.189	26.29	11.39
		P	.001**	<.001**	<.001**	.606	.036*		
	CBQC	*r*	0.293	0.288	−0.326	0.207	0.327	32.26	19.28
		P	<.001**	< .001**	<.001**	.022*	<.001**		
	CBQO	*r*	0.174	0.230	−0.451	0.045	0.222	25.93	11.52
		P	.033*	.005**	< .001**	.624	.014*		

BAI, Beck anxiety inventory; BDI, Beck depression inventory; CBQC, core beliefs questionnaire contingent; CBQO, core beliefs questionnaire others; CBQT, core beliefs questionnaire trait; *r*, Pearson correlation coefficient; SCS, social comparison scale; SD, standard deviation; STAI-S, state-trait anxiety inventory-state; STAI-T, state-trait anxiety inventory-trait.
*$P < .05$.
**$P < .01$.

of fit of the model to an acceptable level, the items "I am unlikeable," "I am foolish," "I am inferior," "I am uninteresting" and "I am a failure" with covariance values of standardized residuals above ±2 were removed from the scale. Covariance matrices (modification) were drawn between the error terms of the items. In this context, to obtain the values for goodness of fit, the error terms were linked and presented as a model starting from the highest value and connecting only 1 error term with the other each time (Table 2). It was seen that the model achieved the necessary goodness-of-fit values (χ^2/SD = 1.634, SRMR = 0.04, TLI = 0.91, CFI = 0.93, and RMSEA = 0.10).

Reliability

The construct validity of the models was confirmed with the CFA for the 3 scales. After the CFA, item analysis was performed with item-total correlation. As a result of the item total correlation analysis, it was found that all items have in each of the 3 scales significant positive item-total correlation ($r_{Pearson} \geq 0.40$, $P < .01$). In addition, a reliability analysis was performed for all 3 scales. Cronbach's α reliability test revealed that all 3 versions were highly reliable (CBQTα = 0.95, CBQCα = 0.98, and CBQOα = 0.94). Also, reliability indicators including item-total correlation and cronbach's alpha if item deleted values are given in Table 3. Item-total correlations in all scales are positive and greater than 0.30. Removing an item from any of the scales does not significantly increase the reliability of the overall scale.

Concurrent Validity

There were significant positive correlations of the 3 CBQ versions with both anxiety and depression levels (Table 4).

The scores of individuals with GAD and healthy controls for the SCS, CBQT, CBQC, CBQO, STAI, BAI, and BDI are presented in Table 5. According to the comparison results, all scale scores in the clinical group were significantly different from those in the control group (Table 5).

DISCUSSION

The present research aimed to evaluate the validity and reliability of the Turkish CBQ composed of Trait, Contingent, and Other versions in clinical and non-clinical Turkish samples. In the treatment process of anxiety

Table 5. Comparison of Scale Scores Between Clinical and Non-Clinical Groups

	Clinical (n = 150)		Non-Clinical (n = 150)		*P*
	$\bar{x}$	*SD*	$\bar{x}$	*SD*	
CBQT	45.65	19.54	26.29	11.39	<.001*
CBQC	53.01	23.14	32.26	19.28	<.001*
CBQO	45.31	21.02	25.93	11.52	<.001*
SCS	60.40	21.65	77.50	18.94	<.001*
BAI	32.70	11.12	7.61	6.85	<.001*
BDI	23.70	10.84	6.93	5.19	<.001*
STAI-S	48.71	10.88	32.93	8.79	<.001*
STAI-T	56.75	9.61	37.70	4.99	<.001*

$\bar{x}$ = Mean
BAI, Beck anxiety inventory; BDI, Beck depression inventory; CBQC, core beliefs questionnaire contingent; CBQO, core beliefs questionnaire others; CBQT, core beliefs questionnaire trait; SCS, social comparison scale; SD, standard deviation; STAI-S, state-trait anxiety inventory-state; STAI-T, state-trait anxiety inventory-trait.
*Independent sample *t*-test.

disorders, it may be important to reveal core beliefs and evaluate the change in these beliefs. For this purpose, determining a valid and reliable scale to evaluate these beliefs is significant when conducting studies in this area. The current study is the first to evaluate the CBQ in GAD patients and found support for the validity and reliability of the CBQ for assessing core beliefs in both clinical groups with GAD and non-clinical groups. Evaluating core beliefs in the 3 versions, for oneself, for other people's thoughts about one, and situationally, makes the CBQ a comprehensive scale about core beliefs.

The original version of the questionnaire was validated with individuals with social anxiety disorder. In the cognitive model of GAD, there is a focus on the role of dysfunctional cognitions in the development of anxiety. These include beliefs about the possibility of danger, the perceived cost of that possibility, the ability to cope with danger, and the perception of external support.[10] In the cognitive model of social anxiety disorder, the basis of anxiety is that individuals have dysfunctional attitudes and beliefs about their behavior and the way other people evaluate these behaviors.[38] In this context, both disorders have dysfunctional core beliefs about the social self, self-efficacy, and support systems.

In the present research, CBQ was found to distinguish between GAD and non-clinical groups with all 3 versions. All three versions of the CBQ scores were higher in individuals with GAD than in non-clinical groups, indicating that core beliefs in GAD were affected in all 3 aspects. As predicted in individuals with GAD and non-clinical groups, a 1-factor structure emerged, consisting of 17 items in three versions of the CBQ. In the literature, in line with this data, it is emphasized that maladaptive schemas are observed in individuals with GAD.[10,12,13,38] Three versions of the CBQ exhibited good internal consistency, which is in line with the predictions. While TLI goodness of fit values were acceptable in all versions except CBQO (TLI : 0.88). Moreover, other goodness of fit values, such as Chi-square/*df*, CFI, SRMR, and RMSEA, were within the acceptable range (according to Hu and Bentler's[39] criteria: Chi-square/*df* (cmin/*df*) = <3 good; <5 acceptable; CFI = >0.90 acceptable >0.95 good; SRMR = <0.09; RMSEA = <0.05 good; <0.05-0.10 acceptable) for CBQO. The TLI's performance may be affected by a smaller sample size (n < 250) leading to bias and underestimation of model fit. [39]

The factor analysis results in the clinical and non-clinical groups of this study are consistent with those of the original version of the CBQ. The Turkish CBQ version and the original CBQ versions contain the same items (consistent with the original versions; items 6, 13, and 17 were deleted in the Turkish version). The satisfactory internal consistency results for all CBQ versions, in both clinical and non-clinical groups, are consistent with those reported for the English version of the CBQ, which similarly found high internal consistencies for the original CBQ versions (in present research, Cronbach's α ranged from 0.93 to 0.98).

Moreover, the CBQ showed significant correlations with SCS, which assessed similar cognitive features, BDI, which assessed depression, and BAI/STAI, which assessed anxiety, in clinical groups in all 3 versions. These correlation analyses also support the 3-version structure of the CBQ. The 3 versions of CBQ demonstrated good internal consistency and positive correlations with a measure of anxiety and depression. Individuals with GAD scored higher on 3 CBQ versions than the healthy sample. Moreover, there was a correlation between STAI-S/STAI-T and the 3 subscales of the CBQ in both clinical and non-clinic groups. In Koerner et al[7]'s study investigating core beliefs in GAD patients, it was found that the levels of negative and positive beliefs about the self and others were higher in probable GAD patients than in non-clinical groups. Also, this study showed that core belief levels were related to depression and trait anxiety levels.[7] Fowler et al[40] reported that self-beliefs were associated with depression and anxiety in the non-clinical sample. The relationship between state/trait anxiety and core beliefs in non-clinical and GAD groups may suggest that core beliefs should also be addressed in undiagnosed or subclinical cases.

Confirmatory factor analysis was not performed in both the original version and the Iranian version of the CBQ and was reported as a limitation. The fact that the results were confirmed by CFA is a prominent feature of our study. The importance and use of CFA in adaptation studies are becoming increasingly widespread. Confirmatory factor analysis aims to examine the factor structure of a previously created scale and to determine the conformity of this structure to theoretical information. The theoretical appropriateness of the factor structure of a scale is important in terms of validity and reliability studies.[41]

This study has some limitations. The CBQ has been tested in social anxiety disorder and non-clinical samples in the development and validation study. However, in this study, only patients with GAD were tested as a clinical group. Although this study was conducted with GAD patients, it is reasonable to assume that anxiety disorders have common cognitive structures. Therefore, it is necessary to support the findings of this study in other clinical groups (e.g., social anxiety disorder, depression, etc.). Another limitation of the study was significant differences between the clinical and the control group in terms of duration of education and employment status. Also, this study provided no within-treatment or long-term outcome data. The CBQ is an assessment tool for mental disorders and needs to be tested as an indicator of pre-post treatment change. The process of changing scores regarding core beliefs with evidence-based psychotherapies or pharmacotherapy can also be examined in future studies. Furthermore, whether core beliefs are related to GAD or other mental disorders

should be evaluated with repeated and longitudinal studies.

In conclusion, the psychometric properties revealed in the present study were mostly similar to the results of the original study. Regarding its use for clinical and experimental purposes, the CBQ Turkish version is recommended as a valid and reliable scale for assessing core beliefs in both healthy individuals and individuals diagnosed with GAD.

Data Availability Statement: The authors confirm that the data supporting the findings of this study are available within the article.

Ethics Committee Approval: This study was approved by the Ethics Committee of Afyon Kocatepe University (Approval no.: 277, Date: 03.11.2017).

Informed Consent: Written informed consent was obtained from the participants who agreed to take part in the study.

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REFERENCES

1. Türkçapar H. *Bilişsel Terapi; 5. baskı*. Ankara: HYB Yayıncılık; 2011.
2. Beck AT, Weishaar M. *Cognitive Therapy, Comprehensive Handbook of Cognitive Therapy* Freeman A, Simon KM, Beutler LE, Arkowitz H, eds. New York: Plenum Press; 1989.
3. Beck JS. *Cognitive Behavior Therapy: Basics and Beyond*. New York, NY: The Guildford Press; 2011.
4. Beck AT, Emery G, Greenberg RL. *Anxiety Disorders and Phobias: A Cognitive Perspective*. New York NY: Basic Books; 2005.
5. Clark DA, Beck AT. Cognitive therapy of anxiety disorders: Science and practice. *NewYork NY*. Guilford Press; New York; 2011.
6. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Washington DC: American Psychiatric Association; 2013.
7. Koerner N, Tallon K, Kusec A. Maladaptive core beliefs and their relation to generalized anxiety disorder. *Cogn Behav Ther*. 2015;44(6):441-455. [CrossRef]
8. Robichaud M, Koerner N, Dugas MJ. *Cognitive Behavioral Treatment for Generalized Anxiety Disorder: From Science to Practice*. 2nd ed. New York: Routledge; 2019.
9. Arntz A. Imagery rescripting as a therapeutic technique: Review of Clinical Trials, Basic Studies, and Research Agenda. *J Exp Psychopathol*. 2012;3(2):189-208. [CrossRef]
10. Hazlett-Stevens H. *Psychological Approaches to Generalized Anxiety Disorder: A Clinician's Guide to Assessment and Treatment*. New York, NY: Springer; 2008.
11. Dugas MJ, Schwartz A, Francis K. Brief Report: Intolerance of uncertainty, worry, and depression. *Cog Ther Res*. 2004;28(6):835-842. [CrossRef]
12. Dozois D, Beck AT. Cognitive schemas, beliefs, and assumptions. In: Dobson K. S., Dozois D.J.A., eds. *Risk Factors in Depression*. San Diego, CA: Elsevier; 2008:121-143.
13. Leahy RL. *The Worry Cure: Seven Steps to Stop Worry From Stopping You*. New York, NY: Crown Publishing Group; 2006.
14. Koerner N, Antony MM, Young L, McCabe RE. Changes in beliefs about the social competence of self and others following group cognitive-behavioral treatment. *Cognit Ther Res*. 2013;37(2):256-265. [CrossRef]
15. Wong QJJ, Gregory B, Gaston JE, Rapee RM, Wilson JK, Abbott MJ. Development and validation of the Core Beliefs Questionnaire in a sample of individuals with social anxiety disorder. *J Affect Disord*. 2017;207:121-127. [CrossRef]
16. Soltani E, Wong QJJ, Sahraian A, et al. Psychometric properties of the Persian version of the Core Beliefs Questionnaire (CBQ). *Int J Cogn Ther*. 2022;15(3):354-369. [CrossRef]
17. Allan S, Gilbert P. A social comparison scale: Psychometric properties and relationship to psychopathology. *Pers Individ Dif*. 1995;19(3):293-299. [CrossRef]
18. Öksüz E, Malhan S. Sosyal karşılaştırma Ölçeğinin güvenilirlik ve Geçerlilik analizi. Poster presented at. *Ulus Aile Hekimliği Kongresi* Mayıs 2004; Bursa; VI:4-7.
19. First MB, Williams JBW, Karg RS, Spitzer RL. *Structured Clinical Interview for DSM-5, Clinician Version*. Arlington, VA: American Psychiatric Association; 2015:(SCID-5-CV).
20. Elbir M, Alp Topbaş Ö, Bayad S, et al. Adaptation and reliability of the structured clinical interview for DSM-5 disorders clinician version (SCID-5/CV) to the Turkish language. *Turk Psikiyatri Derg*. 2019;30(1):51-56. [CrossRef]
21. Spielberger CD, Gorsuch RL, Lushene RE. *Manual for State-Trait Anxiety Inventory*. CA: Consulting Psychologist Press; 1970.
22. Oner N, Le Compte A, Envanteri El Kitabı DSA. *Istanbul: Bogaziçi Universitesi Yayınları*; 1988.
23. Beck AT, Ward C, Mendelson M. Beck depression inventory (BDI). *Arch Gen Psychiatry*. 1961;4:561-571.
24. Hisli N. Beck Depresyon Envanteri'nin geçerliği üzerine bir çalışma. *Psikhol Derg*. 1988;6:118-122.
25. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: Psychometric properties. *J Consult Clin Psychol*. 1988;56(6):893-897. [CrossRef]
26. Ulusoy M, Envanteri BA. Geçerlik ve Güvenirlik çalışması. *Yayınlanmamış Uzmanlık Tezi*. İstanbul: Bakırköy Ruh ve Sinir Hastalıkları Hastanesi, 1993.
27. Barrett P. Structural equation modelling: Adjudging model fit. *Pers Individ Dif*. 2007;42(5):815-824. [CrossRef]

28. Bagozzi RP, Yi Y. Specification, evaluation, and interpretation of structural equation models. *J Acad Mark Sci*. 2012;40(1):8-34. [CrossRef]
29. Kline RB. *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press; 2011.
30. Browne MW, Cudeck R. Alternative ways of assessing model fit. In: Bollen KA, Long JS, eds. *Testing Structural Equation Models*. Beverly Hills, CA: Sage; 1993:136-162.
31. Fitzgerald CE, Estabrook R, Martin DP, Brandmaier AM, von Oertzen TV. Correcting the bias of the root mean squared error of approximation under missing data. *Methodology*. 2021;17(3):189-204. [CrossRef]
32. Baumgartner H, Homburg C. Applications of structural equation modeling in marketing and consumer research: A review. *Int J Res Mark*. 1996;13(2):139-161. [CrossRef]
33. Bentler PM. Multivariate analysis with latent variables: Causal modeling. *Annu Rev Psychol*. 1980;31(1):419-456. [CrossRef]
34. Bentler PM, Bonett DG. Significance tests and goodness of fit in the analysis of covariance structures. *Psychol Bull*. 1980;88(3):588-606. [CrossRef]
35. Marsh HW, Hau KT, Artelt C, Baumert J, Peschar JL. OECD's brief self-report measure of educational psychology's most useful affective constructs: Cross-cultural, psychometric comparisons across 25 countries. *Int J Test*. 2006;6(4):311-360. [CrossRef]
36. Hair JF, Black WC, Babin BJ, Anderson RE. *Multivariate Data Analysis*. 7th ed. Upper Saddle River, NJ: Pearson Prentice Hall; 2010.
37. Awang Z. Structural equation modeling using AMOS. *Shah Alam. Malaysia: University Teknologi MARA*; 2014.
38. Clark DM, Wells A. *Social Phobia: Diagnosis, Assessment and Treatment*. New York: The Guilford Press; 1995.
39. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct Equ Model Multidiscip J*. 1999;6(1):1-55. [CrossRef]
40. Fowler D, Freeman D, Smıth B, et al. The Brief Core Schema Scales (BCSS): Psychometric properties and associations with paranoia and grandiosity in non-clinical and psychosis samples. *Psychol Med*. 2006;36(6):749-759. [CrossRef]
41. Çapık C. Geçerlik ve güvenirlik çalişmalarinda doğrulayici faktör analizinin kullanimi. *Journal of Anatolia Nursing and Health Sciences*. 2014;17(3):196-205.

Supplementary Table 1. The Turkish Versions of All Items in the CBQ

Ölçek madde numarası	GENEL DURUM	BELİRLİ DURUM	DİĞER KİŞİLER
1	İticiyim	İticiyim	Başkaları benim itici olduğumu düşünür
2	Aptalım	Aptalım	Başkaları benim aptal olduğumu düşünür
3	Yetersizim	Yetersizim	Başkaları benim yetersiz olduğumu düşünür
4	Aşağılığım	Aşağılığım	Başkaları benim aşağılık olduğumu düşünür
5	İlgi çekici değilim	İlgi çekici değilim	Başkaları benim ilgi çekici olmadığımı düşünür
6	Sıkıcıyım	Sıkıcıyım	Başkaları benim sıkıcı olduğumu düşünür
7	Salağım	Salağım	Başkaları benim salak olduğumu düşünür
8	Zayıf biriyim	Zayıf biriyim	Başkaları benim zayıf biri olduğumu düşünür
9	Beceriksizim	Beceriksizim	Başkaları benim beceriksiz olduğumu düşünür
10	Çekilmezim	Çekilmezim	Başkaları benim çekilmez olduğumu düşünür
11	Değerli biri değilim	Değerli biri değilim	Başkaları benim değerli biri olmadığımı düşünür
12	Acayip biriyim	Acayip biriyim	Başkaları benim acayip biri olduğumu düşünür
13	Tuhafım	Tuhafım	Başkaları benim tuhaf olduğumu düşünür
14	Önemsizim	Önemsizim	Başkaları benim önemsiz olduğumu düşünür
15	Fiziksel olarak çekici değilim	Fiziksel olarak çekici değilim	Başkaları benim fiziksel olarak çekici olmadığımı düşünür
16	Yeteneksizim	Yeteneksizim	Başkaları benim yeteneksiz olduğumu düşünür
17	İstenmeyen biriyim	İstenmeyen biriyim	Başkaları benim istenmeyen biri olduğumu düşünür
18	Sevimsizim	Sevimsizim	Başkaları benim sevimsiz olduğumu düşünür
19	Başarısızım	Başarısızım	Başkaları benim başarısız olduğumu düşünür
20	Kusurluyum	Kusurluyum	Başkaları benim kusurlu olduğumu düşünür