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Psychometric Evaluation of the Child and Parent Versions of the Coping Questionnaire

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Abstract

The Coping Questionnaire (CQ) – child and parent version – is an idiographic measure of youth's perceived ability to cope in anxiety provoking situations. Participants ($N = 442$; aged 7–17) met DSM-IV criteria for separation anxiety disorder, generalized anxiety disorder, or social anxiety disorder. The internal consistency of the CQ was supported, and retest reliability and parent/child agreement were, as expected, modest. The CQ scores were significantly correlated in the expected direction with measures of anxiety symptoms and functioning, providing evidence of convergent and divergent validity. The criterion validity of the CQ also was supported: the CQ scores were significantly correlated with the clinical severity rating of the youth's principal diagnosis on ADIS. There was a significant correlation between change in CQ scores and in anxiety severity and symptoms following treatment. Results support the CQ as a measure to assess coping efficacy in anxious youths as part of evidence-based assessment.

Keywords

Coping; anxiety; assessment; idiographic assessment; evidence-based assessment

Anxiety disorders affect more than 15% of youth [1] and are associated with impairment in academic, occupational, family, social, and legal functioning [2, 3]. This impairment is in part due to avoidance of activities deemed difficult or stressful [4]. This avoidance may be due in part because the youth does not believe that they can successfully cope in the stressful situation [5]. Coping is an intentional behavioral, physiological, or cognitive modification in response to undesirable changes in one's environment or emotions [4]. Therefore, a key goal of cognitive behavioral therapy (CBT) is to increase one's ability to cope in anxiety

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Conflict of Interest

Philip C. Kendall receives royalties from sales of treatment materials related to anxiety in youth. He publishes and distributes the program that was included in the study.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent

Informed consent was obtained from all individual participants included in the study.

provoking situations [6]. Specifically, anxious youth first learn coping strategies and then practice using coping skills in stressful situations [7–9].

Evidence indicates that CBT produces a favorable effect on coping [10]. Findings suggest that an increase in youths perceived coping efficacy, rather than actual coping ability, mediates treatment gains [11–13]. For example, in the Child/Adolescent Anxiety Multimodal Treatment Study (CAMS) [14], which compared CBT, sertraline, their combination, and pill placebo, change in self-perceived coping efficacy, not anxious self-talk, mediated gains in all treatments [11]. Similarly, change in perceived control, not specific coping strategies, mediated the effects of group CBT for youth anxiety [12]. Although anxiety symptoms and coping efficacy are conceptually related [5], coping efficacy describes the youth's ability to help him/herself feel better in response to anxiety. Given the importance of increasing a youth's perceived coping efficacy, a measurement of coping efficacy is needed to monitor a youth's progress in treatment.

The Coping Questionnaire (CQ) – parent and child versions – measures youth's perceived coping efficacy in anxiety provoking situations, individualized to each youth [7]. A diagnostician/clinician selects three situations the youth finds most anxiety inducing using information from the parent and youth report during Anxiety Disorders Interview Schedule for Children (ADIS-C/P) [15]. Parent and youths then rate the youth's ability to cope in each situation. This ideographic approach differs from measures of coping that assess specific coping responses (e.g., the Coping Strategies Checklist for Children [16], the Self-Report Coping Scale [17], the Ways of Coping Checklist for Adolescents [18], and the Response to Stress Questionnaire [19]) and measures of coping self-efficacy in response to specific types of anxiety (e.g., Self-Efficacy Questionnaire for School Situations [20], and Self-Efficacy Ratings for Coping with Panic, [21]). The individualized and transdiagnostic nature of the CQ has contributed to its frequent use to monitor treatment-produced change for the variety of anxiety disorders (e.g., [7, 8, 11, 14, 22, 23].

The CQ is consistent with many of Hunsley and Mash's criteria of an ideal evidence-based assessment (EBA) tool: it is a brief, feasible way for practitioners/clinicians to measure treatment response [24]. The CQ is a low burden assessment which is beneficial given time constraints of gathering assessment information when implementing and disseminating empirically supported treatments [25–27]. Its ease of administration makes it ideal for integrating into youth anxiety treatment services and conducting outcome evaluations, which are becoming increasingly important in public health systems [25]. Finally, the CQ is free: affordable for both high- and low-resourced mental health settings [25, 27]. The CQ is a person-centered, problem-focused measure, offering information that can guide treatment [26–29]. For example, situations on the CQ can be a target for behavioral experiments/exposure tasks. Following the gold-standard for youth assessment [30], the CQ has a parent and child version. Parents and youth often disagree about treatment targets [31]. By having parents and youth assess the youth's coping efficacy in the same situations, the therapist can discuss discrepancies. Integrating CQ ratings from the parent and the youth can improve decision making [30].

The CQ compliments nomothetic measures of youth anxiety [32–34]. As an idiographic assessment [35], the CQ has a standard assessment template, but individually selected situations that are relevant to the youth. Idiographic assessments increase the contextual relevance of measures, which may increase the uptake of the measure [36].

There are few other idiographic measures that provide a reliable assessment of clinically relevant concerns [29]. Like the CQ, but not specific to anxiety, the Top Problems Assessment (TPA) [34] is an example of a transdiagnostic, problem-specific idiographic measure. The TPA asks parents and youth to identify the problems that are of greatest concern and then rate the severity of these problems weekly throughout treatment. There are two main differences between the CQ and the TPA: the CQ assesses youth's coping efficacy specific to anxiety (the TPA assesses problem severity), and the parent and youth versions of the CQ use the same items (TPA does not always have the same items). In other words, the TPA measures problem severity, whereas the CQ measures the youth's perceived ability to help him/herself feel better and manage an anxiety situation. Despite these differences, both measures adhere to Mash and Hunsley's recommendation that EBA tools are disorder- or problem-specific so that they can be used to assess the delivery of services to treat specific disorders [27].

However, for the CQ to be used in EBA, it must have sound psychometric properties. Previous studies have reported internal consistency, retest reliability, sensitivity to treatment, and construct validity of the CQ [7, 37–39]. In a sample of anxious youth enrolled in CBT ($N = 72$), Cronbach's alpha for the CQ-C was .60 [39]. In a separate study of CBT for anxious youth, retest reliability over a two month period was .46, although the sample in this study was small ($N = 20$) [7]. The CQ has demonstrated sensitivity to treatment for anxious youth [14, 37]. Construct validity of the CQ has been reported: coping efficacy mediated treatment effects in CAMS [11] and in CBT in a community clinic in Hong Kong [22]. However, convergent and divergent validity, criterion validity, and parent-child agreement on the CQ have yet to be examined in a large sample.

The present research uses a large sample to examine the psychometric properties of the CQ to assess the degree to which the CQ can be used in EBA. To inspect reliability, we examined internal consistency, test-retest reliability over four weeks, and parent-child agreement. We hypothesized that internal consistency would be modest (the measures taps three distinct situations), that retest reliability would be positive and substantial, and that parent-child agreement would be modest, as is often found [30]. We also examined convergent and divergent validity by correlating the CQ with theoretically related measures (e.g., Multidimensional Anxiety Scale for Children) [40] and unrelated measures (e.g., Child Behavior Checklist rule-breaking subscale) [41]. We inspected criterion validity by correlating the CQ with severity ratings from the gold-standard structured diagnostic interview (ADIS-C/P) [15]. We examined the concurrent validity by correlating the CQ situation with the ADIS clinical severity ratings (CSR). Finally, we contribute to the CQ construct validity by comparing the change in CQ scores to the change in other measures of outcome following treatment. Additionally, we regressed a global measure of anxiety improvement (Child Global Impression-Improvement [42]) on the treatment produced

change in anxiety symptoms (Pediatric Anxiety Rating Scale [43]) and coping efficacy (CQ-C/CQ-P).

Methods

Participants

Participants ($N = 442$; age 7–17, $M_{age} = 11.06$ years, $SD_{age} = 2.76$ years) were from the CAMS study. To be included in CAMS, participants had to meet diagnostic criteria for separation anxiety disorder, social anxiety disorder, and/or generalized anxiety disorder. Exclusion criteria included a current diagnosis of a major depressive or substance use disorder; unmedicated attention deficit hyperactivity disorder (ADHD); a lifetime history of bipolar, psychotic, or pervasive developmental disorder; a failed adequate trial of CBT or an SSRI; non-English speaking; youth pregnancy; severe school refusal behavior in the past term; and current suicidality or homicidality. See Compton et al. for more details on inclusion and exclusion criteria [44]. Participants were not included if they had missing CQ data.

In the present sample, 50% of participants ($n = 221$) were female and 50% were male ($n = 221$); 75% of participants ($n = 332$) were children (aged 7–10), and 25% of participants ($n = 110$) were adolescents (aged 11–17). The racial/ethnic composition of the sample was 79% white ($n = 351$), 9% black ($n = 39$), 3% Asian ($n = 12$), 1% Native Hawaiian/Other Pacific Islander ($n = 2$), 1% Native American ($n = 5$), and 8% “other” ($n = 33$); 89% of the sample identified as non-Hispanic ($n = 395$) and 11% of the sample identified as Hispanic ($n = 47$). The sample was largely from a high socioeconomic background ($n = 351$; 79%), defined as scoring a 40 or higher on the four factor Hollingshead Index [45].

In terms of anxiety disorders targeted in CAMS, 245 youth (55%) met criteria for separation anxiety disorder, 353 youth (80%) met criteria for social anxiety disorder, and 353 youth (80%) met criteria for generalized anxiety disorder. Participants had high rates of comorbidity: 81% ($n = 359$) met diagnostic criteria for more than one anxiety disorder, and 55% ($n = 247$) met diagnostic criteria for at least one other (non-anxiety) psychological disorder. Outside of comorbidity for the target anxiety disorders, ADHD was the most common comorbidity ($n = 51$; 12%), followed by oppositional defiant disorder ($n = 40$; 9%), and obsessive-compulsive disorder ($n = 37$; 8%). Only 0.8% ($n = 4$) of participants met diagnostic criteria for a specific phobia. Relative to other samples [46], rates of depression ($n = 5$; 1%) were low due to the exclusion criteria.

Measures

Coping Questionnaire-child and parent versions (CQ).—The CQ [7] assesses youth’s perceived ability to cope on a three-item, individualized measure. Three situations that are most anxiety provoking to the youth are identified according to information the parents and youth provide. The coping situations are the same for the CQ child report form (CQ-C) and CQ parent report form (CQ-P). On separate forms, parents and youth rate the youth’s ability to make him/herself less upset during each anxiety-provoking situation on a 7-point scale, ranging from 1 (*not at all able to help myself or him/herself*) to 7 (*completely*

able to help myself or him/herself). Items are summed to create a total CQ-C and CQ-P score; higher scores indicate higher coping efficacy. The CQ-C and CQ-P are included in the Appendix.

Anxiety Disorders Interview Schedule for Children, child and parent versions (ADIS-C/P).—The ADIS-C/P [15] is a semi-structured diagnostic interview in accordance with DSM-IV criteria. Composite diagnoses are determined using information from separate interviews with the parent and the youth. Diagnosticians rate the youth's level of impairment (CSR) on a 9-point scale ranging from 0 (*no impairment*) to 8 (*severe impairment*). Higher CSR scores indicate greater impairment, and a CSR ≥ 4 indicates meeting diagnostic criteria. The final diagnoses use the higher CSR scores from the parent and youth interviews, and the disorder(s) with the highest CSR score is the principal diagnosis/are the co-principal diagnoses. Analyses in this paper use the highest CSR. Interrater agreement, for independent diagnosticians, for the ADIS-C/P ranged from $\kappa = .92$ for principal diagnoses, $\kappa = .80$ – 1.0 for individual anxiety disorders, and $\kappa = .65$ – $.77$ for comorbid disorders [47]. The anxiety disorders section demonstrated excellent convergence with a questionnaire (Multidimensional Anxiety Scale for Children) [40] for social anxiety disorder, separation anxiety disorder, panic disorder, but not generalized anxiety disorder [48, 49].

Child Global Impression-Severity and Improvement (CGI-S; CGI-I).—The CGI-S and the CGI-I [42] are single-item measures respectively of anxiety severity and anxiety improvement after treatment. In the CGI-S, an independent evaluator (IE) who completed the structured interview rates the youth's anxiety on a scale of 1 (*normal, not at all ill*) to 7 (*extremely ill*); lower scores indicate less severe anxiety. In the CGI-I, the IE also rates the improvement in the youth's anxiety following treatment on a scale of 1 (*very much improved*) to 7 (*very much worse*). In the CAMS report, the correlation between the CGI-S and the IE Pediatric Anxiety Rating Scale total score [43] was $.78$ [50].

Children's Global Assessment Scale (CGAS).—IEs assigned youth a CGAS score to indicate the youth's overall level of functioning and impairment [51]. Scores range from 1 to 100, with higher scores indicating higher levels of functioning. The CGAS has been shown to be stable over time (retest intraclass coefficient = 0.85) and to discriminate between youth in inpatient and outpatient settings [51].

Child Anxiety Impact Scales (CAIS-C/P).—The CAIS-C/P [52] is a 27-item youth self-report and parent-report measures of anxiety-related difficulties in children's school, social, and family/home functioning. The parent or youth rates how much difficulty the youth has on each item on a scale ranging from 0 (*not at all*) to 3 (*very much*). Scores are summed, with higher scores indicating higher functional impairment from anxiety. In two samples of youth who met criteria for an anxiety disorder, Cronbach's alpha ranged from $.70$ to $.90$ and the CAIS-C/P was significantly correlated with measures of internalizing problems and impairment [52, 53].

Pediatric Anxiety Rating Scale (PARS).—The PARS is a clinician-administered measure of anxiety severity and interference [43]. Parents, youth, and an IE rate seven items on a 6-point scale ranging from 0 (*none*) to 5 (*extreme*). Six of the seven items are summed

to produce a total score, ranging from 0 to 30, with higher scores indicating more severe anxiety symptoms. In a sample of youth receiving psychopharmacological treatment for anxiety, Cronbach's alpha was .64, the 4-week retest reliability was .55, convergent validity ranged from $r = .22$ to .61, and divergent validity ranged from $r = .18$ to .33 [43]. In this sample, Cronbach's alpha on the child, parent, and IE version ranged from .69 to .77.

Multidimensional Anxiety Scale for Children (MASC).—The MASC [40] is a 39-item youth self-report and parent-report measure of the youth's anxiety symptoms. Youth and their parents completed separate questionnaires on which they rated how often the child has been feeling certain ways over the past two weeks on a 4-point Likert-type scale ranging from 0 (*never*) to 3 (*often*). Total scores range from 0 to 117, with higher scores indicating higher levels of anxiety. In the full CAMS sample, Cronbach's alpha was between .87 and .89 for parent and child versions of the MASC [54]. In a sample of youth who met criteria for an anxiety disorder or ADHD, retest reliability coefficients between .79 and .93 [40]. The MASC correlated with other measures of youth anxiety, supporting its convergent validity [54, 55], and can be used to predict diagnoses based on structured interviews [48].

Child Behavior Checklist (CBCL).—The CBCL is a 113-item measure of child emotional and behavioral symptoms [41]. Parents rated each item on a 3-point scale ranging from 0 (*not true*) to 2 (*often true*). The checklist provides a *T* score for eight subscales, including the anxious/depressed, rule-breaking, and aggressive subscales. The authors made an a priori decision to only include the CBCL rule-breaking and aggressive subscales in this study because these subscales have the least amount of overlap with anxious symptomology. Cronbach's alpha for these subscales ranged from .86 to .89, and retest reliability coefficients range from .82 to .91 [56]. Evidence for concurrent and divergent validity has been reported [41]. The CBCL scores can be used to identify the presence of an anxiety disorder [57]. Internal consistency of the CBCL anxious/depressed subscale was .83 (Cronbach's alpha) in the CAMS sample [58].

Procedure

Participants were recruited for CAMS via community mental health centers, schools, community organizations, churches, and advertisement in local media. Participants were from one of six university medical centers/clinics in geographically diverse areas from the United States. Youth and their parents completed diagnostic interviews, and if eligible, they were randomized to receive CBT (*Coping Cat program*) [59], sertraline, their combination, and pill placebo, returned to complete questionnaires assessing the baseline assessment of the youth's functioning. Participants completed all measures at baseline assessment, at post-treatment (12 weeks after baseline assessment), three months after treatment (three-month follow-up; 24 weeks after baseline assessment) and six months after treatment (six-month follow-up; 36 weeks after baseline assessment). They also completed a subset of measures every four weeks during treatment. This study examined all measures at baseline, post-treatment assessment for the CQ, CGI-S, CGI-I, and PARS, three- and six-month follow up for the CQ, and the four-week assessment on the CQ for participants in the pill placebo condition. Subjects provided assent and at least one parent provided written informed consent. All study procedures were approved by the institutional review board of each

university, and by the CAMS data and safety monitoring board. Internal consistency, retest reliability, parent-child agreement, and convergent, divergent, and criterion validity were assessed using pretreatment data. Retest reliability was assessed using CQ responses at pretreatment and four weeks later. Sensitivity to treatment and construct validity was assessed using responses on the CQ, CGI-S, CGI-I, and PARS at post-treatment. The CQ was coded as missing if the participant did not complete all three CQ items. Additionally, because we did not have access to all questionnaires, we used listwise deletion to exclude cases with mismatches.

Results

Table 1 presents the means and standard deviations of all study measures. The majority of CQ-P respondents were the child's mother ($n = 362$, 84%), followed by both parents ($n = 32$, 7%), the child's father ($n = 31$, 7%), grandparents ($n = 3$, 1%), aunt/uncle ($n = 2$, 0.5%), and step-parent ($n = 1$, 0.2%). There was no significant difference between respondent gender for the CQ-C, $t(436) = 1.76$, $p = .08$, $d = 0.19$, or the CQ-P, $t(439) = 0.65$, $p = .52$, $d = 0.07$. Additionally, there was no significant difference between children (aged 7–12) and adolescents (aged 13–17) for the CQ-C, $t(436) = 1.77$, $p = .08$, $d = 0.17$, or CQ-P, $t(439) = 0.59$, $p = .56$, $d = 0.06$. Therefore, we did not examine the psychometric properties of the CQ separately for children and adolescents.

Reliability

Cronbach's alphas were computed. Alpha for the CQ-C was .69, and alpha for the CQ-P was .66. The correlation between the CQ-C and CQ-P estimated parent-youth agreement, $r = .46$, $p < .001$ ($n = 437$). According to a paired-sample t -test, parents rated the youth's coping efficacy significantly lower than the youth rated their own coping efficacy, $t(470) = 9.93$, $p < .001$. Retest reliability at four weeks was assessed using scores from participants randomized to placebo: CQ-C was .40, $p < .01$ ($n = 56$); CQ-P was .48, $p < .001$ ($n = 53$).

Validity

The CQ-C and CQ-P were correlated with multiple measures of anxiety severity (i.e., CGI-S; PARS; MASC; CBCL anxious/depressed subscale) and interference (i.e., CGAS; CAIS; PARS) to evaluate convergent validity, and measures of externalizing behavior (i.e., CBCL rule-breaking and aggressive subscales) to evaluate discriminant validity. A Bonferroni correction was applied to adjust for multiple comparisons (18 comparisons, critical p -value = .003). As seen in Table 2, convergent and discriminant validity was supported: the CQ-C and CQ-P were significantly correlated in the expected direction with all measures, with the exception of the CQ-C and CQ-P and the CBCL anxious/depressed subscale, which were not significantly correlated. The CQ-C and CQ-P also were not significantly correlated with the other CBCL subscales.

Criterion validity was assessed by correlating the CQ-C and CQ-P with the highest CSR on the ADIS. Given the typically-reported lack of parent-child agreement on the ADIS (Grills & Ollendick, 2003), the highest CSR from the parent ADIS was compared to the CQ-P, and the highest CSR from the youth ADIS was compared to the CQ-C. As expected, the CQ-C

and CQ-P were significantly negatively correlated with the highest CSR, such that lower levels of coping efficacy were associated with higher levels of symptom severity (CQ-C: $r = -.21, p < .001$; CQ-P: $r = -.18, p < .001$).

Sensitivity to treatment was analyzed with paired-samples *t*-tests to examine the difference between CQ scores at baseline and CQ scores at post-treatment, three-month follow-up, and six-month follow-up. Relative to baseline, CQ-P scores were significantly higher at post-treatment, $t(391) = 31.29, p < .001, d = 1.58$, at three-month follow-up, $t(336) = 31.79, p < .001, d = 1.73$, and at six-month follow-up, $t(333) = 32.85, p < .001, d = 1.80$. Similarly, relative to baseline, CQ-C scores were significantly higher at post-treatment, $t(388) = 25.41, p < .001, d = 1.29$, at three-month follow-up, $t(332) = 26.27, p < .001, d = 1.44$, and at six-month follow-up, $t(326) = 27.17, p < .001, d = 1.50$. These results indicate that the CQ is sensitive to treatment effects and indicates sustained improvement from treatment across a six-month follow-up period.

Construct validity was assessed by correlating the change in CQ-C and CQ-P from pre- to post-treatment with the change in (a) CGI-S and (b) PARS, and the CGI-I. A Bonferroni correction was applied to adjust for multiple comparisons (8 comparisons, critical p -value = .006). The CQ-C and CQ-P were significantly correlated in the expected direction with all measures (Table 3). Additionally, we performed two hierarchical regressions with CGI-I as the dependent variable. The change in PARS from baseline to week 12 was entered in the first step; and the change in PARS and the CQ-P/CQ-C from baseline to week 12 was entered in the second step. As shown in Table 4, even after controlling for change in anxiety symptoms, change in coping efficacy significantly predicted improvement in anxiety symptoms following treatment.

Discussion

Results suggest that the CQ has acceptable psychometric properties, making it a useful, idiographic measure that can be administered to track youth anxiety and assess treatment gains. Along with the TPA [34], the present results suggest that individualized, idiographic measures can have sound psychometric properties. The CQ can be used as an EBA tool to assess perceived coping efficacy in both treatment and research settings. Given its brevity and specificity to the individual youth, it may be particularly helpful to track treatment progress on a weekly basis, and in research and practice settings.

Internal consistency, retest reliability, and parent-child agreement were sufficient. Cronbach's alpha (e.g., .69) was only slightly lower than the standard cut off of $\alpha = .70$, but this was expected given that the CQ is only three items [60]. The internal consistency of the CQ was higher in this study than previously reported [39]. Nonetheless, this lower internal reliability could mean that the CQ may underestimate effect sizes in clinical research [60].

Retest reliability of the CQ was not as high as expected, even though CQ responses at baseline assessment were significantly correlated with responses four weeks later. However, retest reliability was assessed using participants who were on a pill placebo, and approximately one quarter of those participants reporting improved anxiety. Although the

pill placebo is medically inert, it does have psychological features: a higher retest correlation would be expected when the interest interval contains no intervention. The retest coefficient in this study was higher than previously reported [7].

Parent and youth ratings on the CQ were significantly correlated, but relative to the youth's ratings, parents rated the youth's coping efficacy significantly lower. Parent-child agreement was higher than expected: a meta-analysis of multiple informant agreement found that the average correlation between parent and youth reported internalizing symptoms was .26 [30]. The higher parent-child agreement may be because coping efficacy is demonstrated in an observable format (e.g., avoidance of the anxiety-provoking situation), unlike other internalizing symptoms. Indeed, parent-child agreement is higher for observable symptoms [30, 61]. In practice, the youth's self-perception of their own ability to cope may be central.

The convergent, divergent, and criterion validity of the CQ also were supported. A significant correlation was found between the CQ and related measures of anxiety symptoms and functioning, and the CQ was not significantly correlated with measures of externalizing symptoms. Although these findings are supportive, there was an exception: the CQ-C and CQ-P were not significantly correlated with the CBCL anxious/depressed subscale. This lack of a significant correlation may reflect the fact that the anxious/depressed subscale appears to measure negative affectivity more broadly and has fewer items related to anxiety relative to depression [41]. Supporting criterion validity, the CQ was significantly correlated with the highest ADIS CSR rating. In other words, the brief ideographic measure produced scores was consistent with the severity scores gathered from the 3–4 hour structured interview.

Supporting the CQ's construct validity, there was a large effect of treatment on perceived coping efficacy: coping efficacy, as measured by the CQ, significantly improved following treatment, and these improvements were still significant at both the three- and six-month follow-ups. Additionally, treatment improvement measured by the CQ was significantly correlated with more time-demanding measures of anxiety symptoms, severity, and improvement following treatment. Finally, even after controlling for change in anxiety symptoms, change in coping efficacy significantly predicted overall improvement in anxiety following treatment. These findings support previously reported results on the CQ's predictive validity and sensitivity to treatment [7, 14, 22, 37, 38]. Taken together, the data suggest that the CQ can be a useful measure to assess perceived coping efficacy in anxious youths.

Limitations warrant mention. First, participants were recruited for a principal diagnosis of separation anxiety disorder, social anxiety disorder, or generalized anxiety disorder. The absence of a non-anxious group did not allow analyses to determine whether the CQ can be used to differentiate between anxiety disordered and non-disordered youth. Additionally, the absence of a waitlist control group prevented an analysis of retest reliability in the absence of even a pill placebo treatment. Second, the CAMS dataset did not include other measures of coping or the Top Problems Scale, so we were unable to compare the CQ to other measures of coping strategies or self-efficacy, or to another idiographic measure of youth symptoms. Third, the sample was predominately Caucasian from middle-high

socioeconomic backgrounds and thus generalizations are limited to similar groups. Additionally, participants were from university/hospital specialty clinics. To be implemented as part of EBA in community mental health settings, future work would benefit from including participants from diverse backgrounds (e.g. low-income, ethnic minority, non-English speaking). The results of a study of coping efficacy in a clinical and sub-clinical sample of anxious youth in Hong Kong suggested that the Cantonese Chinese translation of CQ also has adequate psychometric properties [22].

Future studies could examine the degree to which using information from the CQ in treatment enhances treatment outcomes. Using weekly CQ assessment, for example, could help to identify those features of treatment most impactful on the trajectory of beneficial change. Similarly, weekly use of the CQ data could enhance treatment, as was done with the TPA [34]. The results of the present study support the utility of the CQ in assessing change in perceived coping efficacy associated with treatment.

Summary

The Coping Questionnaire (CQ) – child and parent version – is an idiographic measure of youth's perceived ability to cope in anxiety provoking situations. Parents and youths rate the youth's capacity to make themselves less upset in situations individualized to the youth. Participants ($N = 442$; aged 7–17) met DSM-IV criteria for separation anxiety disorder, generalized anxiety disorder, or social anxiety disorder. The internal consistency of the CQ was supported ($\alpha = .66$ to $.69$), and retest reliability and parent/child agreement were, as expected, modest ($r = .40$ to $.48$; $.46$, respectively). The child and parent CQ scores were significantly correlated in the expected direction with measures of (a) anxiety symptoms and (b) functioning, providing evidence of convergent and divergent validity. The criterion validity of the CQ also was supported: the child and parent CQ scores were significantly correlated with the clinical severity rating of the youth's principal diagnosis on the Anxiety Disorders Interview Schedule for Children. The change in CQ scores following treatment was significantly correlated with treatment changes on anxiety severity and symptoms ($r = -.37$ to $-.60$). Results support the CQ as a measure to assess coping efficacy in anxious youths as part of evidence-based assessment.

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Appendix

Coping Questionnaire – Instructions

Select three situations that are most anxiety provoking to the youth are identified according to information the parents and youth provide. The coping situations are the same for the CQ child report form (CQ-C) and CQ parent report form (CQ-P).

Sum the three items on the CQ-C and the three items on the CQ-P to create a total CQ-C and CQ-P score. Higher scores indicate higher coping efficacy.

This measure was first cited in:

Kendall, P. C. (1994). Treating anxiety disorders in children: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 62, 100–110.
doi:[10.1037/0022-006X.62.1.100](https://doi.org/10.1037/0022-006X.62.1.100)

Psychometric properties of this measure are published in:

Crane, M. E., & Kendall, P. C. (2019). Psychometric evaluation of the child and parent versions of the Coping Questionnaire. Manuscript under review.

Child ID #: _____ Date: _____

Coping Questionnaire-Child (CQ-C)

The examiner will explain the sample question to you. Be sure you know how to use the rating scale (from 1 to 7). Practice: You go to a restaurant with your parents, and you want to order your favorite meal, but you find out they don't have it. Are you able to help yourself feel less upset?

1 2 3 4 5 6 7
Not at all able to help myself Somewhat able to help myself Completely able to help myself

Suppose you were really upset a half hour later after finishing dinner when everyone else had forgotten about it. That would be a 1. But suppose you could quickly change your mind and find something else to order that you would like. Then that's a 7. Or suppose you would be upset when you found out you couldn't have what you wanted, but you could enjoy your new choice once it arrived. That would be a 4.

1. When you are:
Are you able to help yourself feel less upset?

1 2 3 4 5 6 7
Not at all able to help myself Somewhat able to help myself Completely able to help myself

2. When you are:
Are you able to help yourself feel less upset?

1 2 3 4 5 6 7
Not at all able to help myself Somewhat able to help myself Completely able to help myself

3. When you are:
Are you able to help yourself feel less upset?

1 2 3 4 5 6 7
Not at all able to help myself Somewhat able to help myself Completely able to help myself

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Child ID #: _____ Date: _____

Coping Questionnaire-Parent (CQ-P)

The examiner will fill in the blanks with 3 anxiety provoking situations identified from the diagnostic interview (the same 3 situations rated on the Coping Questionnaire-Child).

1. When your child:
How well is he/she able to help himself/herself feel less upset?

1 2 3 4 5 6 7
Not at all able to help himself/herself Somewhat able to help himself/herself Completely able to help himself/herself

2. When your child:
How well is he/she able to help himself/herself feel less upset?

1 2 3 4 5 6 7
Not at all able to help himself/herself Somewhat able to help himself/herself Completely able to help himself/herself

3. When your child:
How well is he/she able to help himself/herself feel less upset?

1 2 3 4 5 6 7
Not at all able to help himself/herself Somewhat able to help himself/herself Completely able to help himself/herself

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References

1. Merikangas KR, He J-P, Burstein M, Swanson SA, Avenevoli S, Cui L, Benjet C, et al. (2010) Lifetime prevalence of mental disorders in U.S. adolescents: Results from the national comorbidity survey replication–adolescent supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry* 49:980–989. [PubMed: 20855043]
2. Swan AJ, Kendall PC (2016) Fear and missing out: Youth anxiety and functional outcomes. *Clin Psychol Sci Pract* 23:417–435.
3. Wittchen H-U (2002) Generalized anxiety disorder: prevalence, burden, and cost to society. *Depress Anxiety* 16:162–171. [PubMed: 12497648]
4. Compas BE, Connor-Smith JK, Saltzman H, Thomsen AH, Wadsworth ME (2001) Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychol Bull* 127:87–127. [PubMed: 11271757]
5. Bandura A (1988) Self-efficacy conception of anxiety. *Anxiety Research* 1:77–98.
6. Prins PJM, Ollendick TH (2003) Cognitive change and enhanced coping: Missing mediational links in cognitive behavior therapy with anxiety-disordered children. *Clin Child Fam Psychol Rev* 6:87–105. [PubMed: 12836579]
7. Kendall PC (1994) Treating anxiety disorders in children: Results of a randomized clinical trial. *J Consult Clin Psychol* 62:100–110. [PubMed: 8034812]
8. Kendall PC, Flannery-Schroeder E, Panichelli-Mindel SM, Southam-Gerow M, Henin A, Warman M (1997) Therapy for youths with anxiety disorders: A second randomized clinical trial. *J Consult Clin Psychol* 65:366–380. [PubMed: 9170760]
9. Kendall PC, Robin JA, Hedtke KA, Suveg C, Flannery-Schroeder E, Gosch E (2005) Considering CBT with anxious youth? Think exposures. *Cogn Behav Pract* 12:136–148.
10. Chu BC, Harrison TL (2007) Disorder-specific effects of CBT for anxious and depressed youth: A meta-analysis of candidate mediators of change. *Clin Child Fam Psychol Rev* 10:352–372. [PubMed: 17985239]
11. Kendall PC, Cummings CM, Villabø MA, Narayanan MK, Treadwell K, Birmaher B, et al. (2016) Mediators of change in the Child/Adolescent Anxiety Multimodal Treatment Study. *J Consult Clin Psychol* 84:1–14. [PubMed: 26460572]
12. Pereira AI, Muris P, Roberto MS, Marques T, Goes R, Barros L (2017) Examining the mechanisms of therapeutic change in a cognitive-behavioral intervention for anxious children: The role of interpretation bias, perceived control, and coping strategies. *Child Psychiatry Hum Dev* 49:73–85.
13. Creswell C, Murray L, Cooper P (2013) Interpretation and expectation in childhood anxiety disorders: Age effects and social specificity. *J Abnorm Child Psychol* 42:453–465.
14. Walkup JT, Albano AM, Piacentini J, Birmaher B, Compton SN, Sherrill JT, et al. (2008) Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *N Engl J Med* 359:2753–2766. [PubMed: 18974308]
15. Silverman WK, Albano AM (1996) Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions. Graywind Publications, Boulder, CO
16. Ayers TS, Sandier IN, West SG, Roosa MW (1996) A dispositional and situational assessment of children's coping: Testing alternative models of coping. *J Pers* 64:923–958. [PubMed: 8956518]
17. Causey DL, Dubow EF (1992) Development of a Self-Report Coping Measure for Elementary School Children. *J Clin Child Psychol* 21:47–59.
18. Halstead M, Johnson SB, Cunningham W (1993) Measuring coping in adolescents: An application of the Ways of Coping Checklist. *J Clin Child Psychol* 22:337–344.
19. Connor-Smith JK, Compas BE, Wadsworth ME, Thomsen AH, Saltzman H (2000) Responses to stress in adolescence: measurement of coping and involuntary stress responses. *J Consult Clin Psychol* 68:976–992. [PubMed: 11142550]
20. Heyne D, King N, Tonge B, Rollings S, Pritchard M, Young D, et al. (1998) The Self-efficacy Questionnaire for School Situations: Development and psychometric evaluation. *Behav Change* 15:31–40.

21. Ollendick TH (1995) Cognitive behavioral treatment of panic disorder with agoraphobia in adolescents: A multiple baseline design analysis. *Behav Ther* 26:517–531.
22. Lau W-Y, Chan CK-Y, Li JC-H, Au TK-F (2010) Effectiveness of group cognitive-behavioral treatment for childhood anxiety in community clinics. *Behav Res Ther* 48:1067–1077. [PubMed: 20696421]
23. Villabø MA, Narayanan M, Compton SN, et al. (2018) Cognitive-behavioral therapy for youth anxiety: An effectiveness evaluation in community practice. *J Consult Clin Psychol* 86:751–764. [PubMed: 30138014]
24. Hunsley J, Mash EJ (2007) Evidence-based assessment. *Annu Rev Clin Psychol* 3:29–51. [PubMed: 17716047]
25. Beidas RS, Stewart RE, Walsh L, Lucas S, Downey MM, Jackson K, et al. (2015) Free, brief, and validated: Standardized instruments for low-resource mental health settings. *Cogn Behav Pract* 22:5–19. [PubMed: 25642130]
26. Glasgow RE, Riley WT (2013) Pragmatic measures: What they are and why we need them. *Am J Prev Med* 45:237–243. [PubMed: 23867032]
27. Mash EJ, Hunsley J (2005) Evidence-based assessment of child and adolescent disorders: issues and challenges. *Journal of Clinical Child & Adolescent Psychology* 34:362–379.
28. Eisen SV, Dickey B (1996) Mental health outcome assessment: The new agenda. *Psychotherapy* 33:181–189.
29. Ng MY, Weisz JR (2016) Annual Research Review: Building a science of personalized intervention for youth mental health. *J Child Psychol Psychiatry* 57:216–236. [PubMed: 26467325]
30. De Los Reyes A, Augenstein TM, Wang M, Thomas SA, Drabick DAG, Burgers DE (2015) The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychol Bull* 141:858–900. [PubMed: 25915035]
31. Yeh M, Weisz JR (2001) Why are we here at the clinic? Parent-child (dis)agreement on referral problems at outpatient treatment entry. *J Consult Clin Psychol* 69:1018–1025. [PubMed: 11777105]
32. Barlow DH, Nock MK (2009) Why can't we be more idiographic in our research? *Perspect Psychol Sci* 4:19–21. [PubMed: 26158824]
33. Hunsley J (2015) Translating evidence-based assessment principles and components into clinical practice settings. *Cogn Behav Pract* 22:101–109.
34. Weisz JR, Chorpita BF, Frye A, et al. (2011) Youth top problems: Using idiographic, consumer-guided assessment to identify treatment needs and to track change during psychotherapy. *J Consult Clin Psychol* 79:369–380. [PubMed: 21500888]
35. Haynes SN, Mumma GH, Pinson C (2009) Idiographic assessment: Conceptual and psychometric foundations of individualized behavioral assessment. *Clin Psychol Review* 29:179–191.
36. Proctor EK, Landsverk J, Aarons GA, Chambers D, Glisson C, Mittman B (2009) Implementation research in mental health services: An emerging science with conceptual, methodological, and training challenges. *Adm Policy Ment Health* 36:24–34. [PubMed: 19104929]
37. Kendall PC, Southam-Gerow MA (1996) Long-term follow-up of a cognitive-behavioral therapy for anxiety-disordered youth. *J Consult Clin Psychol* 64:724–730. [PubMed: 8803362]
38. Kendall PC, Safford S, Flannery-Schroeder E, Webb A (2004) Child anxiety treatment: Outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *J Consult Clin Psychol* 72:276–287. [PubMed: 15065961]
39. Peterman JS, Carper MM, Kendall PC (2019) Testing the Habituation-Based Model of Exposures for Child and Adolescent Anxiety. *J Clin Child Adolesc Psychol* 48:S34–S44. [PubMed: 27355694]
40. March JS, Parker JDA, Sullivan K, Stallings P, Conners K (1997) The Multidimensional Anxiety Scale for Children (MASC): Factor structure, reliability, and validity. *J Am Acad Child Adolesc Psychiatry* 36:554–565. [PubMed: 9100431]
41. Achenbach TM (1991) Manual for the Child Behavior Checklist 4–18 and 1991 Profile. University of Vermont, Burlington, VT
42. Guy W (1976) ECDEU assessment manual for psychopharmacology.

43. The Research Units on Pediatric Psychopharmacology Anxiety Study Group (2002) The Pediatric Anxiety Rating Scale (PARS): Development and psychometric properties. *J Am Acad Child Adolesc Psychiatry* 41:1061–1069. [PubMed: 12218427]
44. Compton SN, Walkup JT, Albano AM, Piacentini JC, Birmaher B, Sherrill JT, et al. (2010) Child/Adolescent Anxiety Multimodal Study (CAMS): rationale, design, and methods. *Child Adolesc Psychiatry Ment Health* 4:1. [PubMed: 20051130]
45. Hollingshead AB (1975) Four Factor Index of Social Status. Unpublished manuscript, New Haven, CT
46. Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A (2003) Prevalence and development of psychiatric disorders in childhood and adolescence. *Arch Gen Psychiatry* 60:837–844. [PubMed: 12912767]
47. Lyneham HJ, Abbott MJ, Rapee RM (2007) Interrater reliability of the Anxiety Disorders Interview Schedule for DSM-IV: Child and parent version. *J Am Acad Child Adolesc Psychiatry* 46:731–736. [PubMed: 17513985]
48. Villabø MA, Gere M, Torgersen S, March JS, Kendall PC (2012) Diagnostic efficiency of the child and parent versions of the Multidimensional Anxiety Scale for Children. *Journal of Clinical Child & Adolescent Psychology* 41:75–85.
49. Wood JJ, Piacentini JC, Bergman RL, McCracken J, Barrios V (2002) Concurrent validity of the anxiety disorders section of the Anxiety Disorders Interview Schedule for DSM-IV: Child and parent versions. *J Clin Child Adolesc Psychol* 31:335–342. [PubMed: 12149971]
50. Peris TS, Compton SN, Kendall PC, Birmaher B, Sherill J, March J, et al. (2015) Trajectories of change in youth anxiety during cognitive behavior therapy. *J Consult Clin Psychol* 83:239–252. [PubMed: 25486372]
51. Shaffer D, Gould MS, Brasic J, Ambrosini P, Fisher P, Bird H, et al. (1983) A Children's Global Assessment Scale (CGAS). *Arch Gen Psychiatry* 40:1228–1231. [PubMed: 6639293]
52. Langley AK, Bergman RL, McCracken J, Piacentini JC (2004) Impairment in childhood anxiety disorders: Preliminary examination of the Child Anxiety Impact Scale–Parent Version. *Journal of Child and Adolescent Psychopharmacology* 14:105–114. [PubMed: 15142397]
53. Langley AK, Falk A, Peris T, Wiley JF, Kendall PC, Ginsburg G, et al. (2013) The Child Anxiety Impact Scale: Examining parent- and child-reported impairment in child anxiety disorders. *Journal of Clinical Child & Adolescent Psychology* 43:579–591. [PubMed: 23915200]
54. Wei C, Hoff A, Villabø MA, Peterman J, Kendall PC, Piacentini J, et al. (2014) Assessing anxiety in youth with the Multidimensional Anxiety Scale for Children (MASC). *J Clin Child Adolesc Psychol* 43:566–578. [PubMed: 23845036]
55. Baldwin JS, Dadds MR (2007) Reliability and validity of parent and child versions of the multidimensional anxiety scale for children in community samples. *J Am Acad Child Adolesc Psychiatry* 46:252–260. [PubMed: 17242629]
56. Achenbach TM, Rescorla LA (2001) Manual for the ASEBA School-age Forms Profiles: An Integrated System of Multi-informant Assessment. ASEBA, Burlington, VT
57. Aschenbrand SG, Angelosante AG, Kendall PC (2010) Discriminant validity and clinical utility of the CBCL with anxiety-disordered youth. *J Clin Child Adolesc Psychol* 34:735–746.
58. Read KL, Settapani CA, Peterman J, Kendall PC, Compton S, Piacentini J, et al. (2014) Predicting Anxiety Diagnoses and Severity with the CBCL-A: Improvement Relative to Other CBCL Scales? *J Psychopathol Behav Assess* 37:100–111.
59. Kendall PC, Hedtke KA (2006) Cognitive-behavioral therapy for anxious children: Therapist manual, 3rd ed. Ardmore, PA
60. Schmitt N (1996) Uses and abuses of coefficient alpha. *Psychol Assess* 8:350–353.
61. Comer JS, Kendall PC (2004) A symptom-level examination of parent–child agreement in the diagnosis of anxious youths. *J Am Acad Child Adolesc Psychiatry* 43:878–886. [PubMed: 15213589]

Table 1**Means and Standard Deviations of Measures**

	Parent Report			Child Report			Independent Evaluator		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
CQ, total sample									
CQ, baseline	441	2.57	1.12	438	3.20	1.40			
CQ, post-treatment	393	5.02	1.32	393	5.37	1.32			
CQ, three-month follow-up	338	5.28	1.21	336	5.60	1.17			
CQ, six-month follow-up	335	5.43	1.23	329	5.72	1.24			
CQ, pill placebo only									
CQ, baseline	57	2.57	1.12	57	3.17	1.33			
CQ, week 4	54	3.33	1.22	57	3.98	1.45			
CGI-S									
CGI-S, baseline							442	5.04	0.71
CGI-S, post-treatment							396	2.95	1.47
CGI-I, post-treatment							396	2.28	1.06
CGAS, baseline							442	50.57	6.92
CAIS, baseline	442	24.09	13.10	441	16.44	12.81			
PARS									
PARS, baseline	442	18.43	4.74	436	15.81	5.80	442	19.19	4.10
PARS, post-treatment	397	8.81	6.50	396	7.79	6.21	397	9.54	6.63
MASC, baseline	442	64.65	15.43	442	45.88	18.99			
CBCL, baseline									
Anxious/depressed	434	68.06	8.77						
Rule-breaking	434	54.06	5.75						
Aggressive	434	56.73	7.51						
Highest ADIS CSR, baseline							442	5.93	0.84

Note. CQ = Coping Questionnaire; CGI-S = Child Global Impressions-Severity; CGI-I = Child Global Impressions-Improvement; CGAS = Children's Global Assessment Scale; CAIS = Child Anxiety Impact Scale; PARS = Pediatric Anxiety Rating Scale; MASC = Multidimensional Anxiety Scale for Children; CBCL = Child Behavior Checklist; ADIS CSR = clinical severity rating on the ADIS.

Table 2

Convergent and Discriminant Validity Correlations of the CQ

	Parent		Child	
	<i>n</i>	<i>r</i>	<i>n</i>	<i>r</i>
CGI-S	441	-.25 *	438	-.24 *
CGAS	441	.35 *	438	.38 *
CAIS	441	-.19 *	437	-.21 *
PARS, independent evaluator	441	-.36 *	438	-.33 *
PARS, parent/child report	441	-.37 *	432	-.45 *
MASC	441	-.21 *	438	-.21 *
CBCL, anxious/depressed	441	-.14	431	-.04
CBCL, rule-breaking	433	.06	431	.11
CBCL, aggressive	433	-.004	431	.08

Note.

* significant with Bonferroni correction (18 comparisons, critical p -value = .003); CGI-S = Child Global Impressions-Severity; CGAS = Children's Global Assessment Scale; PARS= Pediatric Anxiety Rating Scale; MASC = Multidimensional Anxiety Scale for Children; CBCL = Child Behavior Checklist.

Table 3

Correlation between change scores for the CQ and the CGI-I, and change scores for the CGI-S and PARS

	Parent		Child	
	<i>n</i>	<i>r</i>	<i>n</i>	<i>r</i>
CGI-I	392	-.57 *	389	-.37 *
CGI-S	392	-.60 *	388	-.41 *
PARS, independent evaluator	392	-.60 *	389	-.42 *
PARS, child/parent report	392	-.57 *	384	-.46 *

Note.

* significant with Bonferroni correction (8 comparisons, critical p -value = .006); Change scores examine the difference between scores at week 12 and baseline; CGI-S = Child Global Impressions-Severity; CGI-I = Child Global Impressions-Improvement; PARS = Pediatric Anxiety Rating Scale

Table 4

Results of Hierarchical Regression of CGI-I Scores at Week 12

Variable	β	t	R^2	R^2
Equation 1				
Step 1			.49	.49
PARS, parent report	.70	19.31**		
Step 2			.54	.05
PARS, parent report	.55	13.15**		
CQ, parent report	-.26	-6.18**		
Overall Model	$F(2, 388) = 223.31, p < .001$			
Equation 2				
Step 1			.33	.33
PARS, child report	.57	13.54**		
Step 2			.34	.02
PARS, child report	.51	10.82**		
CQ, child report	-.14	-2.97*		
Overall Model	$F(2, 380) = 97.93, p < .001$			

Note.

*
 $p < .01$;**
 $p < .001$;

PARS = change in the Pediatric Anxiety Rating Scale from baseline to week 12; CQ = change in the Coping Questionnaire from baseline to week 12.