

The Central Relationship Questionnaire (CRQ): Psychometric Properties in a Swedish Sample and Cross-Cultural Studies

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The Core Conflictual Relationship Theme (CCRT) method is one of the most widely used and tested instruments developed within a psychoanalytic context for assessing central relationship patterns or characteristic patterns of relating to others. The Swedish version of the Central Relationship Questionnaire (CRQ), a recently developed self-report instrument based on the CCRT, was tested in a sample of Swedish psychology students (31 men, 60 women) and compared with responses of Swedish outpatients (15 men, 15 women) and North American students (49 men, 49 women). The subscales of the Swedish CRQ showed acceptable internal consistency and correlated with each other in a predictable fashion, displaying a pattern of intercorrelations similar to the English version. The CRQ showed meaningful patterns of correspondence with self-reported interpersonal problems as well as meaningful differences between the Swedish students and Swedish outpatients, indicating preliminary convergent and divergent validity.

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In psychotherapy research there is a need for theoretically based instruments that capture the essential qualities of a given form of treatment and that are easy to administer and use. During recent decades there has been an upsurge in the development of instruments for assessing various psychodynamic constructs. For heuristic purposes, a distinction can be made between instruments that mainly assess structure (e.g., defenses, level of object relations) and those that assess content (e.g., conflicts, wishes, or fears). Of course, content and structure are interrelated: through the structure one can obtain clues to the specific psychodynamic content important to a person (e.g., specific fears and how the individual responds to them), and through an individual's accounts of different "actions" (content), structure can be inferred. As Schafer¹ noted, "Whether one calls it structure or content thus depends not on what one ob-

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serves, but on the kinds of questions one is asking” (p. 888).

The structure-oriented measures include Vaillant’s instruments for assessing defenses;^{2,3} Perry and Cooper’s Defense Mechanism Rating Scales;^{4,5} Piper and colleagues’ Quality of Object Relations Scale;^{6,7} and Weinryb and co-workers’ Karolinska Psychodynamic Profile^{8,9} for assessing various aspects of character from clinical interviews.

Among the content-oriented instruments developed within a psychodynamic frame of reference, the Core Conflictual Relationship Theme (CCRT) method is one of the most widely used and tested (for a review of content-oriented measures, see Barber and Crits-Christoph¹⁰). In the Freudian tradition, Murray¹¹ and Luborsky et al.^{12,13} postulated that every individual has a very limited number of central relationship patterns, which refer to characteristic patterns of wishes towards other people, ways of relating to others, and modes of experiencing interpersonal interactions. According to Luborsky’s theoretical position, central relationship patterns can be divided into three components: the individual’s wishes or desires in his or her relationships (Wish); the actual, anticipated, or fantasized responses from other people (Response from Other [RO]); and the actual, anticipated, or fantasized responses of the person to other people’s responses (Response of Self [RS]). In its original form, the CCRT, which consists of the most prevalent Wish, RO, and RS evidenced across narratives of multiple interactions, is formulated by independent judges. The CCRT can be derived from naturally free-flowing narration from psychotherapy sessions or from the Relationship Anecdote Paradigms (RAP)¹⁴ interview. In the RAP, the data needed to compose the CCRT are obtained by means of a specialized interview that focuses on accounts of relationship episodes (i.e., descriptions of specific interactions with others). Barber et al.¹⁵ found evidence supporting the premise that CCRTs extracted from the RAP are similar to those rated from transcripts of sessions early in treatment.

In the original method, each patient’s CCRT is tailor-made in the sense that each judge relies on her or his own personal terminology to formulate the CCRT. The tailor-made CCRT is difficult to use in research studies because it allows each judge to define the patient’s Wishes, ROs, and RSs in an idiosyncratic manner. Thus, it is difficult or impossible, for example, to compare or average ratings from different judges. To

solve this problem, the tailor-made method has been supplemented by a system of standard categories of Wishes, ROs, and RSs that each judge rates.¹⁶ From a psychometric point of view, these categories represent an improvement over the tailor-made system. Nevertheless, the CCRT remains a cumbersome and costly method, given that it requires transcribed data and independent judges’ CCRT ratings, and this limits its usefulness in large-scale empirical investigations.

A self-report instrument, the Central Relationship Questionnaire (CRQ),¹⁷ was developed to measure the CCRT construct in large-scale investigations. In accordance with the CCRT, the CRQ assesses three main components: Wishes, ROs, and RSs. The Wish component has 7 subscales, the RO component has 7, and the RS component has 8. The subscales are presented in Table 1, along with the number of items within each subscale. The CRQ subscales can be divided into two categories: they are either positive or negative in valence. Positively toned subscales are in the direction of positive affiliation, respect for one’s own and the other’s autonomy, and/or positive feeling states, whereas negatively toned subscales are in the direction of antagonistic relationships, a lack of respect for one’s own and the other’s autonomy, and/or negative feeling states. Thus, subscales such as the Wish “To Be in Conflict,” the Response from Other “Hurts Me,” and the Response of Self “Am Domineering” might be perceived as positive by the respondent, but they are still classified as negative in valence according to these definitions.

The CRQ components have been differentiated into meaningful subscales that were internally consistent and evidenced significant stability over a one-year period.¹⁷ Moreover, the CRQ demonstrated preliminary convergent and divergent validity with instruments measuring interpersonal problems and symptomatology.¹⁷ The CRQ also has shown significant consistency in measuring central relationship patterns across different types of significant others.¹⁸

An important measurement issue for any instrument is whether it is reliable and valid in different samples and cultures. To this aim, we administered the CRQ to three different samples: a Swedish student sample, a Swedish outpatient sample, and a North American student sample. The overall purpose of the present study was to determine whether a number of the psychometric properties that Barber et al.¹⁷ reported for the original English version of the CRQ could be replicated

with the Swedish version of the CRQ. Hence, the specific objective of the present study was fourfold.

The first aim of the study was to test the internal consistency of each subscale of the Swedish CRQ version as well as the pattern of intersubscale correlations. On the basis of findings from the original version of the CRQ,¹⁷ we expected that positively toned CRQ subscales would be positively correlated with each other, negatively toned subscales would be positively correlated with each other, and positively toned subscales would be inversely correlated with negatively toned subscales.

The second aim was to test the convergent and divergent validity of the Swedish CRQ version by examining its relationship to a measure of interpersonal problems. Consistent with the procedure employed with the original version of the CRQ,¹⁷ correlations were examined between the CRQ and the Inventory of Interpersonal Problems (IIP),¹⁹ which measures the presence and severity of various types of interpersonal problems (specifically, problems with being domineer-

ing, vindictive, cold, socially avoidant, nonassertive, exploitable, overly nurturant, and intrusive). We hypothesized that the positively toned CRQ subscales would correlate negatively with the overall number of interpersonal problems, while the negatively toned CRQ subscales would correlate positively with the overall number of interpersonal problems. A second issue was to ascertain whether the Swedish CRQ evidences the same pattern of correlations with the IIP scales as the original version of the CRQ did.¹⁷

The third aim of the study was to determine whether the CRQ subscales could discriminate between the Swedish outpatients and Swedish students. Barber *et al.*¹⁷ demonstrated that certain CRQ subscales differentiated a group of students from a group of outpatients who had received at least one DSM psychiatric diagnosis. Barber and his colleagues restricted their group comparison to a limited set of CRQ subscales; the present study expands this comparison. We predicted that students would have higher mean scores on positively toned CRQ subscales, whereas patients would have

TABLE 1. Internal consistency and means and standard deviations of CRQ subscales in three samples

Component and Subscale	Items per Subscale	Swedish Students (n=91)			Swedish Outpatients (n=30)		North American Students (n=98)	
		α	r (item-total) ^a	mean \pm SD	α	mean \pm SD	α	mean \pm SD
Wish								
+ To Be Supportive	16	0.95	0.37-0.85	6.22 \pm 0.79	0.94	6.17 \pm 0.91	0.89	6.25 \pm 0.67
+ To Be Independent	5	0.81	0.35-0.82	6.41 \pm 0.71	0.78	6.07 \pm 0.96	0.89	6.17 \pm 1.25
- To Be in Conflict	10	0.85	0.21-0.74	2.08 \pm 0.81	0.85	2.22 \pm 0.92	0.84	1.48 \pm 0.52
+ To Be Recognized	3	0.75	0.51-0.71	6.17 \pm 0.96	0.65	5.81 \pm 1.30	0.83	5.52 \pm 1.43
+ To Be Trusted	5	0.83	0.44-0.84	6.25 \pm 0.94	0.85	5.59 \pm 1.63	0.90	6.12 \pm 1.34
+ To Be Sexual	7	0.95	0.55-0.94	6.48 \pm 0.80	0.96	5.87 \pm 1.45	0.92	6.13 \pm 1.04
+ Not To Be Abandoned	3	0.84	0.68-0.75	6.06 \pm 1.27	0.93	5.78 \pm 1.92	0.96	5.82 \pm 1.86
Response from other (RO)								
- Hurts Me	3	0.84	0.69-0.74	2.74 \pm 1.30	0.90	3.44 \pm 1.71	0.88	2.37 \pm 1.02
+ Loves Me	13	0.89	0.33-0.80	5.43 \pm 0.87	0.96	4.64 \pm 1.41	0.91	5.88 \pm 0.79
+ Is Independent	5	0.72	0.12-0.79	5.53 \pm 0.87	0.35	5.58 \pm 0.76	0.85	5.50 \pm 1.05
- Controls Me	5	0.88	0.61-0.80	2.55 \pm 1.30	0.93	3.18 \pm 1.80	0.78	2.25 \pm 0.86
- Is Out of Control	6	0.91	0.67-0.86	2.06 \pm 1.10	0.91	2.21 \pm 1.19	0.82	2.06 \pm 0.91
- Is Anxious	4	0.85	0.57-0.77	2.06 \pm 1.12	0.87	2.44 \pm 1.28	0.89	2.39 \pm 1.10
+ Is Sexual	3	0.96	0.88-0.93	5.72 \pm 1.09	0.98	4.38 \pm 1.97	0.95	5.57 \pm 1.34
Response of self (RS)								
+ Feel Valued	9	0.94	0.57-0.88	5.51 \pm 1.08	0.96	4.64 \pm 1.49	0.94	5.63 \pm 1.01
+ Care for Other	10	0.89	0.53-0.75	5.66 \pm 0.80	0.89	5.39 \pm 0.92	0.87	6.04 \pm 0.70
- Feel Anxious	13	0.96	0.68-0.86	2.52 \pm 1.35	0.97	3.69 \pm 1.74	0.91	2.20 \pm 0.84
- Feel Disliked	4	0.71	0.39-0.61	2.05 \pm 0.84	0.79	2.83 \pm 1.37	0.77	1.99 \pm 0.69
- Avoid Conflict	3	0.89	0.73-0.83	3.12 \pm 1.52	0.72	4.08 \pm 1.45	0.87	4.27 \pm 1.53
+ Am Independent	5	0.66	0.22-0.54	4.70 \pm 1.04	0.78	4.26 \pm 1.20	0.68	5.15 \pm 0.88
+ Am Sexual	5	0.89	0.58-0.84	5.49 \pm 1.06	0.86	4.60 \pm 1.45	0.87	5.55 \pm 1.02
- Am Domineering	2	0.67	0.51	3.40 \pm 1.34	0.53	2.98 \pm 1.37	0.72	2.96 \pm 1.16

♦ Note: + = positively toned subscale; - = negatively toned subscale; α = Cronbach's alpha coefficient.

^aRange of correlations between individual item scores and total subscale score.

higher mean scores on the negatively toned subscales. There is one exception to this global prediction. One of the negatively toned CRQ subscales assesses dominance, yet clinical experience seems to indicate that patients, who are often lacking in self-esteem, have problems of submissiveness. Consequently, patients are expected to evidence less dominance than students. In the present study, discriminant validity will be tested by comparing the Swedish outpatients with the Swedish students (nonpatients).

The fourth purpose of the study was to perform an exploratory cross-cultural comparison by examining the CRQ responses of the Swedish and North American student samples. We wanted to examine whether some of the cultural stereotypes of the two countries would be evident in the students' CRQ responses. For example, North American culture values autonomy and achievement, whereas Swedish culture is more open about sexuality. Although it might be expected that students from each country would score higher on CRQ subscales that captured their countries' values, we preferred to consider the objective of this analysis exploratory rather than predictive given that cultural stereotypes were based on conjecture. In addition, a gender comparison was also included in this analysis given that women and men were hypothesized to have different orientations to relationships (see, for example, Gilligan²⁰).

METHODS

The Translation Process

The CRQ was translated into Swedish by the first author (R.M.W.). A translation group consisting of 5 to 8 experienced researchers and clinicians then discussed each translated item and compared it with the original version in order to arrive at a satisfactory formulation in everyday Swedish. In some cases, modifications had to be made in the original wording, following Brislin's²¹ recommendations for cross-cultural modifications of research instruments. Once a preliminary translation of the CRQ had been agreed upon, it was administered to a few psychiatric inpatients by a research nurse, who discussed any problems and ambiguities in the formulation of the items with each patient after completion of the questionnaire. Using the feedback from the patients, the translation group modified ambiguities in the text.

This process was reiterated until a satisfactory final translation of all the CRQ items was agreed upon.

Participants

The psychometric properties of the CRQ were studied in two Swedish samples and one North American sample.

The Swedish students were undergraduates enrolled in a course in a psychology department ($n=91$; 31 men, 60 women). Only age categories were available for this sample: 24 years or younger, 25 to 29 years, 30 or more years. The mode age category was 30 or more years for the entire sample. One man and three women were homosexual. These participants were included in the analyses because there was no reason to believe that responses should differ in any systematic way on the basis of a person's sexual orientation. Ethnicity is rarely coded in studies in Sweden unless the study specifically focuses on that issue; the overwhelming majority of the Swedish students were most likely white.

The Swedish psychiatric outpatients were 30 patients (15 men and 15 women) in group psychotherapy at a department specializing in the treatment of substance abuse. Participants' ages ranged from 23 to 62, with a mean age (\pm SD) of 41.0 ± 9.5 . Four men and one woman were homosexual, and these participants were included in the analyses under the same rationale cited above concerning the Swedish students. All outpatients were white.

The 98 North American participants were 49 heterosexual couples recruited from students and nonfaculty staff at an urban university campus as part of a larger study. The participants' ages ranged from 19 to 37, with a mean age of 25 ± 3.83 years. In the sample, 81% of the participants were white, 13% were Asian American, 3% were Hispanic American, 2% were African American, and 1% were of other ethnicities. Sixty-two percent of the sample were students (of these, 58% were graduate students and 42% were undergraduates).

In order to determine whether the three samples differed by age, the age for each sample was coded into the three age categories that were available for the Swedish student sample: 24 or fewer years, 25 to 29 years, 30 or more years. The Swedish outpatient sample was significantly older than the Swedish student sample. Specifically, the frequency distribution of the Swedish outpatient sample (ranging from youngest to oldest) was 1, 2, and 27 (3%, 7% and 90%), compared with 21, 22,

and 48 (23%, 24% and 53%) in the Swedish student sample (Cochran-Mantel-Haenszel $\chi^2 = 11.9$, $df = 1,121$, $P < 0.001$; this is a chi-square test for use when one variable is ordinal²²). The Swedish student sample was significantly older than the North American student sample; in the latter, the frequency distribution was 49, 34, and 13 (51%, 35%, and 14%; Cochran-Mantel-Haenszel $\chi^2 = 30.0$, $df = 1,187$, $P < 0.001$). Because of these significant age differences, we used age as a covariate when comparing these groups.

Measures and Procedure

The *Central Relationship Questionnaire* (CRQ)^{17,18} assesses central relationship patterns in terms of three main components: Wishes, Responses from Other (ROs), and Responses of Self (RSs). The CRQ consists of 49 Wish items, 39 RO items, and 51 RS items. These items correspond to 7 Wish subscales (To Be Supportive, To Be Independent, To Be in Conflict, To Be Recognized, To Be Trusted, To Be Sexual, Not To Be Abandoned); 7 RO subscales (Hurts Me, Loves Me, Is Independent, Controls Me, Is Out of Control, Is Anxious, Is Sexual); and 8 RS subscales (Feel Valued, Care for Other, Feel Anxious, Feel Disliked, Avoid Conflict, Am Independent, Am Sexual, Am Domineering). Each item is rated on a 7-point scale ranging from 1 (never true or typical of me) to 7 (always true or typical of me). Thus, higher scores represent a higher presence of a particular Wish, Response from Other, or Response of Self.

In the couple sample described above, Foltz and Barber (unpublished manuscript, 2000) found that the actual similarity between partners' central relationship patterns, defined as the correlation between the two partners' self-descriptions at the level of the individual subscales of the CRQ, was small. More specifically, the average correlations between the partners were 0.11 for Wishes, 0.25 for ROs, and 0.27 for RSs. These results suggest that the potential intercorrelation between the CRQ scores of the partners is minimal and is not likely to affect the present results.

The *Inventory of Interpersonal Problems* (IIP)¹⁹ was used to assess problems with interpersonal relationships. The IIP consists of 127 items describing perceived interpersonal difficulties. For each item, participants are asked to rate how distressed they feel on a 5-point scale, ranging from 0 (not at all) to 4 (extremely). The circumplex model of interpersonal be-

havior²³⁻²⁶ conceptualizes personality traits as arranged in a circular fashion in a two-dimensional space defined by the orthogonal dimensions of affiliation (warm-cold) and control (dominance-submissiveness). Using this model, Alden *et al.*²⁷ constructed eight circumplex scales for the IIP. Each scale describes a different type of interpersonal problem—specifically, problems of being domineering, vindictive, cold, socially avoidant, nonassertive, exploitable, overly nurturant, or intrusive. The Swedish version of the IIP²⁸ has been shown to have acceptable internal consistency, to have construct validity for its circumplex properties, and to show meaningful patterns of correspondence with self-report and interview-based instruments developed within other theoretical frameworks for assessing personality characteristics. In the present study, the 64-item circumplex version was used.

The Swedish students completed the questionnaires on a voluntary basis after a psychology lecture. The Swedish outpatients completed the questionnaires as part of their semiannual evaluation. The North American students were recruited via advertisements posted on a large university campus to participate in a study examining interpersonal relationships. Only the North American students were paid for their participation in the study. The CRQ was given to all three samples. The Swedish students also completed the IIP.

RESULTS

Internal Consistency

Internal consistency of the CRQ subscales was assessed with Cronbach's alpha coefficient and correlations of individual item scores with subscale total scores (item-total correlations) for the Swedish student sample. The indices of internal consistency for the Swedish student sample as well as the means and standard deviations for all three samples are presented in Table 1. Cronbach's alpha coefficient ranged from 0.75 to 0.95 for the seven Wish subscales (mean = 0.85), 0.72 to 0.96 for the seven RO subscales (mean = 0.86), and 0.66 to 0.96 for the eight RS subscales (mean = 0.83). Internal consistency was acceptable for 17 of the 22 subscales, with alphas above 0.80;²⁹ it was lower but still respectable at more than 0.70 for the Wish To Be Recognized, the RO Is Independent, and the RS Feel Disliked. Alphas were slightly below 0.70 for two RS subscales: Am

Independent (0.66) and Am Domineering (0.67). Generally, similar results were obtained in the other two samples, with the exception of the RO Is Independent, which was extremely low in the Swedish outpatient sample ($\alpha = 0.35$). In the Swedish student sample, item-total correlations ranged from 0.21 to 0.94 for the Wish items (there were three items with item-total correlations at or below 0.4, one each from the subscales To Be Supportive, To Be Independent, and To Be In Conflict). For the RO items, item-total correlations ranged from 0.12 to 0.93 (there was one item from the subscale Loves Me and two items from Is Independent with item-total correlations at or below 0.4). Finally, for the RS items, the item-total correlations ranged from 0.22 to 0.88. (There were two items with item-total correlations at or below 0.4, one each from the subscales Feel Disliked and Am Independent.)

Intersubscale Correlations

Pearson correlations were computed between the CRQ subscales in order to examine whether the pattern of intercorrelations was similar to that obtained with the original version of the CRQ.¹⁷ The intersubscale correlations are presented separately for the Wishes, ROs, and RSs in Table 2. All of the subscales correlated in the predicted directions. That is, positively toned subscales correlated positively with other positively toned subscales and inversely with negatively toned subscales, whereas negatively toned subscales correlated positively with other negatively toned subscales. For some subscales the correlations were very high, particularly between the Wish subscales To Be Supportive and To Be Sexual (0.75), the RO subscales Hurts Me and Loves Me (-0.70), the RO subscales Hurts Me and Is Out of Control (0.71), the RS subscales Feel Valued and Feel Anxious (-0.81), and the RS subscales Am Independent and Feel Anxious (-0.70). The RS subscale Am Domineering, which consists of only two items, generally showed very low correlations with the other RS subscales. Overall, the pattern of intersubscale correlations appears similar to that reported for the original version of the CRQ¹⁷ with the exception of intersubscale correlations involving the RS subscale Avoid Conflict.

In order to quantify this comparison, we contrasted the matrix of intersubscale correlations for the present study with the same matrix reported for the original version of the CRQ (Barber et al.,¹⁷ their Table 1). The signs of the corresponding correlations were in the same

direction across the two samples for 64/70 (91%) of the correlations that composed the entire matrix. In addition, the average absolute difference in the magnitude of the correlations across the two samples was 0.13. The negatively toned ROs seemed to be more strongly intercorrelated in the Swedish student sample. However, most of the discrepancy between the two studies seemed to stem from the RS subscale Avoid Conflict: four of the six corresponding correlations with signs in the opposite direction involved the RS Avoid Conflict, and the average absolute difference between the two correlation matrices excluding the RS Avoid Conflict was 0.11. A Kruskal-Wallis test comparing the mean correlations of these two matrices (including the RS Avoid Conflict) suggested that the correlation matrices were not significantly different ($\chi^2 = 0.13$, $df = 70$). Furthermore, the root mean square residual calculated from the differences between the corresponding correlations from the Swedish student sample and the sample reported in Barber et al.¹⁷ was 0.16. The root mean square residual dropped to 0.13 after the seven correlations involving the RS Avoid Conflict were excluded. Although the root mean square residual is larger than the criterion used to judge the goodness of fit between two correlation matrices (root mean square residual less than 0.10 according to Cole³⁰), it is not substantially different from it. Thus, with the exception of the RS Avoid Conflict, it appears overall that the intersubscale correlations for the Swedish and the original versions of the CRQ are not notably different.

Convergent and Divergent Validity

The average IIP score, which can be conceived as a general measure of interpersonal distress, correlated in the predicted direction with all the CRQ subscales; that is, positively toned CRQ subscales were inversely correlated with the number of interpersonal problems, whereas the negatively toned CRQ subscales correlated in a positive fashion with the overall level of interpersonal problems (Table 3). When a more conservative critical significance level of $P < 0.01$, two-tailed, was used to control for the likelihood of making a Type I error, 12 of the 22 correlations were significant.

To examine the concordance (i.e., replication) of the correlation matrices between the CRQ and the IIP, the correlation matrix from the present study was contrasted with the same matrix reported for the original version of the CRQ (Barber et al.,¹⁷ their Table 3). The

average absolute difference in the magnitude of the corresponding correlations across the two studies was 0.11. The sign of the corresponding correlations was in the same direction for 174 of the 198 correlations (88%). Of the 24 instances where the sign of the corresponding correlation was in the opposite direction, 18 involved Wish subscales. Furthermore, 17 of the 24 cases where the sign of the corresponding correlations was in the opposite direction involved correlations that were basically zero, the corresponding correlations ranging from +0.10 to -0.10. A Kruskal-Wallis test comparing the mean correlation of these two matrices suggested that the correlation matrices were not significantly different across the two samples ($\chi^2 = 1.55$, $df = 198$). Finally, the root mean square residual calculated from the differences between the corresponding correlations from the Swedish student sample and sample reported in Barber *et al.*¹⁷ was 0.13. Again, while the root mean square residual is larger than the criterion used to judge the goodness of fit between two correlation matrices (less than 0.10, according to Cole³⁰), it is not substantially different from it. Thus, generally, the pattern of associations between the IIP and the Swedish version

of the CRQ was not significantly different from that reported with the original version of the CRQ.

Comparison Between Swedish Students and Swedish Outpatients

In order to address the issue of discriminant validity, we used mixed-models analysis of variance³¹ (a more general version of general linear models) to test the prediction that Swedish outpatients, relative to Swedish students, would endorse significantly higher levels of the negatively toned CRQ subscales and significantly lower levels of the positively toned CRQ subscales and the RS Am Domineering. Because scores on the dependent variables might differ by participants' gender and age, these factors were incorporated into the model. A mixed-models analysis of variance was conducted on the CRQ subscales, adjusting for unequal group variances with Group (Swedish outpatients versus Swedish students) and Gender serving as independent variables, and Age entered as a covariate. The presentation of the results of the mixed-models analysis

TABLE 2. Intercorrelations among the CRQ subscales in the Swedish student sample ($n = 91$)

Component and Subscale	1	2	3	4	5	6	7	8
Wish	+	+	-	+	+	+	+	
1. + To Be Supportive	1.00							
2. + To Be Independent	0.54***	1.00						
3. - To Be in Conflict	-0.57***	-0.22*	1.00					
4. + To Be Recognized	0.49***	0.58***	-0.14	1.00				
5. + To Be Trusted	0.58***	0.64***	-0.42***	0.45***	1.00			
6. + To Be Sexual	0.75***	0.61***	-0.25*	0.54***	0.42***	1.00		
7. + Not To Be Abandoned	0.62***	0.42***	-0.33**	0.33**	0.61***	0.52***	1.00	
Response from other (RO)	-	+	+	-	-	-	+	
1. - Hurts Me	1.00							
2. + Loves Me	-0.70***	1.00						
3. + Is Independent	-0.32**	0.18	1.00					
4. - Controls Me	0.69**	-0.51***	-0.25*	1.00				
5. - Is Out of Control	0.71***	-0.56***	-0.32**	0.66***	1.00			
6. - Is Anxious	0.65***	-0.62***	-0.31**	0.61***	0.69***	1.00		
7. + Is Sexual	-0.26*	0.46***	0.12	-0.20	-0.26*	-0.31**	1.00	
Response of self (RS)	+	+	-	-	-	+	+	-
1. + Feel Valued	1.00							
2. + Care for Other	0.66***	1.00						
3. - Feel Anxious	-0.81***	-0.53***	1.00					
4. - Feel Disliked	-0.67***	-0.50***	0.75***	1.00				
5. - Avoid conflict	-0.43***	-0.25*	0.51***	0.34***	1.00			
6. + Am Independent	0.59***	0.42***	-0.70***	-0.52***	-0.30**	1.00		
7. + Am Sexual	0.49***	0.53***	-0.46***	-0.44***	-0.21*	0.47***	1.00	
8. - Am Domineering	0.05	-0.20	-0.02	0.29**	0.01	0.08	-0.18	1.00

◆ Note: + = positively toned subscale; - = negatively toned subscale.
* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

of variance focused on the Group by CRQ Subscale interaction, the Gender by CRQ Subscale interaction, and the three-way interaction between Group, Gender, and CRQ Subscale, although all main effects and the remaining interactions were included in the model in order to adjust for their effects. The Wish, RO, and RS subscales were analyzed separately, given that they were conceived as three distinct components of central relationship patterns. Finally, all significant effects were followed by post hoc tests where a more conservative critical significance level of $P < 0.01$ was used in order to reduce the likelihood of making a Type I error.

Wishes: The results of the mixed-models analysis of variance on the seven Wish subscales yielded a significant interaction between Group and Wish ($F = 3.06$, $df = 6, 120$, $P < 0.01$), although the two-way interaction between Gender and Wish ($F = 1.95$, $df = 6, 120$, $P < 0.10$), the three-way interaction between Group, Gender, and Wish ($F = 1.22$, $df = 6, 120$), and the covariate Age ($F = 0.40$, $df = 2, 115$) were not significant. Although the omnibus test for the Group by Wish

interaction was significant, suggesting differences between Swedish outpatients and students at the multivariate level, none of the post hoc tests involving the individual Wish subscales were significant at $P < 0.01$, two-tailed. Nevertheless it is worth noting, although not statistically significant, that Swedish outpatients generally endorsed higher levels of the negatively toned Wish subscales and lower levels of the positively toned Wish subscales than the Swedish students, as predicted (see Table 1).

Responses from other: The results of the mixed-models analysis of variance conducted on the seven RO subscales yielded a significant interaction between Group and RO ($F = 2.41$, $df = 6, 120$, $P < 0.05$); however, the two-way interaction between Gender and RO ($F = 1.88$, $df = 6, 120$, $P = 0.08$), the three-way interaction between Group, Gender, and RO ($F = 0.85$, $df = 6, 120$), and the covariate Age ($F = 0.48$, $df = 2, 115$) were not significant. Post hoc comparisons at $P < 0.01$, two-tailed, suggested that outpatients perceived their romantic partners as acting significantly less loving and less sexual compared

TABLE 3. Correlations between the CRQ subscales and the Inventory of Interpersonal Problems (IIP) in the Swedish student sample ($n = 91$)

Component and Subscale	Domin-eering	Vindictive	Cold	Socially Avoidant	Non-assertive	Exploitable	Overly Nurturant	Intrusive	IIP Average
Wish									
+ To Be Supportive	-0.04	-0.19	-0.08	-0.13	-0.21	-0.17	-0.12	-0.04	-0.20
+ To Be Independent	0.03	-0.25	-0.14	-0.15	-0.03	-0.07	-0.05	-0.04	-0.13
- To Be in Conflict	0.13	0.07	0.16	0.22	0.33*	0.17	0.24	0.00	0.27*
+ To Be Recognized	0.09	-0.22	-0.22	-0.15	-0.09	-0.07	-0.06	0.12	-0.10
+ To Be Trusted	-0.10	-0.14	-0.08	-0.08	-0.12	-0.05	0.02	-0.07	-0.12
+ To Be Sexual	0.11	-0.16	-0.17	-0.26	-0.18	-0.25	-0.20	0.02	-0.22
+ Not To Be Abandoned	0.01	-0.06	-0.11	-0.02	-0.01	-0.06	0.04	-0.01	-0.04
Response from other (RO)									
- Hurts Me	0.16	0.18	0.25	0.23	0.35**	0.23	0.23	0.12	0.36**
+ Loves Me	0.09	-0.16	-0.30*	-0.20	-0.26	-0.20	-0.25	-0.11	-0.28*
+ Is Independent	-0.22	-0.26	-0.22	-0.16	-0.16	-0.10	-0.02	-0.02	-0.21
- Controls Me	0.00	0.23	0.36**	0.45**	0.37**	0.39**	0.34**	0.05	0.44**
- Is Out of Control	-0.01	0.07	0.18	0.19	0.20	0.27*	0.18	0.00	0.23
- Is Anxious	0.09	0.14	0.32*	0.22	0.23	0.28*	0.25	0.07	0.32*
+ Is Sexual	-0.07	-0.24	-0.43**	-0.31*	-0.09	-0.05	-0.18	-0.23	-0.30*
Response of self (RS)									
+ Feel Valued	0.10	-0.16	-0.36**	-0.27*	-0.28*	-0.27*	-0.27*	-0.15	-0.33*
+ Care for Other	-0.11	-0.27*	-0.35**	-0.23	-0.22	-0.07	-0.03	-0.07	-0.25
- Feel Anxious	0.11	0.23	0.32*	0.25	0.31*	0.30*	0.30*	0.14	0.39**
- Feel Disliked	0.18	0.17	0.33*	0.23	0.28*	0.19	0.29*	0.07	0.35**
- Avoid Conflict	0.08	0.24	0.27*	0.28*	0.31	0.44**	0.28*	0.04	0.39**
+ Am Independent	-0.08	-0.22	-0.33*	-0.38**	-0.31*	-0.26	-0.34*	-0.14	-0.41**
+ Am Sexual	-0.17	-0.10	-0.11	-0.30*	-0.30*	-0.19	-0.30*	-0.22	-0.35**
- Am Domineering	0.33*	0.25	0.15	0.04	0.15	0.09	0.22	0.14	0.26

◆ Note: + = positively toned subscale; - = negatively toned subscale.
* $P < 0.01$, two-tailed; ** $P < 0.001$, two-tailed.

with students' perceptions of their partners (see Table 1). With the exception of the subscale *Is Independent*, Swedish outpatients tended to endorse, albeit not significantly so, higher levels of the negatively toned RO subscales and lower levels of the remaining positively toned RO subscales than the Swedish students, as predicted.

Responses of self: The results of the mixed-models analysis of variance of the eight RS subscales suggested that the interactions between Group and RS ($F=3.70$, $df=7,120$, $P<0.01$), and between Gender and RS ($F=4.13$, $df=7,120$, $P<0.001$) were both significant. The three-way interaction between Group, Gender, and RS ($F=1.68$, $df=7,120$, $P<0.12$), and the covariate for Age ($F=2.74$, $df=2,115$, $P=0.07$) were not significant. None of the post hoc comparisons for the interaction between Gender and RS subscale were significant at $P<0.01$, two-tailed. Post hoc analyses of the significant interaction between RS and Group revealed that outpatients reported they felt significantly more anxious, disliked, and avoidant of conflict and also felt significantly less valued and less sexual with their romantic partners than students did (each difference was significant at $P<0.01$, two-tailed; see Table 1 for group means). In the remaining nonsignificant comparisons, Swedish outpatients scored lower than Swedish students on the RS subscales *Care for Other*, *Am Independent*, and *Am Domineering*, as predicted.

Comparison Between Swedish and North American Student Samples

In order to explore cross-cultural differences, we conducted a mixed-model analysis of variance to test for differences between the Swedish and North American student samples' CRQ responses. As in the previous analysis of the two Swedish samples, a series of three mixed-models analyses of variance was conducted on the CRQ subscales (again, separate analyses for Wish, RO, and RS subscales), with Country and Gender serving as independent variables, Age included as a covariate, and adjusting for unequal variances across groups. All significant effects were followed by post hoc tests where a more conservative critical significance level of $P<0.01$ was used.

Wishes: The results of the mixed-model analysis of variance of the seven Wish subscales yielded significant two-way interactions for Country and Wish ($F=4.55$,

$df=6,188$, $P<0.001$) and Gender and Wish ($F=4.28$, $df=6,188$, $P<0.001$), as well as a significant three-way interaction between Country, Gender, and Wish ($F=2.70$, $df=6,188$, $P<0.05$); however, the covariate Age ($F=0.27$, $df=2,188$) was not significant. Post hoc tests ($P<0.01$, two-tailed) of the significant interaction between Country, Gender, and Wish revealed that Swedish men scored significantly higher on the *Wish To Be Sexual* (mean \pm SD: 6.59 ± 0.64) and *Wish To Be Recognized* (6.09 ± 0.97) than American men (6.06 ± 0.98 and 5.08 ± 1.52 , respectively), while Swedish women on average scored significantly higher on the *Wish To Be In Conflict* (2.20 ± 0.83) than American women (1.42 ± 0.58).

Responses from other: The results of the mixed-models analysis of variance of the RO subscales yielded significant two-way interactions between Country and RO ($F=5.60$, $df=6,188$, $P<0.0001$) and Gender and RO ($F=6.34$, $df=6,188$, $P<0.0001$). The three-way interaction between Country, Gender, and RO ($F=2.18$, $df=6,188$, $P=0.05$) was marginally significant. The covariate Age was not significant ($F=0.30$, $df=2,115$). Post hoc tests of the significant interaction between Country, Gender, and RO suggested that American women rated their romantic partners significantly higher on *Loves Me* (mean \pm SD: 6.13 ± 0.70) than Swedish women did (5.48 ± 0.90).

Responses of self: The results of the mixed-models analysis of variance of the eight RS subscales yielded significant two-way interactions between Country and RS ($F=10.14$, $df=7,188$, $P<0.0001$) and Gender and RS ($F=3.63$, $df=7,188$, $P<0.01$). The three-way interactions between Country, Gender, and RS ($F=0.70$, $df=7,188$) and the covariate Age ($F=2.67$, $df=2,115$, $P<0.10$) were not significant. Post hoc tests for the significant interaction between Country and RS suggested that North American students endorsed significantly higher levels of the RS subscales *Am Independent*, *Care for Other*, and *Avoid Conflict* relative to the Swedish students (see Table 1). None of the post hoc tests of the significant Gender by RS interactions were significant at $P<0.01$, two-tailed.

DISCUSSION

The aim of the present study was to determine the psychometric properties of the Swedish translation of the CRQ, which was administered to samples of Swedish psychology students and outpatients. The results indi-

cate that the subscales of the Swedish CRQ version possessed acceptable internal consistency. The intercorrelations among the CRQ subscales were in the predicted direction and were similar to those reported for the English version of the CRQ.¹⁷ The CRQ showed meaningful and predicted patterns of correspondence with self-reported interpersonal problems, indicating preliminary convergent and divergent validity. In addition, meaningful differences were found between the Swedish students and Swedish outpatients, also providing initial evidence of the CRQ's divergent validity. An exploratory analysis comparing the CRQ responses of Swedish students with those of North American students suggested some interesting cultural differences as well as some gender differences.

The internal consistencies of the CRQ subscales in the Swedish student sample were acceptable, at 0.8 or greater, for the majority of subscales. The alpha coefficients for the CRQ subscales of the Swedish version were similar to, although slightly lower than, those originally reported by Barber et al.¹⁷ It is worth noting that the particular subscales with lower internal consistency in the present study were generally the same subscales with lower internal consistency in the sample of Barber et al.¹⁷ More specifically, it appears that the RS subscales Am Independent and Am Domineering would benefit from further refinement. In addition, unlike Barber et al.¹⁷ or the other samples presented herein, the Swedish outpatient sample revealed poor internal consistency for the RO Is Independent subscale. Item-total correlations also supported the internal consistency of the CRQ subscales, although these correlations did suggest that a few items did not fare so well in the Swedish version. Future study is needed to determine whether these items were translated properly and whether the same subscales are less internally consistent in other Swedish samples. The correlations among the CRQ subscales were in the predicted direction; that is, positively toned subscales correlated positively with each other and inversely with negatively toned ones, and negatively toned subscales correlated positively with each other. The pattern of intersubscale correlations was statistically similar to that reported for the original version of the CRQ¹⁷ according to the Kruskal-Wallis test, although the RS subscale Avoid Conflict intercorrelated with other subscales quite differently in the Swedish student sample. This inconsistency was also reflected in the country differences.

A measure of interpersonal problems, the IIP, was

used to examine the convergent and divergent validity of the CRQ. The prediction that positively toned CRQ subscales would correlate inversely with the number of interpersonal problems and negatively toned CRQ subscales would correlate positively with that variable was generally supported. Although not all of the 22 correlations obtained statistical significance (in fact, just over half reached the critical significance level), it is important to note that the nonsignificant correlations primarily involved Wishes. An individual's wishes should not necessarily correlate with the IIP, "because what one wishes for may or may not be seen as problematic depending on, for example, whether one receives what was wished" (Barber et al.,¹⁷ p. 132). Although the IIP and the CRQ both assess patterns of interpersonal behavior, theoretically the IIP focuses on the types of *interpersonal* problems whereas the CRQ focuses on *intrapsychic* relations and potentially conflictual patterns. In addition, the CRQ measures more directly what people want and how they perceive others and themselves, rather than what types of problems they struggle with. The general pattern of the correlations between the IIP and the CRQ subscales indicates that the CRQ might contribute to an understanding of the intrapsychic aspect of interpersonal problems. In terms of replication, the results of a Kruskal-Wallis test indicated that the pattern of associations between the IIP and the Swedish version of the CRQ was statistically similar to that reported with the English version of the CRQ.¹⁷

We tested whether the Swedish CRQ version could discriminate between outpatients and nonpatients. Across the separate analyses of Wish, RO, and RS subscales, Swedish outpatients could be significantly differentiated from Swedish students (nonpatients) at the multivariate level (i.e., by a simultaneous test across all CRQ subscales). Although the univariate tests were generally significant only for the RS subscales, the group means on all but one of the 22 CRQ subscales were consistent with the original prediction that students would endorse higher levels on the positively toned subscales and the RS subscale Am Domineering, while outpatients would endorse higher levels of the negatively toned subscales. The subscale that did not discriminate students and patients was the RO subscale Is Independent, where the mean scores were quite similar across samples. It is noteworthy that the RO Is Independent was not an internally consistent subscale in the Swedish outpatient sample, which might have contributed to this contradictory finding. Overall, the re-

sults give some preliminary indications that the Swedish version of the CRQ, like the original version of the CRQ,¹⁷ has some discriminant validity, particularly among the RS subscales.

The Swedish and North American students were compared on the CRQ to examine cultural and/or translation differences, chiefly for exploratory purposes. Some significant cross-cultural differences were found; some of these supported stereotypes of these cultures, others contradicted them. Consistent with the North American culture's value on autonomy, North American students rated themselves as acting more independent than Swedish students. Also, the finding that Swedish men wished to be sexual significantly more often than American men supports the stereotype that Swedes are more comfortable expressing their sexuality. Contradicting the notion that Swedes are more inhibited in expressions of aggression, Swedish men and women avoided conflict less than the North American students did. Moreover, Swedish women indicated that they wanted to be in conflict with their romantic partner significantly more often than American women did, whereas American women felt their romantic partner acted in a loving manner more often than Swedish women did. However, the fact that the North American sample consisted of partners from couples who were relatively well adjusted might account for these latter findings and also explain why the North American sample said they cared for their romantic partners more than the Swedish students did. Finally, neither consistent nor inconsistent with stereotypes, it is unclear why Swedish men would want more recognition from their romantic partners than North American men.

The differences found between the Swedish and the American student samples were intriguing, and one could only speculate as to the background and even the validity of the findings. Although it could not be ruled out that the differences were due to the different translations themselves, the finding of meaningful differences between Swedish samples lessened this likelihood. Also, these country differences could potentially be ascribed to age or educational differences. However, these possibilities were also unlikely given that Age was not a significant covariate in this analysis and the samples were similarly educated (either in college or college-educated).

To sum up, the results of the first study of the Swedish version of the CRQ indicated that the instrument has internal consistency and that it showed convergent

and divergent validity. All CRQ subscales correlated in the predicted manner with each other and with interpersonal problems. The correlational pattern of the RS subscale Am Domineering with other CRQ subscales and its low internal consistency raise some concerns and suggest that this two-item subscale should be further developed. The CRQ also discriminated between patients and nonpatients, indicating that the instrument has preliminary discriminative validity. Cross-country exploratory comparisons yielded some results that confirm and some results that contradict popular cultural stereotypes, both of which could be used to generate hypotheses to be tested in further studies.

In short, the results of the present study indicate that the CRQ is a promising instrument for assessing dimensions of central relationships. Because it is a self-report instrument and thus easier to use than the CCRT on which it is based, the CRQ can be used in various settings, such as research, clinical practice, and the training of therapists. It has been shown by Crits-Christoph and colleagues that accuracy of interpretation as measured with the CCRT is related both to the development of the therapeutic alliance³² and to outcome.³³ Assessment by the CRQ could be useful both in guiding interpretations of relationships and in tracking the course of therapy. For clinicians and therapists in training, the CRQ can be helpful to identify and formulate central relationship patterns in the therapeutic setting (that is, in the transference) and how to better focus on such patterns during treatment. From a clinical as well as a research point of view, the CRQ can be used for following quantitative and qualitative changes in interpersonal patterns during and after therapy, such as the relations between positively and negatively toned relationship dimensions. The present study was a first step in validating a Swedish version of the CRQ. Future study of the validity of the CRQ is required, including studies that examine the convergence between self-ratings from the CRQ and clinician ratings of the same person.

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