



Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Psychometric properties of the Co-Rumination Questionnaire



Collin L. Davidson, DeMond M. Grant*, Jennifer Byrd-Craven, Adam C. Mills, Matt R. Judah, William V. Lechner

Oklahoma State University, United States

ARTICLE INFO

Article history:

Received 10 May 2014

Received in revised form 23 June 2014

Accepted 7 July 2014

Available online 26 July 2014

Keywords:

Co-rumination

Psychometrics

Depression

Rumination

ABSTRACT

Co-rumination is an interpersonal behavior that can deepen friendships but also lead to the development of depressive and anxious symptoms. While there has been considerable interest in studying this construct, little psychometric information on the self-report instrument designed to measure co-rumination, the Co-Rumination Questionnaire (CRQ), is available. The current study investigated the factor structure, reliability, and convergent and discriminant validity of the CRQ. Exploratory factor analyses revealed responses were best characterized by a 3-factor structure, termed Rehashing, Mulling, and Encouraging Problem Talk. A confirmatory factor analysis suggested a hierarchical model with the three first-order factors provided a good fit to the data. The CRQ subscales evidenced adequate internal consistency and were differentially related to observational measures of co-rumination and to self-report measures of depression, worry, rumination, and attachment, suggesting the importance of examining specific facets of co-rumination.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Co-rumination, which involves “extensively discussing and revisiting problems, speculating about problems, and focusing on negative feelings” (Rose, 2002, p. 1830), is an interpersonal construct that may explain how close relationship functioning may lead to depressive symptomology. Research suggests that co-rumination in adolescents is associated with higher friendship quality, but also increased depressive and anxious symptoms, particularly among girls cross-sectionally (Rose, 2002) and prospectively (Hankin, Stone, & Wright, 2010; Rose, Carlson, & Waller, 2007; Starr & Davila, 2009; Stone, Hankin, Gibb, & Abela, 2011). Co-rumination also has been found to predict depressive symptoms among college students (Calmes & Roberts, 2008). Two studies used behavioral coding to evaluate whether specific dimensions of co-rumination, consisting of speculation about the causes of problems, mutual encouragement to discuss problems, rehashing these concerns, and focusing on negative affect, predicted physiological markers of stress during a problem discussion task (Byrd-Craven, Geary, Rose, & Ponzi, 2008; Byrd-Craven, Granger, & Auer, 2011). Results indicated that only focusing on negative affect predicted increases in cortisol and salivary alpha amylase, suggesting there

may be both adaptive and maladaptive components of co-rumination.

Thus, growing data supports certain features of co-rumination as a vulnerability factor for the development of internalizing symptoms in both adolescent and college-aged samples. Despite this, little attention has been paid to the factor structure and psychometric properties of the questionnaire used to assess co-rumination, the Co-Rumination Questionnaire (CRQ; Rose, 2002). At present, the only evaluation of the factor structure of this scale is limited to Rose (2002), which suggested that the scale is unidimensional in nature. However, the study did not present detailed information on analyses that were conducted. Because research has highlighted the importance of assessing the effects of specific features of rumination on psychopathology (Raes, 2010; Roelofs, Huibers, Peeters, & Arntz, 2008) and co-rumination on the stress response (Byrd-Craven et al., 2011), examination of the factor structure of the CRQ can provide further information on the functional and dysfunctional aspects of co-rumination. While the scale was originally developed to measure co-rumination in adolescents, subsequent studies have found that undergraduates engage in co-rumination as well (i.e., Byrd-Craven et al., 2008, 2011; Calmes & Roberts, 2008). Additionally, young adulthood is characterized by increased diversity of support networks compared to adolescence (Furman & Buhrmester, 1992). Thus, it is important to examine the psychometric properties of this measure in a college population. The current article describes an Exploratory Factor Analysis (EFA) intended to establish the factor structure of this instrument

* Corresponding author. Address: Oklahoma State University, Department of Psychology, 116 N. Murray, Stillwater, OK 74078, United States. Tel.: +1 405 744 6983; fax: +1 405 744 8067.

E-mail address: demond.grant@okstate.edu (D.M. Grant).

and a Confirmatory Factor Analysis (CFA) used to test the structure found in the EFA and to estimate whether the final structure was invariant with regard to sex. Finally, correlations were estimated between the CRQ scales and related constructs to test convergent and discriminant validity.

2. Method and overview

2.1. Participants

EFA. The sample consisted of 1056 undergraduate students who completed an online survey administered at a large Midwestern university. Participants completed the CRQ and demographic information, in addition to several other questionnaires not utilized in the present report. The sample was predominantly female (61.6%) and most participants identified as Caucasian (85.8%). The modal age was 18.

CFA. The sample consisted of 540 students who completed an online survey at a large Midwestern university. Subjects completed a demographics questionnaire and the CRQ. The sample was predominantly female (67.8%) and Caucasian (78.9%), with a mean age of 19.6 (SD = 3.5).

Convergent and Discriminant Correlations. This sample consisted of 362 students recruited from undergraduate psychology courses who received class credit for their participation. As with the EFA and CFA, all data were collected using online versions of the questionnaires. Participants were predominantly female (67.1%) and primarily identified as Caucasian (84.3%). The mean age was 19.9 (SD = 2.8).

2.2. Measures

The CRQ is a 27-item instrument that assesses the extent that participants co-ruminate with close friends (Rose, 2002). Respondents rate each item on a 5-point scale ranging from 1 (not at all true) to 5 (really true). Coefficient alphas have ranged from .90 to .97 suggesting excellent internal consistency (e.g., Rose, 2002; Rose et al., 2007).

The *Center for Epidemiologic Studies Depression Scale* (CES-D; Locke & Putnam, 1971) is a 20-item instrument that assesses severity of depressive symptoms during the previous week. It has good internal consistency and adequate test–retest reliability (Locke & Putnam, 1971). Internal consistency in this study was .87.

The *Interpersonal Dependency Inventory – Lack of Self-Confidence Subscale* (IDI; Hirschfeld et al., 1977) is a 16-item measure which assesses the degree to which individuals doubt their ability to successfully interact with others. This subscale was selected in order to determine which aspects of co-rumination are related to self-efficacy about engaging the social environment. Coefficient alpha for the current study was .77.

The *Penn State Worry Questionnaire* (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) is a 16-item instrument that assesses worry. It has good psychometric properties (Meyer et al., 1990). Internal consistency in this study was .95.

The *Ruminative Response Scale (RRS) of the Response Styles Questionnaire* (RSQ; Nolen-Hoeksema & Morrow, 1991) is a 22-item scale that assesses the tendency for individuals to respond to stressful situations with rumination. The current study utilized the brooding and reflection subscales found in Treynor, Gonzalez, and Nolen-Hoeksema (2003). The brooding subscale assesses the maladaptive component of rumination without the inclusion of depressive symptoms, whereas the reflection subscale measures the contemplative, problem-focused component. Research supports this measure as a valid instrument, with good internal consistency and test–retest reliability (Nolen-Hoeksema, 2000;

Nolen-Hoeksema & Morrow, 1991). Internal consistency in this study was .95.

Finally, the *Thought Control Questionnaire – Distraction Subscale* (TCQ; Wells & Davies, 1994) consists of 6 items rated from 1 (never) to 4 (almost always) and assesses the use of distraction in order to control unwanted thoughts. This scale was selected in order to evaluate the discriminant validity of the CRQ and its subscales. Internal consistency was .73 for the current study.

2.3. Procedure and data analysis

All procedures were IRB approved and in compliance with the APA ethical guidelines for research. The number of factors to extract was determined using the scree plot and parallel analyses. Choice of the final models was based on theoretical interpretability (Floyd & Widaman, 1995; Lance, Butts, & Michels, 2006).

3. Results

3.1. EFA of the Co-Rumination Questionnaire (CRQ)

The scree plot indicated that two factors should be retained as the bend in the graph occurred at the second point. Parallel analyses indicated that a three factor structure was most appropriate. Next, two principal axis factor analyses (with 2 and 3 factors retained respectively) were conducted using direct oblimin rotation, because the factors were correlated (r 's = .41–.63; Tabachnick & Fidell, 2007). The 3-factor solution was the most appropriate because the 2-factor solution did not present an easily interpretable factor structure. Specifically, two items of the 2-factor solution had substantial cross-loadings, the first two items did not load substantially on either factor, and the factors were more difficult to interpret because the items reflected multiple constructs.

The 3-factor solution accounted for 60.19% of the total variance and the factor loadings are displayed in Table 1. From the initial pool of 27 questions, 15 items loaded on the first factor, which involves discussion of the aspects and implications of a problem in detail (“Rehashing”). Seven items loaded strongly on the second factor, which describes a desire to repeatedly discuss problems (“Mulling”). Finally, four items loaded on the third factor which describes the tendency to encourage others to focus on the problem at the expense of other activities (“Encouraging Problem Talk”). Internal consistency for the total questionnaire was .97 and .97, .88, and .83 for the Rehashing, Mulling, and Encouraging Problem Talk subscales, respectively.

3.2. CFA of the CRQ

The structure of the CRQ suggested by the EFA was tested using CFA with Mplus version 5.2 (Muthén & Muthén, 2008). Maximum likelihood estimation with robust standard errors based on covariance matrices was used to evaluate the three factor model and to compare it to a single factor model. Based on results of Rose (2002), as well as related literature evaluating lower order factors for personality constructs (e.g., Rushton & Irwing, 2008), we evaluated a hierarchical model with three first-order factors whose associations were explained by the higher order co-rumination construct. Model fit was assessed using the Confirmatory Fit Index (CFI) and the Tucker-Lewis Index (TLI) with values close to .95, and Root Mean Square Error of Approximation (RMSEA) values close to .06 indicating excellent fit (Hu & Bentler, 1999). CFI and TLI values below .95 and greater than .90 and RMSEA values above .06 and below .10 were taken as indicators of adequate fit (Bentler, 1992; MacCallum, Browne, & Sugawara, 1996). Additionally, Akaike's

Download English Version:

<https://daneshyari.com/en/article/890334>

Download Persian Version:

<https://daneshyari.com/article/890334>

[Daneshyari.com](https://daneshyari.com)