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The Connor-Davidson Resilience Scale in Critical Care Nurses: A Psychometric Analysis

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Abstract

Objective—(a) To investigate the factor structure of the Connor-Davidson Resilience Scale (CD-RISC) in critical care nurses, using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) and (b) to assess reliability and known group differences of the CD-RISC on critical care nurses.

Methods—CD-RISC surveys were collected on 744 critical care nurses across the United States. An abridged version of the CD-RISC was used for the EFA and CFA. Further reliability and known group differences were also tested.

Results—EFA identified 3 factors with eigenvalues >1.0 and an explained variance of 59%. The factors were labeled personal competence, perseverance, and leadership, and each factor had salient loadings. The 3-factor CFA provided good fit to the data, $\chi^2 = 243.1$, $p < .001$; RMSEA = .062; CFI = .935, although correlations among the 3 factors were high (.78–.86). A 1-factor model was subsequently tested but did not produce a better fit, and model comparison analyses supported retention of the 3-factor model. Known group differences was supported as intensive care unit (ICU) nurses with a diagnosis of posttraumatic stress disorder (PTSD) had significantly lower total resilience scores ($M = 75.43$) compared to those without a diagnosis of PTSD ($M = 83.21$; $t = 5.01$; $p < .001$).

Discussion—The current investigation found that the 3-factor structure provided the best fit for the data on the abridged version of the CD-RISC in a population of ICU nurses. Analyses also supported the reliability and known group differences of the 16-item measure. Further research is needed to examine trait and capacity features of resilience as it relates to this population.

Keywords

resilience; confirmatory factor analysis; critical care nursing

Resilience as a behavioral construct has been defined as a trait, a capacity, or an outcome depending on the underlying theory adopted by the researcher. We are most interested in viewing resilience as a capacity to cope with traumatic or stressful events by finding meaning in adversity or suffering (Campbell, Campbell, & Ness, 2008, p. 65). There is evidence to suggest that people can learn to be resilient by developing characteristics that facilitate coping, adaptation, and recovery from stress (Maddi & Khoshaba, 2005; Milne, 2007). This is particularly important when considering interventions to cultivate resilience in groups of individuals who are at risk for maladaptation and psychological distress because of exposure to traumatic and stressful work environments. One group particularly vulnerable to trauma and stress exposure in the work environment is critical care nurses.

DESCRIPTION OF THE PROBLEM

Critical care nurses are at an increased risk for developing psychological disorders such as anxiety, depression, and posttraumatic stress disorder (PTSD; Mealer, Jones, Newman, et al., 2012; Mealer, Shelton, Berg, Rothbaum, & Moss, 2007) because of the tension charged atmosphere of the intensive care unit (ICU) and the moral dilemmas resulting from exposure to end-of-life issues, futile care, traumatic injuries, and performing cardio-pulmonary resuscitation (Mealer, Burnham, Goode, Rothbaum, & Moss, 2009). Resilience enables one to thrive in the face of adversity and has been recognized as one of the most important factors when considering adjustment following a traumatic experience and the subsequent development of PTSD. Resilient critical care nurses are less likely to have PTSD, anxiety, depression, or burnout syndrome (Mealer et al., 2009; Mealer, Jones, Newman, et al., 2012).

Theory

The concept of resilience and inquiry related to resilience was not originally grounded in theory but instead was a consequence of working with survivors of high-risk situations or traumatic experiences, and identifying characteristics of those who responded to adversity in a positive manner (Richardson, 2002). Resilience theory was adopted by researchers as a postmodern approach aimed at nurturing strengths that can be accessed to grow through adversity (Richardson, 2002). Resilience theory is described as a metatheory and a motivational force or capacity within everyone “that drives them to pursue wisdom, self-actualization, and altruism and to be in harmony with a spiritual source of strength” (Richardson, 2002, p. 309). Resilience theory supports a linear model proposing that a person passes through different stages of biopsychospiritual homeostasis. Biopsychospiritual homeostasis is attained through a series of life disruptions and the conscious or unconscious choices made that affect the outcome of those disruptions (Richardson, 2002).

Resilience theory has not been tested in critical care nursing. Although the theory supports the concept of resilience and research inquiry related to the concept, to fully understand the dynamic nature of the critical care work environment and the effects the environment have on the individual nurse, a theoretical perspective that encompasses adaptive and maladaptive responses to traumatic and stressful exposures is needed. One barrier to developing an adequate theoretical perspective of resilience in critical care nursing is the lack of reliable

and valid measures of the construct. One exception is the Connor-Davidson Resilience Scale (CD-RISC).

The CD-RISC is a 25-item self-report measure of resilience. Preliminary analyses of the instrument in the general population ($n = 577$), psychiatric inpatients ($n = 43$), primary care ($n = 139$), and clinical trial samples ($n = 69$) supported its convergent and divergent validity, internal consistency, and test–retest reliability. The CD-RISC was developed to provide a valid and reliable measure of resilience, establish reference values for being resilient or nonresilient in the general population and the psychiatric clinical population, and to assess pharmacological treatment of the psychiatric population and its ability to modify resilience (Connor & Davidson, 2003). Connor and Davidson (2003) conducted an exploratory factor analysis (EFA) of the CD-RISC in the general population sample ($n = 577$) and identified five factors representing “personal competence, high standards, and tenacity”; “trust in one’s instincts, tolerance of negative affect, and strengthening effects of stress”; “positive acceptance of change and secure relationships”; “control”; and “spirituality.” Internal consistency of the CD-RISC was established by calculating a Cronbach’s alpha value of .89 in the general population sample. Test–retest reliability was calculated by assessing two samples of subjects participating in clinical trials for PTSD and generalized anxiety disorder. There was a high level of agreement noted at both time intervals that indicated the stability of the instrument over time. However, the elapsed time frame between tests was not described.

Convergent validity was determined by CD-RISC scores that were positively correlated with the Kobasa hardiness measure and Sheehan Social Support Scale but negatively correlated with the Perceived Stress Scale, Sheehan Disability Scale, and the Sheehan Stress Vulnerability Scale. Discriminant validity was determined by CD-RISC scores that were not significantly correlated with the Arizona Sexual Experience Scale (Conner & Davidson, 2003).

Although the original EFA of the CD-RISC provides preliminary evidence of the multifactorial structure of the instrument, a reanalysis of the factor structure is needed to establish its validity among a sample of critical care nurses.

The purpose of this study was to establish the factor structure of the CD-RISC and to further validate the instrument by analyzing construct validity in the critical care nursing population. Construct validity is a framework of hypothesis testing based on an understanding of the underlying construct being explored (Streiner & Norman, 2008). Two hypotheses were formulated to assess construct validity of the CD-RISC. The first hypothesis was that the factor structure of the tool would be confirmed, and the second hypothesis was that once the factor structure was confirmed, there would be known group differences. To accomplish this, we used a systematic and sequential approach with two independent samples that consisted of an EFA and a confirmatory factor analysis (CFA).

METHOD

Participants

Participants were recruited by mailing a survey to 3,500 randomly selected critical care nurses, who were members of the American Association of Critical Care Nurses (AACN). The AACN is the largest nursing specialty organization representing the interests of more than 500,000 critical care nurses. There were 1,202 nurses who completed and returned the survey. Four hundred and fifty-eight surveys were excluded because they were not currently working as an ICU nurse, which left us with a final sample of 744. Most of the sample were women (91%), and the mean age was 43.6 years ($SD = 11.0$). Race was self-reported as White (83%), Asian (10%), African American (5%), American Indian (1%), and mixed ethnicity/other (1%). Although the demographics of the participants were similar to the overall AACN membership, this was considered a convenience sample of AACN members.

Measures

Connor-Davidson Resilience Scale—The CD-RISC is a 25 item, paper/pencil measure that scores items on a 5-point Likert scale with 0 = *not true at all* and 4 = *true nearly all the time*. The content of the scale questions were drawn from several sources including the following: Kobasa's work with the construct of hardiness; Lyon's work related to patience and the ability to endure pain or stress; Shackleton's work related to spirituality; and Rutter's work related to coping, action orientation, and confidence (Connor & Davidson, 2003). The original psychometric properties of the CD-RISC in the general population and patient samples supported its internal consistency, test-retest reliability, and convergent and divergent validity (Connor & Davidson, 2003).

The Posttraumatic Diagnostic Scale—The Posttraumatic Diagnostic Scale (PDS) is a self-report tool that yields both a PTSD diagnosis according to *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., *DSM-IV*) criteria and a measure of PTSD symptom severity. Although the gold standard for diagnosing PTSD is the clinician-administered PTSD scale (CAPS), the PDS is highly correlated with the clinician-rated measures diagnosing PTSD (Foa, Cashman, Jaycox, & Perry, 1997; Mueser et al., 2001; Sheeran & Zimmerman, 2002). It consists of a screener for Criterion A events; a checklist of 12 traumatic events (including an "other" category); and Criteria B, C, and D that assess the 17 *DSM-IV* symptoms by using a 4-point scale (0 = *not at all or only one time*; 3 = *five or more times a week/almost always*). A total score is calculated by having had a traumatic event; feeling helpless or terrified during the event (Criterion A); and at least one episode of a *reexperiencing* symptom (Criterion B), three *avoidance* symptoms (Criterion C), and two *arousal* symptoms (Criterion D). Symptom severity can be calculated by summing scores of the 17 items addressed in Criterion B, C, and D (Mealer et al., 2009). For this survey, nurses were asked to complete Criterion A on traumatic events that were only experienced while working in the ICU environment, and nurses were asked to fill out Criteria B, C, and D only based on those events. The PDS is a well-accepted and validated survey instrument to diagnose individuals with PTSD (Foa et al., 1997; Mealer et al., 2009) with high internal consistency reliability (Cronbach's alpha range = .78–.92). In addition, test-retest reliability coefficients of the total PDS score demonstrated satisfactory reliability: .83 for total

symptom severity, .77 for reexperiencing, .81 for avoidance, and .85 for arousal (Foa et al., 1997; Mealer et al., 2009).

Procedure

Surveys were mailed in an anonymous manner according to standard survey principles (Dillman, 1978; Hébert et al., 1998). A reminder card was sent 2 weeks later, followed by the mailing of a second survey 1 month after the first. These are established strategies to enhance response rate (Dillman, 1978). This study was approved by the University of Colorado Multiple Institutional Review Board.

For the factor analysis, we randomly split the study sample into two subsamples using a computerized statistical software program (SPSS Version 20; IBM, 2011a). Cases were included in the factor analysis if there were no missing data. Sample 1 was used to conduct an EFA of the 25-item CD-RISC. Sample 2 was to verify the factor structure obtained from the EFA using CFA and to examine internal consistency reliability and discriminant construct validity.

The adequacy of the sample size was based on the EFA and CFA analyses with larger samples increasing the generalizability of the conclusions confirmed through the factor analysis. A sample size of 200 is considered adequate in most factor analysis cases if the instrument does not involve more than 40 questions (Comrey, 1978; Comrey, 1988; DeVellis, 2012).

Data Analysis

For EFA, factor reduction techniques were employed, in SPSS (IBM, 2011a), using principal axis factoring with oblimin rotation. We chose this method because we expected that the factors would be highly correlated. For CFA, the sample variance–covariance matrices were analyzed using a latent variable software program and maximum-likelihood minimization functions (SPSS AMOS Version 20; IBM, 2011b). Goodness of fit was evaluated using the root mean square error of approximation (RMSEA), comparative fit index (CFI), and the chi-square test with p value and degrees of freedom. Of note, we did not rely on the chi-square test to reject or accept model fit because of its oversensitivity to sample size. For the CFA, final acceptance or rejection of the models were based on (a) conventional criteria for a good fit model (RMSEA < .08, CFI > .90), (b) the magnitude and significance of the standardized factor loadings, and (c) theoretical comprehensibility of the factors.

To further assess construct validity, we assessed known group differences by testing whether CD-RISC total scores and subscale scores were statistically different from a diagnosis of PTSD based on PDS scores. This was accomplished by estimating independent samples t tests for equality of CD-RISC means between the two groups (diagnosis of PTSD or not).

RESULTS

The original development of the CD-RISC showed a five-factor structure including 25 items (Connor & Davidson, 2003). However, the five-factor model was not tested in this population because during the EFA, the number of eigenvalues >1 indicated a three-factor

model, the scree plot slope leveled out after three factors, and the factor loadings were not interpretable with five factors. We abridged the 25-item CD-RISC for statistical and methodologic reasons. This was based on normality of distribution, low correlations with the total, significant cross-loadings, and potential factors with less than three measured variables. All item deletions occurred during the EFA using Sample 1 data and the final model was confirmed in the independent sample using CFA. The items deleted and the rationale for deleting the items is described in the following text.

Exploratory Factor Analysis of the Abridged Connor-Davidson Resilience Scale

Using Sample 1 ($n = 371$), we performed an EFA on an abridged version of the CD-RISC including 16 items. See Table 1 for a description of the CD-RISC items. We deleted questions from the original instrument using a stepwise approach. First, we deleted Questions 2 and 25 based on normality of distribution by assessing skew and kurtosis. Question 2 had a skewness of -2.30 , kurtosis of 5.83 , and 74% of the respondents answered this question as true nearly all the time. Question 25 had a skewness of -1.84 , kurtosis of 4.69 , and 67% of the respondents answered this question as true nearly all the time. Question 3 was deleted based on its low correlation with the CD-RISC total (.30 compared with the other items that ranged from .46 to .74). Questions 13, 14, 16, 19, and 23 were deleted because of significant cross-loadings. Finally, Question 9 was deleted because it did not load strongly on any of the factors (.20 on Factor 1, $-.07$ on Factor 2, and .29 on Factor 3). The potential factors that are theoretically important but were deleted based on methodologic concerns include social network (Questions 2 and 13) and spirituality (Questions 3 and 9). We specified that factors should be extracted based on eigenvalues >1 , which produced a three-factor model with eigenvalues of 7.1, 1.3, and 1.1. The explained variance using this model was 59%. Each factor had salient loadings, and we labeled the factors personal competence (six items), perseverance (six items), and leadership (four items; Table 2).

Confirmatory Factor Analysis of the 16-Item Connor-Davidson Resilience Scale

Using Sample 2 ($n = 373$), we estimated a CFA model using the three factors that emerged during the EFA (personal competence, perseverance, and leadership). We hypothesized that each item would load on its relevant factor and did not allow items to cross-load on more than one factor; the three factors were allowed to correlate. This model provided a good fit to the Sample 2 data ($n = 373$), $\chi^2(df = 101) = 243.1$, $p < .001$; RMSEA = .062; CFI = .935. All items had significant and salient loadings, ranging from .49 to .80 (all p values $< .001$; Table 3). However, the model had very high correlations among the three factors (.78–.86), raising the possibility that the three factors were not distinct from one another. As a result, a single-factor model was also tested to determine if the instrument was measuring a unidimensional construct.

The one-factor model hypothesized that each item would load on a single latent factor labeled resilience. This model did not fit the data as well as the three-factor model: $\chi^2(df = 104) = 357.5$, $p < .001$; RMSEA = .081; CFI = .884. In addition, a chi-square difference test comparing the fit of the two models was statistically significant, $\chi^2 \text{ diff } (df = 3) = 114$, $p < .$

001, indicating that the three-factor model fit significantly better than the single-factor model. Therefore, we retained the three-factor model (Figure 1).

Reliability and Known Group Differences of the 16-Item Connor-Davidson Resilience Scale

Internal consistency of the 16-item CD-RISC was evaluated by calculating Cronbach's alpha for the total score and by factor for Sample 2 ($n = 373$). The alpha value for the total score was $\alpha = .90$ indicating good reliability and the alpha values for each subscale were perseverance ($\alpha = .83$), leadership ($\alpha = .72$), and personal competence ($\alpha = .81$).

Known group differences was assessed by independent samples t tests, with the total 16-item CD-RISC score and the three subscale scores as the dependent variables and a PTSD diagnosis as the grouping variable (on Sample 2; $n = 373$). It was hypothesized that ICU nurses with a diagnosis of PTSD would have lower mean resilience scores than those without PTSD. ICU nurses with a diagnosis of PTSD had significantly lower total resilience scores ($M = 75.43$) compared to those without a diagnosis of PTSD ($M = 83.21$; $t = 5.01$; $p < .001$). Known group difference by subscale had similar results. ICU nurses with a diagnosis of PTSD had lower resilience scores compared to those without a diagnosis of PTSD: personal competence (mean 18.1 compared to 20.3; $t = 5.59$; $p < .001$), perseverance (mean 15.4 compared to 17.1; $t = 4.60$; $p < .001$), and leadership (mean 11.9 compared to 12.5; $t = 2.15$; $p = .030$; Table 4).

DISCUSSION

Our study applied exploratory and confirmatory factor analytic methods to the CD-RISC, a measure of resilience, in a sample of critical care nurses. An EFA was performed using a split sample on a 16-item abridged version of the CD-RISC and three factors emerged that had salient loadings and conceptual coherence. The three factors were labeled *personal competence*, *perseverance*, and *leadership*. We followed the EFA with a three-factor CFA model, using the second split sample, and found support for the three-factor model.

Additional analyses provided preliminary support for the construct validity of the 16-item CD-RISC. Critical care nurses who met the diagnostic criteria for PTSD were significantly less likely to be resilient. The results of these analyses suggest that the 16-item CD-RISC measures characteristics that differentiate nurses who are functioning well after traumatic events experienced at work compared to those who are not.

The three factors identified personal competence, perseverance, and leadership supports resilient reintegration described in the metatheory of resilience as a mechanism to maintain homeostasis after exposure to the stress experienced in the ICU work environment. Each of the three factors are examples of coping processes that can result in the promotion of knowledge, self-understanding, and strengthening of resilient qualities.

There is evidence that the 16-item CD-RISC captures the conceptual essence of resilience based on evidence that supports resilient qualities in ICU nurses (Mealer, Jones, & Moss, 2012). The three factors labeled personal competence, perseverance, and leadership included variables that have been identified in the literature as characteristic of resilient ICU nurses

including social networks, cognitive flexibility, moral beliefs, developing active coping skills, and finding resilient role models (Mealer, Jones, & Moss, 2012). The abridged version of the CD-RISC offers a reliable and valid tool to measure resilience and identify areas of resilience that can be fostered in ICU nurses.

However, it is reasonable to consider that our elimination of items may have resulted in important features of resilience being left out of the measure and the elimination of items impacts the reliability and validity testing of the measure. In particular, there is theoretical evidence to support the inclusion of social support, faith, and self-efficacy in a resilience measure (Connor, Davidson, & Lee, 2003; Rutter, 1985). In addition, there is evidence to support adding factors associated with self-care and balance; a personal or professional social network; and faith or worldviews (Mealer, Jones, & Moss, 2012). In a qualitative study of highly resilient ICU nurses and ICU nurses with PTSD, the highly resilient nurses identified spirituality and a supportive social network as coping mechanisms used to deal with the stress associated with the work environment (Mealer, Jones, & Moss, 2012). The original development of the CD-RISC identified five factors but there were methodological limitations that were not addressed. First, there were no clear criteria described for factor selection although it appears that the authors used eigenvalues that were greater than 1. There were also factors that contained questions with different themes such as linking personal competence with tenacity, trust in instinct with strengthening effects of stress, and positive acceptance of change with secure relationships. Finally, the spiritual influence factor included only two questions related to faith, and the control factor only included three questions. It is possible that if additional questions were added, spiritual influence would prove to be a reliable and valid dimension of resilience. In addition, several of the items from the original CD-RISC loaded with different factor dimensions in this cohort. The first factor, personal competence, had significant factor loadings with Questions 1, 4, 5, 6, 7, and 8 for this analysis; however, the original analysis had these same questions loading with personal competence (Factor 1 [Questions 1, 4, 5, and 8]), trust in one's instinct/being tolerant of negative affect/strengthening effects of stress (Factor 2 [Questions 6 and 7]), and positive acceptance of change/secure relationships (Factor 3 [Question 8]). The perseverance factor was a new factor dimension and had significant factor loadings with Questions 10, 11, 12, 21, 22, and 24. The original analyses had these questions loading on Factor 1, personal competence (Questions 10, 11, 12, and 24), and Factor 4, control (Questions 21 and 22). Finally, leadership was the third factor and also a new dimension in this analysis with significant factor loadings on Questions 15, 17, 18, and 20. These questions had significant loadings on the personal competence factor (Question 17) and the trust in one's instinct/being tolerant of negative affect/strengthening effects of stress factor (Questions 15, 18, and 20) of the original analyses. Also, adding items related to self-care and personal or professional social networks would help test the domains of resilience in critical care nurses that have been identified in the literature.

Our study has several limitations. Potentially important factors of resilience were not included in the model, such as faith, social support, and self-care. Nevertheless, the final model was derived from theory, and the findings are parsimonious. Second, this measure of resilience was cross-sectional and may be limited by how a participant felt at the time the measure was completed. Further research should examine trait and capacity features of

resilience because they are related to the critical care nursing population. Third, the intent of the research was to examine the factor structure, reliability, and validity of the abridged CD-RISC in critical care nursing. We cannot make generalizable claims related to critical care nurses as important questions about differences in culture; educational level and professional experience were not collected. However, the critical care nurse participants were all active bedside nurses in the ICU who were exposed to the typical stressful events of the ICU environment (Mealer et al., 2009; Mealer, Jones, Newman, et al., 2012; Mealer et al., 2007).

In summary, the current investigation found that the factor structure of an abridged version of the CD-RISC had good psychometric properties. Analyses also supported the reliability and construct validity of the 16-item measure.

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Figure 1.
Confirmatory factor analysis three-factor model of resilience. CD = Connor-Davidson.

TABLE 1

Description of Items on the Abridged 16-Item Connor-Davidson Resilience Scale

Item	Description
CD1	Able to adapt to change
CD2	<i>One close and secure relationship</i>
CD3	<i>Fate or God to help with problems</i>
CD4	Able to deal with whatever comes
CD5	Confidence dealing with new challenges and difficulty from past successes
CD6	Able to use humor when faced with problems
CD7	Coping with stress makes me stronger
CD8	Ability to bounce back after illness, injury, or hardship
CD9	<i>Things happen for a reason</i>
CD10	Giving best effort no matter what the outcome
CD11	Belief in achieving goals despite obstacles
CD12	Not giving up even if things look hopeless
CD13	<i>Knowing where to turn for help during stress/crisis</i>
CD14	<i>Staying focused under pressure</i>
CD15	Preference to take the lead when solving problems
CD16	<i>Failure is not discouraging</i>
CD17	Thinking of self as strong when dealing with life's challenges and difficulties
CD18	Ability to make unpopular or difficult decisions if necessary
CD19	<i>Handling unpleasant or painful feelings</i>
CD20	Relying on a hunch when dealing with life's problems
CD21	Strong sense of purpose
CD22	Feel in control
CD23	<i>Accepting challenges</i>
CD24	Work to attain goals no matter what roadblocks are encountered
CD25	<i>Pride in achievements</i>

Note. Items in boldface and italics represent deleted questions. CD = Connor-Davidson.

TABLE 2

Exploratory Factor Analysis of the Abridged 16-Item Connor-Davidson Resilience Scale in Sample 1 ($n = 371$)

Item	Personal Competence (Factor 1)	Perseverance (Factor 2)	Leadership (Factor 3)
CD1	.34	.20	.05
CD4	.60	.10	.09
CD5	.47	.29	.08
CD6	.65	-.06	.11
CD7	.76	-.09	.01
CD8	.61	.12	-.10
CD10	.02	.62	-.09
CD11	.00	.74	.05
CD12	.02	.70	.05
CD21	-.05	.69	.06
CD22	.15	.62	-.01
CD24	.04	.61	.19
CD15	.02	.02	.68
CD17	.11	.33	.46
CD18	-.02	-.04	.82
CD20	.10	.08	.42

Note. Exploratory factor analysis was conducted using principal axis factoring with oblimin rotation. Salient factor loadings are in boldface and italics. CD = Connor-Davidson.

TABLE 3

Confirmatory Factor Analysis: First-Order Three-Factor Model and Single-Factor Model in Sample 2 ($n = 373$)

	Three-Factor Model	Single-Factor Model
Model loadings		
CD1	.53	.48
CD4	.68	.62
CD5	.72	.68
CD6	.61	.54
CD7	.66	.60
CD8	.69	.66
CD10	.51	.50
CD11	.72	.68
CD12	.70	.68
CD21	.67	.65
CD22	.66	.64
CD24	.73	.70
CD15	.61	.54
CD17	.80	.73
CD18	.59	.51
CD20	.49	.49
Chi-square	243.14	357.5
<i>df</i>	101	104
<i>p</i> value	<.001	<.001
RMSEA	.062	.081
CFI	.935	.884

Note. *df* = degrees of freedom; RMSEA = root mean square error of approximation; CFI = comparative fit index.

TABLE 4Known Group Differences of the Abridged 16-item Connor-Davidson Resilience Scale in Sample 2 ($n = 373$)

	PTSD Diagnosis	<i>M</i> (<i>SD</i>)	<i>t</i> Test	<i>p</i> Value
Total CD-RISC	No	83.21 (10.16)	5.01	<.001
	Yes	75.43 (12.17)		
Personal competence	No	20.25 (2.86)	5.59	<.001
	Yes	18.09 (3.35)		
Perseverance	No	17.14 (2.42)	4.60	<.001
	Yes	15.45 (2.92)		
Leadership	No	12.53 (2.21)	2.15	.030

Note. PTSD = posttraumatic stress disorder; *M* = mean; *SD* = standard deviation; CD-RISC = Connor-Davidson Resilience Scale.