

Measuring Emotional Contagion: An Examination of the Responsive Distress Scale

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Abstract

This study examined the psychometric qualities of the Responsive Distress Scale, a measure of emotional contagion experienced by individuals. Participants (n = 149) completed the Responsive Distress Scale, in addition to several other measures. We then analyzed the psychometric qualities of internal consistency, convergent validity, individual item analyses, and conducted both exploratory and confirmatory factor analysis. Convergent validity was high and internal consistency was acceptable. After conducting item analyses it became apparent that three items were problematic for the scale. Through factor analyses, we extracted two factors and identified these two factors as *Negative Emotional Responsiveness* and *Event Responsiveness*. We determined that the measure taps into two distinct constructs, rather than one. Future research might profitably divide this scale into two distinct subscales or focus entirely upon items that explicitly mention responses to other people's distress

Introduction

A fascinating aspect of human interaction is the capacity to influence the subjective experiences of others. Behaviors, attitudes and emotions are all subject to changes from the surrounding social environment. One key aspect of this phenomenon is responsive distress. Responsive distress is defined as "the tendency to feel negative emotions when in the presence of others who are feeling negative emotions" (Barchard, 2001, p. 15). Responsive distress can be measured utilizing the Responsive Distress Scale (Barchard, 2001). The current study aims to examine the Responsive Distress Scale (RDS), specifically to (1) examine its internal consistency, (2) examine its validity, (3) conduct an item analysis in order to determine how the internal consistency and validity of this measure could be improved and (4) conduct an item-level factor analysis.



Materials & methods

Sample

The current study was conducted with 149 participants recruited from a large urban university, who participated in exchange for research credit. Data from participants who failed to complete all items were deleted prior to data analysis, leaving 52 males and 90 females. All participants were students enrolled in a psychology course at the time of the study. Participants ranged in age from 18 to 57, with a mean of 19.52 and a standard deviation of 3.94.

Measures

The Responsive Distress Scale (Barchard, 2001) is intended to measure an individual's propensity to experience negative emotions when in the presence of others who are feeling negative emotions. The Responsive Joy Scale (Barchard, 2001) is intended to measure an individual's propensity to experience positive emotions when in the presence of others who are feeling positive emotions.

Procedures

Data for the current study were obtained during one 90 minute session, although many participants returned a week later to complete other measures for the second part of the study. Upon arrival in the designated room, participants were seated at a computer and provided with a paper copy of the informed consent form.

	Responsive Distress Scale				
	Very Inaccurate	Moderately Inaccurate	Neither Inaccurate nor Accurate	Moderately Accurate	Very Accurate
	1	2	3	4	5
1. Am deeply moved by others misfortune	1	2	3	4	5
2. Am easily moved to tears	1	2	3	4	5
3. Suffer from others' sorrows	1	2	3	4	5
4. Am upset by the misfortunes of strangers	1	2	3	4	5
5. Would be upset if I saw an injured animal	1	2	3	4	5
6. Am calm even in tense situations	1	2	3	4	5
7. Am not easily disturbed by events	1	2	3	4	5
8. Am unaffected by the suffering of others	1	2	3	4	5
9. Rarely cry during sad movies	1	2	3	4	5
10. Remain calm during emergencies	1	2	3	4	5

Results

Internal Consistency

To examine the internal consistency of the Responsive Distress Scale, we calculated Interclass Correlation Coefficients as well as the confidence interval for the parameter (Feldt, 1965; Fleiss & ShROUT, 1978). We found standardized alpha = .72, coefficient alpha = .73, 95% CI [.66, .79] and ICC (A,k) = .68, 95% CI [.60, .76]. Thus, coefficient alpha falls into a range often considered acceptable for research purposes.

Validity

Convergent validity was assessed by correlating RDS total scores with total scores on the Responsive Joy Scale. The correlation was positive and strong ($r(142) = .44, p < .001$). The strength of this correlation shows that individuals high in responsive distress also tend to be high in responsive joy.

Item Analyses

We conducted item analyses to determine which items reduce internal consistency within the RDS. The alpha-if-item-deleted technique revealed that coefficient alpha would increase if item 6 were removed. Furthermore the corrected item-total correlation for item 6 was a meager .16. Thus there is agreement between both statistical techniques that item 6 is detrimental to internal consistency.

Factor Analyses

The First Principal Component was extracted to see to what degree all items were related to the same general construct. To determine the number and nature of factors underlying the RDS, we conducted a principal components analysis with multiple factors. Two factors were then extracted and rotated. All salient items on factor 1 involve responsiveness to negative emotional states experienced by the individual; therefore, we titled this factor *Negative Emotional Responsiveness*. Items 6, 7, and 10 had positive, salient loadings on factor 2. There were no negative, salient items on Factor 2. All salient items on factor 2 involve responsiveness to external events; therefore, we named this factor *Event Responsiveness*.

Discussion & future directions

The goal of the present study was to examine the psychometric qualities of the Responsive Distress Scale. The RDS was designed to measure whether the self is responsive to distress in others. Internal consistency and convergent validity with the Responsive Joy Scale were acceptable. However, the item level factor analysis revealed that the current measure taps into two distinct constructs. Items loading on factor 1 appeared to measure responsive distress related to emotions expressed by others and items loading on factor 2 appeared to measure responsive distress related to external events. The RDS is intended to measure "an individual's propensity to experience negative emotions when in the presence of others who are feeling negative emotions" (Barchard, 2001). However, these factor analysis results demonstrate that a second construct is also being measured. Future research should either create separate subscales for each of these two constructs or should focus exclusively on items that discuss reactions to other's distress.

Literature cited

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For further information

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