

Positive Problem-Solving: A Mediator between Relationship Satisfaction and Quality of Life among Caregivers of Children with Autism

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Introduction

Raising a child with an Autism Spectrum Disorder (ASD) has been described as a “crucible” for the parental romantic relationship, due to the caregivers’ increased strain on resources and functioning changes (Hock et al., 2012). Furthermore, caring for a child with ASD has been related to more parenting stress and lower romantic relationship satisfaction (Brobst et al., 2009), which in turn negatively impacts the caregiver’s health and quality of life (QOL) (Linville et al., 2010). Past research indicates the importance of considering the role of problem-solving style, as positive problem-solving has been associated with better family functioning and romantic relationship satisfaction in other caregiver populations (Shanmugham et al., 2009). This study investigated positive and negative problem-solving styles as potential mediators in the relationship between romantic relationship satisfaction and QOL in parental caregivers of children with ASD. We hypothesized that each problem-solving style would mediate the relationship between relationship satisfaction and QOL in this population.

Methods

Participants

- 69 caregivers providing care for their children with ASD
 - Gender: 97% women
 - Participant Age: $M = 42.97$; $SD = 11.28$
 - Child with ASD Age: $M = 15.40$; $SD = 16.09$
 - All participants were recruited online and completed the study survey using Survey Monkey

Measures

- *Social Problem-Solving Inventory- Revised (SPSI-R:S)*. The 25-item self-report measure assessed 5 types of problem-solving styles exhibited by each caregiver:

- Positive problem orientation
- Rational problem-solving
- Negative problem orientation
- Impulsivity/carelessness
- Avoidance

- *Dyadic Adjustment Scale (DAS)*. The 32-item self-report scale measured caregiver romantic relationship satisfaction.

- *Short-Form-36 Health Survey (SF-36)*. The 36-item self-report scale measured caregiver QOL.

Data Analysis

- Due to multicollinearity, principle axis factor analysis using varimax rotation was conducted on the 5 problem-solving styles measured by the SPSI-R:S in order to extract all meaningful factors.
- Hierarchical multiple regression analyses were run to assess for a mediating role of caregiver problem-solving style on relationship satisfaction and quality of life.

Results

Factor Analysis on SPSI-R:S

- The Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett’s test of sphericity indicated that factor analysis was appropriate, $KMO=0.81$; $\chi^2=2427.73$, $p<.001$
- 2 factors were extracted accounting for 65.6% of the total variance
 - *Positive problem-solving*: positive problem orientation & rational problem solving
 - *Negative problem-solving*: negative problem orientation, impulsivity/carelessness, & avoidance

Mediation Analysis- Positive Problem-Solving

- Pearson correlations revealed that all variables were inter-correlated ($p<.05$), except for negative problem-solving and QOL. Therefore, negative problem-solving was not investigated.
- The mediation of positive problem-solving between relationship satisfaction and QOL was tested and revealed that relationship satisfaction predicts QOL, with positive problem-solving as a full mediator, $F(66,2) = 5.82$, $p < .01$
- Beta weights in the final regression equation revealed that relationship satisfaction and positive problem-solving each contributed significant variance to the prediction of QOL, but controlling for positive problem-solving decreased the explained variance from 15% to 7%
- A Sobel test confirmed positive problem-solving as a significant mediator, $Z=2.24$, $p<.05$
- Bootstrap bias corrected 95% confidence intervals for 5000 resamples (.0125, .2868) $p<.05$

Correlations and Descriptive Statistics Between Variables

	Mean	SD	1	2	3	4
1. Positive Problem-Solving	2.18	.76	-			
2. Negative Problem-Solving	2.78	.95	.520**	-		
3. Relationship Satisfaction	67.07	10.88	.517**	.287*	-	
4. QOL	99.63	6.83	.385**	.193	.265*	-

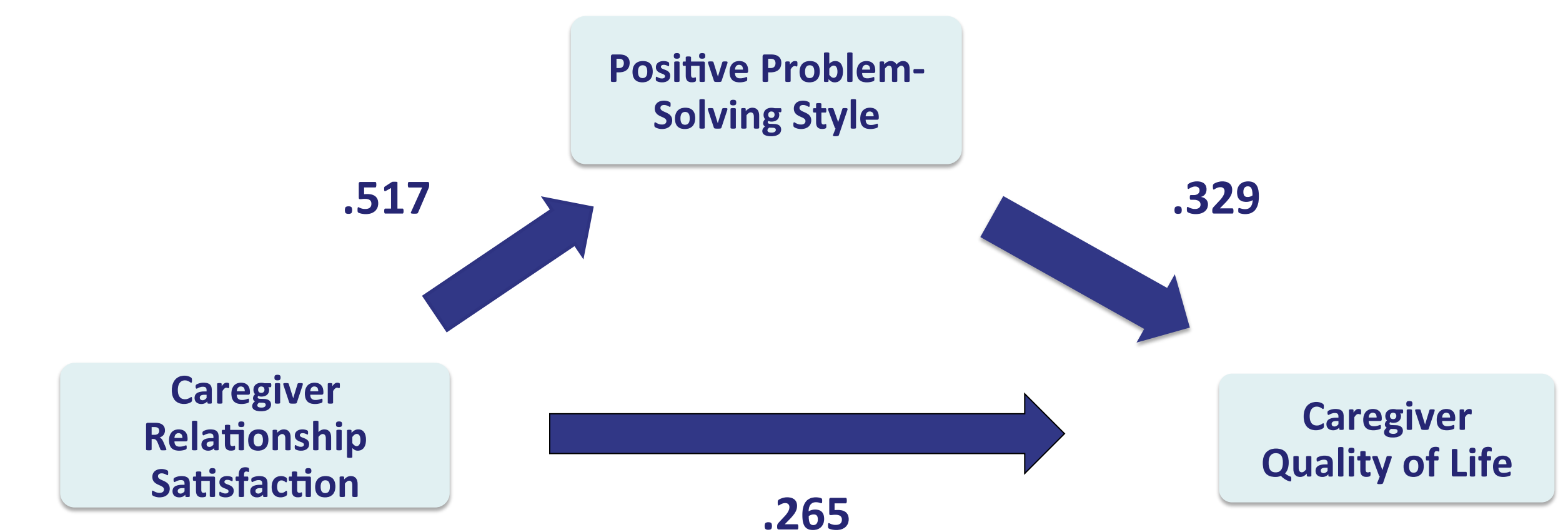
$N = 69$, * $p < .05$, ** $p < .01$

Regression Analysis Examining the Mediating Role of Positive Problem-Solving between Relationship Satisfaction and QOL

Variable	β	R^2	F
<i>Regression 1: Relationship Satisfaction predicting QOL</i>			
Relationship Satisfaction	.27*	.07	5.08
<i>Regression 2: Relationship Satisfaction predicting QOL controlling for Positive Problem-Solving</i>			
Positive Problem-Solving	.33*		
Relationship Satisfaction	.10	.15	5.82

$N = 69$, * $p < .05$

Mediation Model



Major Findings

Overall, positive problem-solving was a significant mediator between romantic relationship satisfaction and QOL. Our results suggest that caregiver positive problem-solving abilities play an important role in explaining the relationship between relationship satisfaction with their romantic partner and QOL. The use of positive problem-solving was more impactful on the connection between these variables than that of negative problem-solving skills, which was not a significant mediator.

Greater romantic relationship satisfaction may increase the caregivers’ likelihood to respond to the stresses that accompany caring for a child with ASD with a positive problem-solving style, by creating a supportive “partnership” environment. Responding to caregiving stressors using positive rather than a dysfunctional problem-solving style has been related to better caregiver adjustment and outcomes (Shanmugham et al., 2009). This may explain the relationship between the caregivers’ use of positive problem-solving and perceived QOL.

Limitations and Implications

There were a few limitations associated with our study that should be considered. For one, because this data was cross-sectional, we cannot be certain of the causal relationships between our variables. Another limitation is that our sample size was restricted to 69 participants. A larger sample size may have allowed us to see a stronger effect.

Clinically, it will be important for clinicians to use interventions that emphasize developing positive problem-solving skills when working with parental caregivers for children with ASD. Future research should also seek to investigate the mediating relationship of positive-problem solving using longitudinal study designs so that the causal relationship between caregiver relationship satisfaction, problem-solving, and QOL outcomes may be better understood for this population.