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Abstract

BACKGROUND: Approximately 2.8 million people in the United States are diagnosed with autism spectrum disorder (ASD). Family caregivers manage many aspects of their care, which is demanding, overwhelming, and can affect their mental health. **OBJECTIVE:** This study examined the effects of caregiver burden (risk factor) and positive cognitions (protective factors) on resourcefulness (resilience

indicator) in 95 caregivers of persons with ASD. **DESIGN:** Descriptive, correlational, and cross-sectional. **RESULTS:** Positive cognitions explained 32% of the variance in resourcefulness, $F(1, 93) = 44.49$, $p < .001$, and as positive cognitions increased, caregivers' resourcefulness increased. A substantial drop in the beta weight of caregiver burden from $B = -.36$ to $-.04$ when positive cognitions was entered the equation suggested that positive cognitions mediated the effect of caregiver burden on resourcefulness. **CONCLUSION:** The results support resilience theory and suggest a need for developing interventions to strengthen positive thinking among caregivers of persons with ASD.

Keywords

autism spectrum disorder, caregivers, positive cognitions, resourcefulness, burden

Introduction

The number of children affected with autism spectrum disorder (ASD) has risen dramatically in the United States; a recent estimate indicated that there is currently an overall increase of approximately 25% since the last estimate in 2006, and the number has risen to nearly double since the analysis that was reported in 2002 (Begley, 2012). It is estimated that 1 out of every 110 Americans has ASD (Lord & Bishop, 2010); currently, an estimated 2.8 million people in the United States are diagnosed with ASD. ASD is a life-long neurodevelopmental disorder, with onset before age 3 years, affecting a child's reciprocal communication, social interaction, and behavior patterns (American Psychiatric Association, 2000).

Family caregivers play an essential role in managing the many different aspects of patient care, which is demanding, even overwhelming (Baker, Blacher, & Olsson, 2005; Phetrasuwan & Miles, 2009). There is ample evidence that caring for children with ASD can be very costly to caregivers' physical, financial, and mental health (Altiere & Von Kluge, 2009; Benson, Karlof, & Siperstein, 2008; Gray, 2006). Caregivers of persons with ASD report poorer self-rated health and quality of life and greater depression, anxiety, anger, and fatigue (Blacher & McIntyre, 2006; Carbone, Behl, Azor, & Murphy, 2010; Davis & Carter, 2008; Hastings et al., 2005; Montes & Halterman, 2007). Feelings of loss, social stigma, and uncertainty have also been reported (Dale, Jahoda, & Knott, 2006; Phetrasuwan & Miles, 2009). Yet some caregivers of persons with ASD have reported that caregiving resulted in positive incentives, including an enhanced sense of meaning in life (Bayat, 2007; Benderix, Nordstrom, & Sivberg, 2006) and feelings of empowerment gained by learning how to navigate the system (Phelps, McCammon, Wuensch, & Golden, 2009). These people were able to rise above their challenges (Woodgate, Ateah, & Secco, 2008). Resilience may help caregivers not only to survive the day-to-day burdens of caring for a person with ASD but also to thrive, that is, to grow into stronger, more flexible, and healthier persons (Van Breda, 2001).

According to resilience theory (Van Breda, 2001), resilience is a dynamic process of balancing risk and protective factors in the face of adversity (Luthar, Cicchetti, & Becker, 2000). The burden of caring for a person with ASD is a risk factor that is defined as a multidimensional response to the physical, psychological, emotional, social, and financial stressors associated with the caregiving (Dumont, Fillion, Gagnon, & Bernier, 2008). Protective factors can enhance resilience by reducing the effects of the risk factors and minimizing negative reactions, thereby contributing to the caregivers' positive outcomes (Bekhet, Johnson, & Zauszniewski, 2012; Zauszniewski, Bekhet, & Suresky, 2010). Examples of

protective factors in family members of children with autism include social support, locus of control, and religious beliefs and spirituality (Bekhet et al., 2012; Ekas, Lickenbrock, & Whitman, 2010; Siman-Tov & Kaniel, 2011). The protective factor examined in this study is positive cognitions, defined as specific positive thinking patterns that enhance mental health and increase one's ability to effectively manage daily activities (Zauszniewski, McDonald, Krafcik, & Chung, 2002). Empirical evidence has shown that positive cognitions minimized the severity of depressive symptoms in women with type 2 diabetes (Zauszniewski et al., 2002). Also positive cognitions have been found to help elders reframe more positively stressful life events such as relocation (Bekhet, Fouad, & Zauszniewski, 2011).

Resourcefulness, an indicator of resilience, is a collection of cognitive and behavioral skills used to attain, maintain, or regain health. Resourcefulness includes the ability to maintain independence in daily activities in potentially negative situations (termed *personal resourcefulness*, or *self-help*; Rosenbaum, 1990; Zauszniewski, 2006) and to ask for others' help when unable to function independently (termed *social resourcefulness*, or *help-seeking*; Zauszniewski, 2006). Empirical evidence suggests that resourcefulness promotes independent, healthy, and productive lifestyles (Rosenbaum, 1990). Highly resourceful persons have been found to be better able to deal constructively with challenging situations and life events more effectively than those who are less resourceful (Bekhet, Zauszniewski, & Wykle, 2008). Both risk and protective factors can directly affect a family caregiver's resilience. However, no studies have looked at whether the effects of caring for a person with ASD (risk factor) on the caregiver's resourcefulness (an indicator of resilience) are mediated or moderated by positive cognitions (protective factors).

This descriptive and correlational study therefore examined the potential mediating and/or moderating effects of positive cognitions on the relationship between caregiver burden and resourcefulness, an indicator of resilience, among caregivers of persons with ASD. The research questions were the following: (a) What are the effects of positive cognitions on resourcefulness? (b) Do positive cognitions moderate the relationship between caregivers' burden and resourcefulness? (c) Do positive cognitions mediate the relationship between caregivers' burden and resourcefulness?

Sample
The convenience sample included 99 English-speaking caregivers of persons with ASD. Inclusion criteria were (a) caring for a person with a diagnosis of ASD, (b) able to read and understand English, (c) Internet access, and (e) residing in the United States. No potential participants were excluded on the basis of gender, race, or socioeconomic status.

No formal measure was used to diagnose ASD in the present study, as the participants were members of the Interactive ASD Network (IAN) registry based on a parent-reported diagnosis of ASD. The parent-reported diagnosis needed for inclusion in the IAN registry was authenticated in a study of medical record reviews of IAN registry participants (*n* = 116). The findings showed that 98% of participants were able to provide the valid documentation of an ASD diagnosis, thus making the registry an efficient and valid method for recruitment (Daniels et al., 2011).

In addition, both the researchers from the study reported here and the IAN research team included, in materials sent to IAN participants, the eligibility criteria, which included being a caregiver *of a person diagnosed with ASD.* In addition, we asked caregivers in the questionnaire about years since diagnosis

and all of them provided a response (years since diagnosis ranged from 6 months to 19 years; *M* = 7.2; *SD* = 4.5) suggesting their knowledge of their family member's ASD diagnosis.

Sample Size and Configuration

Power analysis suggests that a sample size of 85 would be adequate for testing the mediating and moderating effects of positive cognitions with a power of .80 and significance level of .05 (Cohen, 1992). A medium effect size was used for this study. However, oversampling was used to account for potential missing data; 99 subjects were recruited. Four subjects were excluded from the analysis because they did not fill out one or more questionnaires, leaving a final sample size of 95.

Data Collection

Participants were recruited by convenience sampling from The IAN Research registry service provided by the Kennedy Krieger Institute and Johns Hopkins Medicine-Baltimore, sponsored by ASD Speaks Foundation (http://www.iancommunity.org/cs/subject_recruitment_materials/overview). The registry has more than 33,000 participants, including caregivers of children with ASD. Human Research Review Board approval for the study was obtained from the university. Caregivers of persons with ASD who were willing to be contacted by e-mail received an IRB approved flyer by IAN. An IAN request directed potential participants to the Internet website (www.surveymonkey.com) where a consent form and a link to the study questionnaires were housed.

Informed consent was obtained before participants were able to access the questionnaires. Potential participants were offered an incentive for participation in the study, and those who chose to accept the incentive provided their e-mail address at the end of the survey. The research team then sent the participant a code that could be redeemed for $25 at www.Amazon.com. E-mail addresses were destroyed after incentive codes were sent to participants. Data were collected during the months of June and July of 2011.

Measures

Data on family member caregivers, the person with ASD, and the caregiving situation were collected. For caregivers, data on age, gender, education, race, and perceived health status were collected. Perceived health status was measured by an index based on a 4-point Likert-type scale; the score was calculated based on participants' rating of their present health (1 = *poor* to 4 = *excellent*); the higher the score, the better the health (Musil, Haug, & Warner, 1998). For persons with ASD, age, gender, race, marital status, and years since diagnosis were measured. The caregiving situation was measured by asking caregivers about their relationship to the person with ASD, their living arrangements (living with the person with ASD or apart), the amount of caregiving provided (direct care or indirect care), and the amount of help received (nurses aid, adult health care, or any other help).

Caregiver burden
Caregiver burden was measured by the Zarit Burden Interview (ZBI; Knight, Fox, & Chou, 2000). The ZBI consists of 22 items that reflect the burden that persons sometimes feel when they are taking care of another person. Items are scored on a 5-point Likert-type scale ranging from *never* (0) to *nearly always* (4); total score range from 0 to 88. A high score is correlated with higher level of burden. The psychometric properties of the Burden Interview (BI) have been examined in previous studies.

Estimates of internal consistency reliability, using Cronbach's α, for the ZBI range from .88 to .92 (Chou, Chu, Tseng, & Lu, 2003; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993). Cronbach's α in this study was .92. Examples of ZBI questionnaire items are "Do you feel that your relative asks for more help than he/she needs?" "Do you feel that because of the time you spend with your relative that you don't have enough time for yourself?" and "Do you feel stressed between caring for your relative and trying to meet other responsibilities for your family or work?"

Positive cognitions

The Depressive Cognition Scale (DCS; Zauszniewski, 1995) was used to measure positive cognitions. The DCS measures depressive cognitions when its scoring is reversed; however, all items are phrased in a positive direction (Zauszniewski, Chung, Krafcik, & Sousa, 2001). The scale is based on Erikson's psychosocial stages of development, and each of the eight depressive cognition items on the scale reflect unsuccessful resolution of one of the stages outlined by Erikson (Zauszniewski, 1995); the DCS measures depressive cognitions when scoring is reversed. In this study, the scores were not reversed in order to measure positive cognitions.

The DCS consists of 8 items scored on a 6-point Likert-type scale from *strongly agree* (5) to *strongly disagree* (0), to indicate the degree to which a particular statement describes respondents' current thoughts (Zauszniewski, 1995; Zauszniewski et al., 2001). Scores may range from 0 to 40. A higher composite score indicates a greater number of positive cognitions (Zauszniewski, 1997). Zauszniewski (1995) has reported acceptable internal consistency (α = .78), and construct validity was demonstrated by significant correlations in the expected directions ($p < .001$) with measures of depression, resourcefulness, adaptive functioning, and life satisfaction (rs = .54, −.37, −.60, −.57, respectively). Confirmatory factor analysis indicated the presence of a single factor with all item factor loadings exceeding .30; 40% of the total variance of the scale was explained (Zauszniewski, 1997; Zauszniewski et al., 2001). Cronbach's α in this study was .90. Examples of the DCS scale items are: "I am a worthwhile human being," "I believe that life is worth living," and "I am hopeful about my future."

Resourcefulness

Resourcefulness was measured by the 28-item Resourcefulness Scale (Zauszniewski, Lai, & Tithiphontumrong, 2006), which assesses an individual's tendencies to apply self-help (personal resourcefulness) and help-seeking behaviors (social resourcefulness) when facing adverse situations (Zauszniewski et al., 2006). The Resourcefulness Scale consists of 28 items; 16 items measure personal resourcefulness and 12 items measure social resourcefulness (Zauszniewski et al., 2006). A 6-point scoring system with response alternatives ranging from 0 (*not at all like me*) to 5 (*very much like me*) is used (Zauszniewski et al., 2006). Thus, scores may range from 0 to 140, with higher scores indicating greater personal and social resourcefulness (Zauszniewski et al., 2006). Cronbach's αs of .83, .79, and .85 have been reported for the total scale and personal and social resourcefulness subscales, respectively (Zauszniewski et al., 2006). Evidence for construct validity was demonstrated by the emergence of the two dimensions of resourcefulness (personal and social) in a confirmatory factor analysis and by substantial intercorrelations between the two subscales ($r = .41$, $p < .001$; Zauszniewski et al., 2006). Cronbach's α in this study was .92. Examples of the Resourcefulness Scale items are the following: "When I have something to do that is anxiety arousing for me, I try to visualize how I will

overcome my anxiety while doing it." "When my energy level is low, being with other people give me more energy." and "If I find it difficult to concentrate on a task, I divide it into smaller segments."

Data Management/Analysis

Descriptive statistics were used to describe the sample characteristics and the major study variables. The means, standard deviations, ranges, and reliability estimates for the four major study variables were measured. Preliminary data analyses were conducted to ensure that the statistical assumptions for multiple regression were not violated. Simple linear regression was used to test the effects of caregiver burden (risk factor) on resourcefulness (indicator of resilience). Hierarchical regression was used to examine the mediating and the moderating effects of positive cognitions on the relationship between caregivers' burden and indicators of resilience (resourcefulness).

Results

The ages of caregivers ranged from 23 to 67 years (M = 42.8; SD = 7.9); 96.8% were females (n = 92) and 3.2% were males (n = 3). The great majority of the caregivers (n = 88) were Caucasian, representing 92.6% of the total sample; the remaining seven subjects were African American, Hispanic, Asian, or other. More than three quarters of the caregivers were married (76.8%), 16.8% were either divorced or separated, and the remainder were either never married or widowed (6.4%). Almost two fifths (37.9%) of the caregivers had a college degree, 28.4% had some graduate/professional education, another 28.4% had some college or an associate degree, and 5.3% had a high school diploma. More than half of the sample had incomes more than $45,000; 14.8% had incomes ranging from $5000 to less than $20,000, 12.6% had incomes ranging from $ 20,000 to less than $30,000, and 14.8% had incomes ranging from $30,000 to less than $45,000. Almost half (47.4%) of the caregivers rated their health as good, 18.9% rated their health as excellent, 29.5% rated their health as fair, and 4.2% rated their health as poor. Almost all (91.6%) of the caregivers were mothers of the person with ASD, 6.3% were daughters or sons, and 2.1% were others such as aunts or cousins. All of the sample except for one caregiver lived with the patient full time. Almost all (90.5%) of the caregivers (n = 86) provided care with daily activities; and only 9.5% (n = 9) reported that they provided only some care. Regarding the persons with autism, 87.4% were males and 12.6% were females. Almost all (89.5%) of persons with autism (n = 85) were Caucasian and the remaining were African American, Asian, or Hispanic. The ages of the persons with autism ranged from 2 to 21 years (M = 10.9; SD = 4.7); years since diagnosis ranged from 6 months to 19 years (M = 7.2; SD = 4.5).

Simple linear regression was used to examine the effects of positive cognitions on resourcefulness (Question 1, Figure 1; Table 1). The first regression model examined the effects of positive cognitions on resourcefulness; the overall model was statistically significant and explained 32% of the variance in resourcefulness, $F(1, 93)$ = 44.49, p < .001. Thus positive cognitions had a direct positive effect on resourcefulness (B = .57, p < .001): as positive cognitions increased, caregivers' resourcefulness increased.
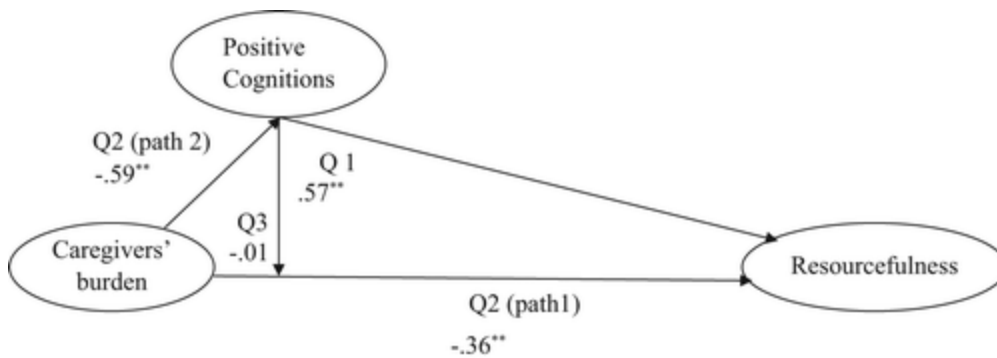
Figure 1. Data analytic model
Note. Values reported are betas.
**$p < .001$.

Table 1. Summary of Testing of Preconditions for Mediating Effects of Caregivers' Burden on Resourcefulness by Positive Cognitions

Preconditions for Testing Mediating Effects	Independent Variables	*B*	*SE B*	☐	*t*	Adjusted *R²*
Prediction of outcome: Resourcefulness	Positive Cognitions (Question 1)	1.55	.23	.57	6.67	.32*
	Caregivers' Burden (Question 2, Path 1)	-.51	.14	-.36	-3.72	.12*
Prediction of the mediator: Positive Cognitions	Caregivers' Burden (Question 2, Path 2)	-.30	-.04	-.59	-7.02	.34*

*p<.001.

Mediation

A two-step hierarchical regression was then used to test the mediating effects of positive cognitions on the relationship between caregiver of persons with ASD burden and resourcefulness. In this regression, three conditions were considered necessary to indicate a mediating role for positive cognitions: (a) variation in the independent variable (caregiver burden) predicted variation in the outcome variable (resourcefulness), (b) variation in the independent variable (caregiver burden) predicted variation in the mediator variable (positive cognitions), and (c) prediction of resourcefulness by caregiver burden was altered when positive cognition was entered into the model. The first condition was supported by the findings showing that the overall regression equation was statistically significant, $F(1, 93) = 13.84$, $p < .001$, with 12% of the variance in resourcefulness explained by caregiver burden. When resourcefulness was regressed on caregiver burden, the results indicated that caregiver burden had a direct negative effect on resourcefulness ($B = -.36$, $p < .001$; Question 2. Path 1, Table 1, Figure 1).

The second condition was supported by the finding that this overall regression equation was statistically significant, $F(1, 93) = 49.24$, $p < .001$, with 34% of the variance in positive cognitions explained by caregiver burden (Question 2. Path 2, Table 1, Figure 1). When positive cognitions were regressed on caregivers' burden, the results indicated that caregiver burden had a direct negative effect on positive cognitions ($B = -.59$, $p < .001$): as burden increased, caregivers' positive cognitions decreased.

For the third condition, caregiver burden was entered in the first step of the regression model and positive cognitions were entered in the second step. In Step 1, the model was significant, $F(1, 93) = 13.84$, $p < .001$, and caregiver burden accounted for 12% of the variance in resourcefulness. When positive cognitions were added in Step 2, the model remained significant, $F(2, 92) = 22.10$, $p < .001$, and the incremental R^2 increased significantly, to .31. There was a substantial drop in the beta weight of caregiver burden, from $B = -.36$ to $-.04$ when positive cognitions entered the equation (Question 2, Table 2). The effect of caregiver burden on resourcefulness was no longer significant; the level of significance dropped from $p < .001$ to $p > .05$, suggesting that the effect of caregiver burden on resourcefulness was mediated by positive cognitions.

Table 2. Tests of Mediation and Moderation of the Effect of Positive Cognitions on the Relationship Between Caregivers Burden and Resourcefulness

Variables in the Equation	Tests for Mediation		Tests for Moderation	
	Step 1 β	Step 2 β	Step 1 β	Step 2 β
Caregivers Burden (CB)	-.36***	-.04	-.04	-.04
Positive Cognition (PC)		.54***	.55***	.55***
Interaction (CB × PC)				-.20
F value	13.84***	22.10***	22.10***	14.58***
Total R^2	.13	.33	.33	.33
Adjusted R^2	.12	.31	.31	.30
Incremental R^2		.19		-.1

*$p < .05$. **$p < .01$. ***$p < .001$.

Moderation

To test the moderating effects of positive cognitions, an interaction term was created by "centering" the scores on measures of caregiver burden and positive cognitions, then multiplying the two (Baron & Kenny, 1986). Centering was achieved by subtracting the mean of each variable from each individual datum. To examine the moderating effect of positive cognitions, caregiver burden and positive cognitions were entered together in the first step, followed by entry of the interaction term in the second step. If the interaction term was significant, then moderator effects were confirmed.

The regression model of the first step was significant, $F(2, 92) = 22.10$, $p < .001$; caregiver burden and positive cognitions together accounted for nearly 31% of the variance in resourcefulness. Although the regression model of Step 2 was significant, $F(3, 91) = 14.58$, $p < .001$, the interaction term did not contribute to the variance and the interaction term was not significant ($B = -.01$, $t = -.13$, $p > .05$; Question 3, Table 2). Thus, positive cognitions did not moderate the effects of caregiver burden on resourcefulness in this sample of caregivers of persons with ASD.

Discussion

This is the first study to examine the mediating and moderating effects of positive cognitions on the relationship between the caregiver burden experienced by those caring of persons with autism and caregiver resourcefulness. The results of this study indicated that positive cognitions have mediating but not moderating effects on the relationship between caregiver burden and resourcefulness in this sample of caregivers of persons with autism. These findings are consistent with those of a study that

found that positive cognitions had mediating and partially moderating effects on caregiver burden in a sample of 60 women family caregivers of adults with serious mental illness (Zauszniewski, Bekhet, & Suresky, 2009). The findings are also consistent with a study by Zauszniewski and colleagues, which found that women with diabetes had greater resourcefulness when they used positive cognitions and this in turn reduced their depressive symptoms (Zauszniewski et al., 2002). Furthermore, a study by Bekhet et al. (2008) found that of 104 older adults who relocated to retirement communities, positive cognitions had direct positive effects on resourcefulness.

There were number of limitations of this study related to sampling and methodological issues. First, the use of convenience sampling limited the generalizability of the findings for many caregivers of persons with ASD; results can be generalized only to those who use the Internet. However, the Internet made it possible to recruit a national sample, and the reality is that more and more people are using the Internet. Second, the use of self-report data by the caregivers especially in terms of having a child diagnosed with ASD, which might be subject to error. Although the IAN registry was authenticated in a study of medical record reviews of IAN registry participants and the findings showed that 98% of participants were able to provide the valid documentation of an ASD diagnosis, no formal measure was used to diagnose ASD in the present study. Future research might consider using a formal tool to measure ASD. Third, since the study was cross-sectional, changes in study variables could not be assessed over time. Longitudinal studies would be useful in examining causal effects of the study variables in caregivers of persons with ASD. Another limitation is that the current study did not measure the severity of the symptoms, which could be a factor related to caregiver burden. Therefore, future studies might consider measuring the severity of the symptoms and its relationship to caregivers' burden. A final limitation is that some potentially important variables that could affect caregiving burden were collected in this study, namely, living with person with ASD versus living apart from them, the amount of caregiving provided, and the amount of help received. These variables were not examined as covariates in the study reported here because the sample was homogenous on these variables. More specifically, all but one caregiver in the sample lived with the patient full time and almost all (90.5%) of the caregivers provided care with daily activities. However, future research with more diverse samples is recommended so that the effects of these factors can be examined more thoroughly in relation to other important outcomes.

Despite the study's limitations, the findings provide direction for the development of interventions to strengthen positive thinking and help caregivers of persons with autism cope with the burden of caregiving. A future study should investigate the effects of a positive cognitions training program on caregiver burden and quality of life among caregivers of persons with autism and examine both immediate and the lagged effects on caregivers' burden.

The results of this study indicated that positive cognitions acted as a mediator on the relationship between caregiver burden and resourcefulness in this sample of caregivers of persons with autism. Accordingly, the mediator (positive cognitions in this case) attenuated (i.e., intensified or strengthened) the effects of the independent variable (burden) on the outcome variable (resourcefulness). Therefore, interventions to promote positive cognitions can help caregivers of persons with autism to feel less burdened and more resourceful over time.

The results of this study of caregivers of persons with autism showed that positive cognitions did not moderate the effects of burden on resourcefulness. The absence of the moderator effect may be because of the homogeneity of the sample or the limited variability of the independent and outcome variables that make it difficult to detect moderator effects (Bennett, 2000). More specifically, the majority of caregivers in this study was Caucasian (92.6%), married (76.8%), rated their health as good or excellent (66.3%), provided care with daily activities (90.5%), have moderate to high positive cognitions (M = 29.8; SD = 7.7), and moderate levels of burden (M = 42.46; SD = 14.8). Therefore, studies in the future should recruit larger and more diverse samples.

Of interest, six participants identified themselves as offspring caregivers of parents with ASD. Future research might consider collecting a larger sample size and look at differences in the caregiving challenges within this group versus the rest of the caregivers.

The study has theoretical and empirical implications. With regard to the theoretical significance, the results of this study provide a better understanding of the relationships among the major components of resilience theory, including risk factors, protective factors, and indicators of resilience, which were measured in this study as caregiver burden, positive cognitions, and resourcefulness, respectively. More specifically, the results of this study support the role of a protective factor (positive cognitions) in attenuating or mediating the effects of a risk factor (burden) on caregiver resourcefulness, an indicator of resilience. However, the results of the study also raise further questions regarding key factors in predicting or understanding burden and resourcefulness. The results of this study showed that greater burden is related to less resourcefulness. However, it is unclear whether increased resourcefulness could lead to less burden. Longitudinal research would be helpful in disentangled the directionality of the relationship between caregiver burden and resourcefulness. The results of the study also indicated that positive cognitions had a mediating effect on the relationship between burden and resourcefulness, so it appears that positive cognitions are associated with greater resourcefulness and less burden. Regarding the empirical significance, the results of this study provide direction for nurses and health care professionals who work with caregivers of persons with autism to include in their interventions those strategies that strengthen positive cognitions and consequently decrease caregiver burden and enhance their resilience.

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Author Roles

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