Optimism, Social Support, and Well-Being in Mothers of Children with Autism Spectrum Disorder

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Abstract  This study used structural equation modeling to examine the relationship between multiple sources of social support (e.g., partner, family, and friends), optimism, and well-being among mothers of children with ASD. Social support was examined as a mediator and moderator of the optimism-maternal well-being relationship. Moreover, the role of optimism as a mediator of the social support-maternal well-being relationship was also evaluated. Results revealed that family support was associated with increased optimism that, in turn, predicted higher levels of positive maternal outcomes and lower levels of negative maternal outcomes. In addition, partner and friend support were directly associated with maternal outcomes. Implications for the development of interventions directed at increasing the quality of social support networks are discussed.

Keywords  Autism · Social support · Optimism · Mediation · Psychological well-being

Introduction

Parents of children with autism spectrum disorder (ASD) face numerous challenges, including obtaining a diagnosis, finding appropriate treatment and educational programs, and struggling with the financial burden of paying for services (Whitman 2004). As a result of coping with these and many other challenges associated with raising a child with ASD, parents report greater levels of depression (Olsson and Hwang 2001), higher levels of stress (Benson 2006), and generally lower overall well-being (Ekas et al. 2009). Social support has been identified as a critical factor that reduces the negative psychological effects of raising a child with ASD as well as other disabilities (Bishop et al. 2007; Bromley et al. 2004; Hassall et al. 2005). In particular, informal support, such as that provided by friends and family, has been shown to be effective in reducing stress among mothers of children with ASD. For example, mothers of children with autism who perceive receiving higher levels of support, especially from spouses and relatives, report lower levels of depression-related somatic symptoms and fewer marital problems (Dunn et al. 2001). Several studies have also shown that mothers first turn to their spouse for support, then to their immediate family, and finally to other parents of children with disabilities (see Boyd 2002 for a review).

Although different types of informal support have been associated with increased well-being, research has not systematically examined whether one source of informal support is more effective than another in helping mothers of children with ASD cope with stress. For example, although mothers of children with ASD may turn to their spouse first (e.g., Boyd 2002), their spouse may not be the most effective support. It is possible that their spouse may be equally distressed and unable to provide effective support (Coyne et al. 1990) and that extended family (e.g., parents, brothers, sisters, etc.) or close friends may be more beneficial in promoting mothers’ well-being. Indeed, research suggests that women turn to individuals outside their marriage (e.g., friends and family) when they do not
receive adequate support from their spouse (Julien and Markman 1991). Moreover, among mothers of critically ill children, social support from friends and family has been shown to buffer the adverse effects of having low spousal support (Rini et al. 2008). The current study investigated the relative effects of three types of informal social support (support from partners, other family members, and friends) on the overall well-being of mothers of children with ASD.

In addition to the impact of extrinsic influences, such as social support, characteristics of the individual may also impact well-being. Previous research has found that personality characteristics, such as locus of control and hardiness, contribute to the well-being of mothers of children with ASD (Dunn et al. 2001; Gill and Harris 1991; Weiss 2002). One personality characteristic that may be especially important in promoting better psychological functioning in mothers of children with ASD is optimism. Optimism refers to the tendency of an individual to expect positive outcomes in life (Scheier and Carver 1985). There is growing evidence that optimism is associated with better physical and mental health outcomes in a variety of populations (Achat et al. 2000; Conway et al. 2008; Scheier and Carver 1992; Segerstrom et al. 1998). Optimistic patients exhibit faster recovery from cardiac bypass surgery (Scheier et al. 1989), and are more likely to employ positive health practices (Scheier and Carver 1992). Among mothers of adults with autism, optimism has been associated with greater psychological well-being (Greenberg et al. 2004). To date, there have been no studies investigating the effects of optimism on the well-being of mothers raising children with ASD. For that reason, the present study also examined the effects of optimism on maternal well-being.

Increasing research indicates that social support and optimism are positively related (e.g. Dougall et al. 2001; Park and Folkman 1997). Moreover, social support has been proposed as an important mediator of the relationship between optimism and psychological adjustment (Dougall et al. 2001); specifically because optimistic individuals appear to be able to establish greater social support resources and build more effective social networks in times of stress. Several studies have found evidence for this mediational relationship among breast cancer survivors (Shelby et al. 2008), survivors of traumatic events (Dougall et al. 2001), and college students (Brissette et al. 2002). These studies, however, have not examined the differential impact of multiple types of social support.

Although social support has typically been considered as a mediating variable, it is also possible that optimism may mediate the social support-psychological well-being relationship. That is, a strong social support network may promote a more optimistic outlook on life that, in turn, fosters well-being. As a result of feeling loved and supported, an individual’s cognitive representations about the future may be changed. Indeed, Karademas (2006) found support for a model in which optimism mediated the social support-psychological well-being relationship in a community adult sample, but not for a model in which social support mediated the optimism-psychological well-being relationship.

Although there are limited studies examining the separate effects of social support and optimism among mothers of children with ASD (e.g., Bristol 1984; Greenberg et al. 2004), no studies to date have specifically examined the dynamic relationship between these two constructs and how the combination of the two impact well-being. In the present study two competing models were examined: (a) social support as a mediator of the optimism-maternal well-being relationship, and (b) optimism as a mediator of the social support-maternal well-being relationship. In addition to the direct and indirect benefits of social support, it is also possible that social support serves a moderating function (Cohen and Wills 1985), with social support buffering the negative effects of low optimism. Shelby et al. (2008) found that, among women with breast cancer, high social support moderated the adverse influences of low optimism on psychological distress, well-being, and psychosocial functioning. For this reason, the present study also examined the role of social support as a potential moderator of the optimism-maternal well-being relationship.

Present Study and Hypotheses

The present study examined the relationships between optimism, informal social support, and well-being in a sample of mothers of children with ASD. More specifically, the role of three types of informal social supports, spouse, friends, and family, were examined as mediators of the optimism-maternal well-being relationship. In measuring maternal well-being, both negative maternal outcomes, such as depression, negative affect, and parenting stress, and positive maternal outcomes, such as positive affect, life satisfaction, and overall psychological well-being were included. Past research has suggested that positive and negative aspects of psychological functioning, under typical conditions, may be separate dimensions with different influences, whereas in times of elevated stress these two dimensions become highly related (Ekas et al. 2009; Zautra et al. 2001). For this reason, it seems especially important for studies to include both negative and positive dimensions in order to provide a more complete picture of well-being in mothers of children with ASD, who are susceptible to experiencing high levels of stress. Consistent with previous research (e.g., Dougall et al. 2001), we hypothesized that optimism would be positively associated with social support which, in turn, would predict...
increased maternal well-being. Furthermore, consistent with previous research (e.g., Dunn et al. 2001) we expected that partner support would be more effective than friend or family support in this process. We also explored the role of optimism as a possible mediator of the social support-maternal well-being relationship. Finally, we examined whether a higher level of social support buffered the negative impact of having low optimism. Consistent with previous research (e.g., Shelby et al. 2008), we predicted that social support, particularly spousal support, would indeed serve as a buffer against the adverse effects of low optimism.

**Method**

**Participants**

Participants consisted of 119 mothers who were part of a larger study examining stress and well-being in families of children with ASD. Mothers included in the present study had at least one child younger than 18 years of age who had been diagnosed with ASD. The majority of mothers were married (82.9%); the remaining mothers were separated, divorced, or widowed (11.9%) or single (5.1%). Mothers were predominantly Caucasian (95%) and middle class; specifically, 8.7% had annual household incomes below $24,999, 55.7% earned $25,000–$74,999, and 35.7% made $75,000 or more annually. The majority of mothers had some college or completed college (75.4%) or completed postgraduate training (14.4%), while a smaller percentage of mothers had a high school degree or less (10.1%). Mothers ranged in age 23–61 (M = 40.13, SD = 7.38). Children were between the ages of 2 and 18 (M = 9.45, SD = 4.08), and were predominantly male (82.9%). Ten families had at least one other child who was also diagnosed with ASD.

**Procedure**

Participants were recruited with the assistance of local autism support groups and a regional autism service center. A total of 311 families, who indicated preliminary interest in being part of a research project, were contacted and sent packets with a cover letter explaining the study, consent forms, and the survey material. Families who did not wish to participate in the study returned a prepaid postcard indicating their decision. A total of 123 families completed and returned the questionnaire in a prepaid envelope, resulting in a 39.5% response rate. Four families were not included in the final data analysis because they did not meet the study requirements of having a child under the age of 18 who was diagnosed with ASD.

**Measures**

**Optimism**

The Life Orientation Test (LOT; Scheier and Carver 1985) was designed to measure optimism as it relates to outcome expectancies. The LOT contains 8 items asking participants to indicate their agreement using a 4-point Likert-type scale (1 = strongly agree to 4 = strongly disagree). Sample items included: “In uncertain times, I usually expect the best,” and “I hardly ever expect things to go my way.” Items were reverse coded and a total score was created with a high score indicating greater optimism. Adequate internal consistency and test–retest reliability has been previously established (Scheier and Carver 1985). Cronbach’s alpha for this measure in the current study was .86, indicating high internal consistency.

**Informal Social Support**

Informal social support was examined for the following relationships: family (not including partner), friends, and partner. Whalen and Lachman (2000) created the scales using items that were adapted from a previous study (Schuster et al. 1990). Mothers answered each question using a 4-point Likert-type scale, (1 = a lot to 4 = not at all). Social support was assessed through 4 items that were similar for family, friends, and partner. The four items were: (a) How much do they (family, friends, partner) really care about you?; (b) How much do they understand the way you feel about things?; (c) How much can you rely on them for help if you have a serious problem?; and (d) How much can you open up to them if you need to talk about your worries? The partner support scale included two additional items that asked: (a) How much does he appreciate you?; and (b) How much can you relax and be yourself around him? Items were reverse coded so that a higher score indicates high support, and a separate score was computed for each type of social support. Good internal consistency has been found in previous studies (Whalen and Lachman 2000). Cronbach’s alphas in the current study were .87, .92, and .89 for friend, partner, and family, respectively.

**Parenting Stress**

This measure of parenting stress was adapted from the Parental Stress Items scale (Pearlin and Schooler 1978). The original 7-item scale instructed mothers to indicate the extent to which they experienced distressed feelings about parenting. Sample items included: “How worried do you feel?” and “How unhappy do you feel?” In an adapted version used in this study, four positively worded items
were added to reduce response bias and increase the reliability of the scale (Bonds et al. 2002). A sample item asked “How satisfied do you feel?” Mothers responded to all items on a 4-point Likert-type scale (1 = not at all to 4 = very much so). Positively worded items were reverse coded so that a higher score indicated higher levels of parenting stress. An internal consistency of .87 for the adapted version of the scale has been reported (Bonds et al. 2002). Cronbach’s alpha in the current study was .89.

Positive and Negative Affect

The Positive and Negative Affect Schedule (PANAS; Watson et al. 1988) is a 20-item questionnaire designed to measure two dimensions of mood, 10 items reflecting positive mood and 10 items reflecting negative mood. Participants were instructed to indicate the extent to which they experienced each mood state, using a 5-point Likert-type scale (1 = not at all to 5 = extremely). A total score was created for the two mood dimensions with a high score indicating high levels of that emotion. High internal consistency, adequate test–retest reliability, and external validity with measures of distress and psychopathology have been reported (Watson et al. 1988). In the present study, Cronbach’s alphas were .86 for negative mood and .89 for positive mood.

Depression

The Center for Epidemiologic Studies Depression inventory (CES-D; Devins et al. 1988; Radloff 1977) is a 20-item self-report questionnaire designed to assess depressive symptoms in adults. Mothers were asked to indicate how frequently they experienced various symptoms during the last week, using a 4-point Likert-type scale (1 = not at all to 4 = very much so). Positively worded items were reverse coded so that a high score indicated greater overall depression. Previous studies have reported high internal consistency, adequate test–retest reliability, and good criterion and discriminant validity coefficients (Devins et al. 1988; Radloff 1977). Cronbach’s alpha for the current study was .92, indicating high internal consistency.

Life Satisfaction

The Satisfaction with Life Scale (SWLS; Pavot and Diener 1993) is a 5-item questionnaire developed to measure global cognitive judgments about one’s life. Using a 7-point Likert-type scale, mothers indicated the extent to which they agreed with each statement (1 = strongly disagree to 7 = strongly agree). Sample items included: “In most ways my life is close to my ideal,” and “If I could live my life over, I would change almost nothing.” A high score indicated higher satisfaction. High internal consistency and test–retest reliability have been previously reported (Pavot and Diener 1993). Cronbach’s alpha in the current study was .85, indicating high internal consistency.

Psychological Well-Being

The Psychological Well-Being Scale (PWB; Ryff and Keyes 1995) is a 42-item self-report measure that assesses well-being in multiple domains. A Personal Growth scale assesses feelings of continued development, openness to new experiences, and improvement in self and behavior over time. An Environmental Mastery scale includes items that evaluate the individual’s sense of mastery and competence in managing the environment and controlling external activities. A Purpose in Life scale assesses the extent to which the individual has goals in life and a sense of directedness, feels there is meaning to present and past life, and has aims and objectives for living. Participants indicated their agreement with each statement using a 5-point Likert-type scale (1 = strongly agree to 5 = strongly disagree). Selected items were reverse coded so that a high score reflected a higher degree of overall well-being. An overall score reflecting psychological well-being was employed in this study. Previous studies have found moderate to strong associations between this measure and measures of positive affect, negative affect, life satisfaction, and depression (Ryff and Keyes 1995). Cronbach’s alpha for this measure in the current study was .92 for overall psychological well-being.

Analytic Strategy

Structural equation modeling (SEM) was used to test our mediational hypotheses regarding pathways between social support, optimism, and maternal well-being. All models were estimated using the M-Plus 5.2 statistical package, using the maximum likelihood estimation method. Multiple fit indices will be reported for each model in order to evaluate the degree to which our models are an appropriate fit for the data. In addition to the traditional chi-square statistic, the \( \chi^2/df \) ratio indicates good fit if values are close to 1, and an acceptable fit if values are less than 5 (Hu and Bentler 1999). Additionally, a comparative fit index (CFI) greater than .95 indicates a very good fit, although a CFI value greater than .90 also indicates the model is an adequate fit to the data (Hu and Bentler 1999). Finally, when the root mean square error of approximation (RMSEA) is less than .06 then the hypothesized model is a good fit for the observed data; however, if the RMSEA is less than .08 then the hypothesized model is an adequate fit for the data.
These alternative fit indices control for sample size (Hu and Bentler 1999). When deciding whether a model is a good fit, each of these fit indices are considered.

The Baron and Kenny (1986) causal steps approach to mediation has been one of the most popular and frequently cited mediation analyses. Recently, however, studies have shown that this approach results in an increase of the Type II error rate. In addition, this approach does not provide a simultaneous test of all paths being estimated, a direct estimate of the total indirect effect of the independent variable on the dependent variable, or provide standard errors to construct confidence limits (MacKinnon et al. 2002; Shrout and Bolger 2002). In addition, when models incorporate multiple mediators and multiple outcomes the traditional approach to mediation has difficulty evaluating each of the individual effects (MacKinnon et al. 2002). In order to determine the significance of mediation, bias-corrected confidence intervals for the indirect effects were constructed using a bootstrap approach with 500 resamples (MacKinnon et al. 2004). Resampling methods may provide more accurate results when sample sizes are low (MacKinnon 2008 p. 342).

Multiple linear regression analyses were conducted to test our moderational hypotheses regarding the effects of the interaction between informal social support and optimism on maternal well-being. Separate regression analyses were conducted for each form of social support (friend, spouse, and family), as well as for each outcome. Each multiple regression model included control variables, optimism, social support, and the optimism x social support interaction term. All variables were mean-centered (Aiken and West 1991). Problems of missing data were minimal, as follow-up correspondence was sent to participants to obtain missing information. For individual items missing on a scale score, a mean score was imputed if 90% of the items on the scale had been completed.

Results

Demographic Relationships

Relationships between demographics and all variables of interest were examined in order to determine whether any demographic variables needed to be included as covariates. Correlational analyses revealed that maternal age was not significantly related to any of the variables. In addition, there was no significant pattern of associations between child age and any of the variables in the current study. There were, however, significant differences between mothers of one child with ASD and mother of more than one child with ASD. Mothers of more than one child with ASD reported less friend support ($F(1, 117) = 5.80$, $p < .05$), partner support ($F(1, 108) = 6.67, p < .05$), and family support ($F(1, 116) = 9.57, p < .01$). In addition, mothers of more than one child with ASD also reported higher levels of depression ($F(1, 111) = 7.67, p < .01$), higher levels of negative affect ($F(1, 114) = 9.59, p < .01$), and lower levels of life satisfaction ($F(1, 116) = 4.28, p < .05$). For these reasons, the number of additional children with ASD was included as a covariate in all mediation and moderation models.

Descriptive Statistics and Correlations

All variables were examined for skewness and kurtosis, and were found to be normally distributed. Therefore, the data in the present study does not violate the normality assumption of maximum likelihood estimation. For the variable of partner support, however, the kurtosis value was slightly higher than accepted values. Multicollinearity tests (e.g. variance inflation factor) between independent variables were conducted. No evidence for multicollinearity was found. Table 1 presents descriptive statistics for each of the measures. In general, in comparison to low risk samples, mothers reported higher degrees of stress (Bonds et al. 2002), higher negative affect (Watson et al. 1988), and levels of depression that were severe enough to warrant a clinical diagnosis of depression (Radloff 1977), lower positive affect (Watson et al. 1988), lower mean life satisfaction scores (Pavot and Diener 1993), and lower levels of optimism (Scheier and Carver 1985). For the other measures, listed in Table 1, normative comparison data were not available.

As shown in Table 2, correlations support our hypotheses concerning the relation between optimism, informal social support, and maternal outcomes. Specifically, a

<table>
<thead>
<tr>
<th>Predictors/mediators</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
<th>Possible range</th>
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</thead>
<tbody>
<tr>
<td>Positive outcomes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Positive affect</td>
<td>33.95</td>
<td>6.96</td>
<td>18–49</td>
<td>10–50</td>
</tr>
<tr>
<td>Psychological well-being</td>
<td>157.36</td>
<td>19.33</td>
<td>111–210</td>
<td>42–210</td>
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<tr>
<td>Negative outcomes</td>
<td></td>
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<td></td>
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<tr>
<td>Depression</td>
<td>33.60</td>
<td>9.90</td>
<td>20–67</td>
<td>20–80</td>
</tr>
<tr>
<td>Negative affect</td>
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<td>6.58</td>
<td>10–38</td>
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<td>6.03</td>
<td>12–39</td>
<td>11–44</td>
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<td>3.62</td>
<td>14–32</td>
<td>8–32</td>
</tr>
<tr>
<td>Friend support</td>
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<td>2.74</td>
<td>4.5–16</td>
<td>4–16</td>
</tr>
<tr>
<td>Partner support</td>
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<td>4.06</td>
<td>6–24</td>
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</tr>
<tr>
<td>Family support</td>
<td>12.70</td>
<td>2.99</td>
<td>5–16</td>
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significant negative association was found between the informal social support variables and maternal negative outcomes. Mothers who reported higher levels of informal social support also reported lower levels of parenting stress, negative affect, and depression. Similar results were found for the relation between optimism and maternal negative outcomes. Further, consistent with our hypotheses, a significant positive association was found between both optimism and informal social support variables and maternal positive outcomes. Mothers who reported higher levels of optimism and informal social support also reported higher levels of positive affect, life satisfaction, and psychological well-being. In addition, we also found a significant positive association between optimism and each of the informal social support variables.

Mediation Analyses

In the first set of analyses, we used SEM to test whether informal social support mediated the relationship between optimism and maternal outcomes. As shown in Fig. 1, we tested two separate hypothesized models, one containing negative maternal outcomes and a second consisting of positive maternal outcomes. Figure 3 presents the results of the hypothesized model test. For the sake of clarity, only significant paths are shown. The results of the SEM containing negative maternal outcomes indicated a good fit with the data, $\chi^2 (2, n = 119) = .46, p = .79, \chi^2/df$ ratio = .23, CFI = 1.0, and RMSEA = 0 (90% CI: 0–.12). The results of the SEM containing positive maternal outcomes also indicated a good fit with the data, $\chi^2 (3, n = 119) = .58, p = .90, \chi^2/df$ ratio = .19, CFI = 1.0, and RMSEA = 0 (90% CI: 0–.07).

As hypothesized, several links between informal social support, optimism, and maternal negative outcomes were found (see Fig. 3a). Partner support was associated with lower levels of depression. Optimism was significantly associated with decreased depression, negative affect, and parenting stress. In addition, an indirect relationship between family support and negative maternal outcomes was found. Family support was associated with increased optimism; this increased optimism, in turn, predicted lower levels of depression, negative affect, and parenting stress. No direct effect between family support and any of the negative outcomes was found, suggesting that optimism completely mediated the relationship between family support and maternal negative outcomes. Confidence intervals of the total indirect effects of family support on maternal depression (95% CI: $-1.18, -0.02$) and parenting stress (95% CI: $-0.20, -0.01$) based on 500 bootstrap sample did not include zero, further indicating significant complete mediation. The confidence interval of the total indirect effects of family support on negative affect (95% CI: $-1.14, 0$) terminated at zero, indicating that this indirect effect may not be as strong.

Several significant associations between informal social support, optimism, and maternal positive outcomes were
also found (see Fig. 3b). Friend support was associated with increased positive affect. Partner support was associated with higher levels of life satisfaction and psychological well-being. Optimism was significantly associated with greater positive affect, life satisfaction, and psychological well-being. Indirect effects between family support and positive maternal outcomes were also found. Specifically, family support was associated with increased optimism; this increased optimism was, in turn, associated with higher levels of positive affect, life satisfaction, and psychological well-being. There was no direct effect found between family support and any of the positive outcomes.
suggesting that optimism completely mediated the relationship between family support and maternal positive outcomes. Confidence intervals of the total standardized indirect effects of family support on maternal positive affect (95% CI: .02, .21), life satisfaction (95% CI: .02, .19), and psychological well-being (95% CI: .02, .22) based on 500 bootstrap sample did not include zero, further indicating significant complete mediation.

Moderator Analyses

These analyses tested whether there was a significant interaction between the various forms of informal social support and optimism. Based on the results of the demographic analyses previously discussed, we controlled for the presence of another child with ASD in the models containing depression, negative affect, and life satisfaction. Results from these analyses found no significant interactions between the informal social support variables and optimism when predicting maternal negative and positive outcomes.

Discussion

Past research suggests that optimism and social support are associated with increased well-being among mothers of children with ASD (Bishop et al. 2007; Greenberg et al. 2004). Although not systematically investigated, research has also suggested that informal supports, such as those provided by partners, friends, and family may be particularly beneficial in promoting maternal well-being in this population (Boyd 2002). Moreover, research with other populations suggests that optimism and social support are positively related to each other and that social support mediates the optimism-psychological well-being relationship (Brissette et al. 2002; Dougall et al. 2001, Shelby et al. 2008). An emerging literature, however, suggests that optimism may mediate the social support-psychological well-being relationship (Karademas 2006). Little is known, however, about how these processes unfold in mothers of children with ASD. The present study was directed toward understanding how these intrinsic and extrinsic factors promote well-being among this population which is especially susceptible to experiencing elevated levels of stress (Ekas et al. 2009). Three different sources of informal social support, including partner, other family members, and friends were examined as mediators as well as moderators of the optimism-maternal well-being relationship.

One of the initial goals of this study was to examine the simple relationships between informal social supports and maternal well-being as well as that between optimism and maternal well-being. We were especially interested in examining whether three different sources of social support (partner, other family members, and friends) were differentially related to maternal outcomes. As seen in Table 2, correlational data indicated that each source of social support was associated with lower levels of depression, negative affect, and parenting stress. With regard to positive maternal outcomes, social support received from
friends was associated with increased life satisfaction, positive affect, and psychological well-being, whereas partner support was associated with increased life satisfaction and psychological well-being. Finally, social support received from other family members was associated only with increased psychological well-being. The correlational data also indicated that optimism was negatively associated with each of the maternal negative outcomes, and positively associated with each positive maternal outcome. In other words, higher levels of optimism were associated with increased positive outcomes and decreased negative outcomes. These preliminary results are consistent with previous research highlighting the benefits of having a good social support network (e.g. Dunn et al. 2001) and having an optimistic outlook (e.g. Achat et al. 2000).

In the present study, another goal was to examine the relationship between social support, optimism, and maternal well-being. While the correlation results indicated that optimism was positively related to each form of social support, social support was not found to either mediate or moderate the relationship between optimism and well-being. This finding contrasted with those of previous research (e.g. Dougall et al. 2001; Trunzo and Pinto 2003). Optimism, however, was found to mediate the relationship between social support received from family members and both positive and negative maternal outcomes (see Fig. 3). More specifically, greater family support was associated with increased optimism. In turn, optimism was associated with decreased depression, parenting stress, and negative affect. Moreover, optimism was also directly associated with increased positive affect, life satisfaction, and psychological well-being. Taken together, the mediation models indicate that each form of social support (partner, other family members, and friends) is important for mothers’ well-being, but that they operate in different ways. Partners and friends appear to directly impact some aspects of maternal well-being, whereas family support operates in an indirect fashion by helping mothers become or remain optimistic as they confront the challenges associated with raising a child with ASD. Based on these results, it would seem advisable for interventions to focus on strengthening each of the informal social supports specifically because each of the sources are associated, either directly or indirectly, with unique sources of benefit for the mother.

The role of optimism as a mediator has not been extensively studied in past research and, in fact, only one previous study involving a community sample of adults has reported similar results to that obtained in the present study (Karademas 2006). The current study extended this preliminary research by examining the relationship of social support, optimism, and well-being in a population experiencing high levels of distress, mothers of children with ASD. In discussing his cognitive architecture of personality, Cervone (2004) argued that behavior is based upon knowledge, an enduring structural feature of personality, and appraisals. Cervone (2004) further suggests that the knowledge structures contribute to the appraisal processes through which individuals assign meaning to particular situations. We similarly argue that social supports could be conceptualized as providers of knowledge as well as providers of instrumental and emotional support. Social supports empower the mothers by giving them hope and leading them to positively appraise the future, in turn reducing negative affect and engendering positive affect.

These findings also have possible implications for the development of interventions directed at increasing well-being in mothers raising children with ASD. One possible implication is that such an intervention should focus on increasing optimism. For example, cognitive-behavior therapy (CBT) techniques, such as self-monitoring and cognitive restructuring, have been shown to increase optimism (Pretzer and Walsh 2001) through getting individuals to monitor the positive aspects, changes and possibilities in their life situation. In one study, Matthews and Cook (2009) reported that self-transcendence, defined as maintaining an interest in the future and planning for the years ahead, was positively associated with optimism. Interventions utilizing CBT techniques have been consistently effective among families of children with developmental disabilities (Singer et al. 2007). It would be beneficial for researchers to adapt, and implement, these established intervention programs with families of children with ASD.

Although focusing on increasing optimism may be effective in reducing distress and promoting positive outcomes, the results of the present study suggest that optimism alone is not the only factor to consider in this equation. Given that increased social support is associated with increased optimism, it seems important to increase both the amount and quality of various informal, as well as formal, social supports available to mothers. More specifically, it seems likely that increases in social support that provides helpful information along with other types of instrumental and emotional assistance will increase optimism and enhance maternal well-being. One possible model that could be utilized in this population is the Parent-to-Parent model (e.g. Singer et al. 1999). This is a program designed to match parents of children with disabilities with parent supporters (i.e. individuals who have experience caring for children with disabilities). The supporter provides emotional support and shares general information with the parent. This model could be easily implemented with parents of children with ASD. Indeed, the regional autism support centers would be a logical choice to provide parent supporters. Overall, there are several intervention programs that could be implemented with families of children with ASD that would focus on...
impacting the skills necessary to increase optimism as well as increasing parent’s social support networks.

Although the current study provides important new information about social support, optimism, and well-being in mothers of children with ASD, there are several limitations to the current study. First, because the sample consisted of mainly Caucasian, upper-middle class families, the generalizability of the results is limited. Second, this study provides a static picture of the mothers at only a single time point. Without longitudinal data, it is not possible to make stronger inferences about the relationships between social supports, optimism, and maternal well-being. For example, we are unable to determine whether optimism influenced maternal outcomes or vice versa. A longitudinal design would help in understanding how these relationships change across time and which social supports provide short-term or long-term benefits. Finally, the present study also relied on maternal self-report for all measures employed. Therefore, the issue of shared source variance is a valid concern. Future research should include both questionnaire and observational components.

In general, the present study expands upon previous research by delineating the various mechanisms by which social support influences maternal well-being and the role maternal optimism plays in this process. Although the current study is an important first step in untangling the complex nature of the social-support-psychological-well-being relationship among mothers of children with ASD, there is still much to be studied in this area. For example, future research might follow a family systems perspective (Cox and Paley 1997), including both fathers and mothers of children with ASD as well as other members of the family, assessing their perceptions of support given and received, and how congruence between family members or lack thereof contributes to the well-being of each member. Moreover, the relative and interactive contributions of formal and informal supports need to be evaluated. For example, it may be that formal supports help structure the informal support system which promotes greater optimism in the family and, in turn, greater well-being. Future research might also examine more systematically how other personality characteristics, such as locus of control, engender or are engendered by various sources of social support. Future studies also need to examine the conditions under which social support mediates the optimism-psychological well-being relationship versus those conditions in which optimism mediates the social-support-psychological well-being relationship. Longitudinal research might also investigate whether the mediational relationships change over time. Together, the results of the present study, and the future research suggested, may provide a useful framework for developing interventions tailored to meet the needs of families of children with ASD.

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References


