



## Research article

## Sources of perceived social support on resilience amongst parents raising children with special needs in Ghana



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## ABSTRACT

**Background:** While parenting a child with special needs is burdensome, some parents do overcome through protective resources. Social support has been widely linked to this unique ability to overcome the challenges of raising a child with special needs. In spite of this, there is still paucity of research about the influence of the sources of perceived social support on this ability, known as resilience.

**Aim:** This study examined three sources of perceived social support—family, friends and significant other—on the resilience of Ghanaian parents raising children with special needs while adjusting for covariates (parental gender, marital status and educational level).

**Methods:** One hundred and seven (107) biological parents were recruited from special schools and parents support groups in Accra, Ghana. They completed paper-and-pencil or online questionnaires on resilience and perceived social support.

**Results:** Output from hierarchical multiple regression after adjusting for covariates showed that only support from significant others predicted resilience. Additionally, being married was positively and holding a higher education was inversely associated with resilience.

**Conclusion and implication:** These findings indicate the importance of support from significant others in the resiliency of parents but underscore the need to fully integrate and emphasize support from the other sources in resilience enhancing interventions.

## 1. Introduction

Raising a child with a special need or disability is associated with several negative outcomes including stress, depression, financial difficulties and stigma (Falk et al., 2014; Goudie et al., 2014; Oti-Boadi et al., 2020). In one study, about 41.2% of parents reported extreme psychological distress amplified by difficulties in managing the behaviours of their children and increased perceived burden, among others (Masulani-Mwale et al., 2018). These negative emotional responses are present more in mothers than in fathers because many a time, mothers perform the primary role of caregiving (Vilaseca et al., 2014). In some instances, the burden is differentiated around the type of disability with parents caring for children with autism asserted to be more prone to distress than parents raising children with any other disorder (Al-Farsi et al., 2016; Hayes and Watson, 2013). Reasons given for this stark disparity include the peculiar behavioural problems exhibited by children with Autism Spectrum disorder and symptom severity (Dieleman et al., 2018; Rivard et al., 2014). Amid these struggles and emotional turmoil, some parents

have emerged stronger by employing adaptive coping and protective resources like religiosity, spirituality, hope, optimism and social support (Dey et al., 2019; Trute et al., 2010).

Proponents of wellbeing research have emphasized the buffering role of social support against the deleterious effects of distress (Garipey et al., 2016; Compton and Hoffman, 2013). This impact of social support in reducing distress and promoting well-being cannot be overemphasized (Kim, 2020; Myers and Diener, 2018; Quoidbach et al., 2019). Support from social relations could be sourced from co-workers, family, neighbours, friends, or significant others. Moreover, distinctions have been made between the types of social support: Quality vs Quantity and Perceived vs Received (Gottlieb and Bergen, 2010; Melrose et al., 2015). Research examining the potency of these distinct types of social support against well-being outcomes continue to stress the superiority of perceived support (Reinhardt et al., 2006; Wilson et al., 2017). Perceived social support is multidimensional and can be understood as the subjective experience of social, psychological and interpersonal assistance that sustains and elevates health and well-being (Gottlieb, 2009; Tariq

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et al., 2020). According to this conceptualization, social support and its perception is pertinent to the overall functioning of an individual. This is particularly true for Ghanaians and Africans who are known to be interdependent, share strong ties and rely heavily on social networks for support (Adams and Dzokoto, 2003; Gyekye, 1996). Perceived social support is divided into three dimensions: family (extended or nuclear unit of people related by birth or affinity), friends (people who share mutual affection but not related by blood) and significant others (people considered as important, influential or intimately close) (Zimet et al., 1988). These dimensions are highly distinguishable in individualistic cultures but often blurry in collectivistic cultures due to the construction of society and language, such that friends in some instances can be considered as significant others or significant others as friends (Wilson et al., 2017). Within the disability literature, social support has been determined as a critical resource that reduces unfavourable psychological outcomes for parents of children with special needs (Meadan et al., 2010). For example, research among parents of children with attention deficit hyperactivity disorder in China has shown that parents reporting high levels of social support also report more psychological well-being (Ma et al., 2017). Social support among these parents has also been found to modulate physical health outcomes like blood pressure (Gallagher and Whiteley, 2012; Lovell et al., 2012). Besides these benefits, social support is also implicated in fostering and sustaining resilience among parents of children with special needs (Bekhet et al., 2012; Jacob et al., 2020).

There are several definitions of resilience. In the simplest terms resilience is a dynamic capability in utilizing resources to successfully

adapt despite threats to well-being (Masten, 2014; Rutter, 2012; Southwick et al., 2014). Most definitions however, contain two cardinal elements. First, a person exposed to adversity and second, the person doing well or able to overcome this adversity. In any person's life, resilience emerges because of their interactions with personal, biological, social and environmental factors (Rutter, 2012). Resilience researchers have studied many of these factors, collectively referred to as protective factors and found them responsible for positive adaptation in the face of crisis (Southwick et al., 2014). In this study, we examine social support which is one of these protective factors.

Parents raising children with special needs have reported that support from their networks is effective enough in managing caregiving stress and promoting positive outcomes through the non-judgmental discussion of their concerns, receiving empathy from others, venting out negative emotions and seeking counsel (Peer and Hillman, 2014). Extensive research among parents of children with special needs and other populations continue to confirm this strong link between social support and resilience (Bayat, 2007; Mathew and Nair, 2017; Ruiz-Robledillo et al., 2014). However, only a few studies have examined associations between the sources or types of social support and resilience among parents of children with special needs with little to none done amongst Ghanaian sample (e.g., Aydogan and Kizildag, 2017; Bayrakli and Kaner, 2012; Farrell et al., 2014; Karaman and Efiltili, 2019).

In line with this thinking, the current study examined how the sources of perceived social support (family, friends and significant others) influence the resilience of parents raising children with special needs in Ghana. It further adjusts covariates including parental gender, marital

**Table 1.** Parents and special child demographic characteristics.

Characteristics	n (%)	M (SD)	Min–Max
<b>Parents (N = 107)</b>			
Mothers	80 (74.8)		
Fathers	27 (25.2)		
Parents' age		39.98 (8.06)	23–58
<b>Marital status</b>			
Single	9 (8.4)		
Married	86 (80.4)		
Separated	9 (8.4)		
Divorced	1 (.9)		
Widowed	1 (.9)		
Missing	1 (.9)		
<b>Education</b>			
Basic school	8 (7.5)		
Secondary	25 (23.4)		
First degree	50 (46.7)		
Postgraduate	19 (17.8)		
Missing	5 (4.7)		
<b>Special Child (N = 104)</b>			
<b>Gender</b>			
Male	68 (65.4)		
Female	36 (34.6)		
Child's age		9.05 (4.22)	3–18
<b>Child diagnosis</b>			
Cerebral Palsy	59 (56.7)		
Autism Spectrum disorder	21 (20.2)		
Down Syndrome	8 (7.7)		
Attention Deficit Hyperactivity disorder	8 (7.7)		
Dyslexia	3 (2.9)		
Dual diagnosis	2 (1.9)		
Others	3 (2.9)		

Note. Dual diagnosis = diagnosed with two prominent childhood disorders.

status and educational level which have been similarly considered in previous studies (Farrell et al., 2014; Gallagher and Whiteley, 2012; Halstead et al., 2018). Against the background that Ghanaian culture is interdependent, it is predicted that all three indexes of perceived social support will influence resilience. The present study attempted to extend the literature on the importance of social support, particularly how specific sources contribute to the resilience of parents of children with special needs and inform the enhancement of culturally relevant interventions for Ghanaian parents.

## 2. Methodology

### 2.1. Participants

This paper is part of a larger study conducted for a master's thesis. It is a descriptive correlational study conducted with both online (created with Google forms) and paper-and-pencil surveys. An a priori power analysis was conducted based on Cohen's (1992) acceptable power of .80, an alpha of 0.05 and a medium effect size of 0.15 to determine sample size adequacy of 103 participants. We recruited 110 parents of children with special needs using purposive and snowball sampling techniques from special schools and parents support groups in the capital city of Ghana, Accra. The inclusion criteria were: a Ghanaian biological birth mother or father, raising a child with special needs aged between 0-18years and residing in Accra. Three participants were excluded for not meeting the eligibility criteria. The total sample was made of 101 mothers or fathers and 3 couples. Age of participants ranged from 23 to 58 years ( $M = 39.98$ ;  $SD = 8.06$ ). Participants were predominantly mothers (74.8%), married (80.4%) and had attained first degree (46.7%). Most parents had children with cerebral palsy (56.7%) and most of the children were males (65.4%). Children's age ranged from 3-18 years ( $M = 9.05$ ;  $SD = 4.22$ ). Fifty-one parents (47.66%) were recruited via the paper-and-pencil format and 56 parents (52.34 %) via the online format.

### 2.2. Measures

#### 2.2.1. Demographic questionnaires

A set of questions were developed to capture relevant demographic data about parents and their children. Parent details included age, gender, educational level and marital status. That of children included age, gender and diagnoses or type of disorder.

#### 2.2.2. Multidimensional scale of perceived social support (MSPSS; Zimet et al., 1988)

The Multi-Dimensional Scale of Perceived Social Support (MSPSS) contains 12-items that determines how much support an individual perceives from close relations like family, friends and significant others. It is a self-rating scale measured on a 7-point Likert from 1 = "very strongly disagree" to 7 = "very strongly agree". The total scores can be summed as family, friends, significant others, or total scale. The sum is ascertained when the 12-items are added. Strong psychometric properties have been reported for this scale. For instance, Doku et al. (2015) reported accepted Cronbach coefficient alpha of .80 for family, .86 for friends, .91 for significant others and .88 for the total scale. In this study, the Cronbach's alpha coefficient was .88, .83, .90, .91 for the total scale, significant others subscale, family subscale and friend subscale, respectively.

#### 2.2.3. The Brief Resilience Scale (BRS; Smith et al., 2008)

The BRS was developed to estimate an individual's capability to bounce back from or overcome adversity. It consists of three items which are phrased positively (e.g., "I usually come through difficult times with little trouble") and three items phrased negatively (e.g., "It is hard for me to snap back when something bad happens"). It is a 6-item scale, rated on a 5-point Likert, where 1 represents "strongly disagree" to 5 representing "strongly agree". We obtained total scores (ranging from 6 to 30) by adding up all responses for all 6 items after reversing 3 items on the scale. Higher scores are associated with high resilience while lower scores on the scale represent low resilience. Bariola et al. (2015) reported a good internal consistency coefficient of 0.92 from their research which is higher than what we found ( $\alpha = 0.74$ ).

### 2.3. Procedure

This study was approved by the Institutional Review Board of the College of Humanities, University of Ghana (IRB number: ECH 038/17-18) and conducted between February and June 2018. Before data collection could begin, permission to recruit participants was sought from school administrators and once permission was granted parents were approached. Parents were thoroughly informed about the purpose of the study and those who consented were given the questionnaire to anonymously complete. Since this study employed both online and paper-and-pencil questionnaires for data collection, participants had to

**Table 2.** Descriptive statistics and correlation between study variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Resilience	—											
2. Social Support	.40**	—										
3. Significant other	.42**	.69**	—									
4. Family	.35**	.83**	.45**	—								
5. Friends	.19	.78**	.26**	.452**	—							
6. Gender	-.12	-.04	.15	-.07	-.14	—						
7. Age	.01	.01	-.13	.02	.10	-.27**	—					
8. Married	.34**	.07	.15	.12	-.08	-.28**	.06	—				
9. Higher education	.06	.42**	.27**	.34**	.34**	-.24*	.06	.26**	—			
10. Child gender	.01	-.04	-.12	.00	.01	.14	-.22*	.00	-.11	—		
11. Child age	.01	.11	-.02	.04	.21*	-.01	.67**	-.02	-.02	-.02	—	
12. Diagnosis	-.01	-.12	-.08	-.16	-.05	.11	-.34**	-.05	-.23*	.16	-.26**	—
Mean	21.47	56.03	21.73	18.04	16.26	—	—	—	—	—	—	—
SD	4.21	13.91	5.07	6.20	6.76	—	—	—	—	—	—	—
Skewness	-.49	-.89	-.55	-.28	-.51	—	—	—	—	—	—	—
Kurtosis	-.51	.183	-.422	-.29	-.78	—	—	—	—	—	—	—

Note.  $n = 107$ ; \* $p \leq .05$ ; \*\* $p \leq .01$ .

indicate a preference. A link to the survey was shared, via emails or WhatsApp, with those parents who chose the online option. Those who agreed to the paper-and-pencil format were given a set of the questionnaires to fill. For the parents belonging to the support groups, one of the researchers established contact with their administrators and was invited to join their regular meetings to facilitate anonymous data collection. Additionally, a link of the online survey was posted to their WhatsApp group platform and interested participants connected to the survey via the link. Participation was strictly voluntary: parents did not receive any compensation. Surveys that were completed were concurrently prepared for data analyses.

2.4. Analysis

Statistical analyses were conducted using the IBM SPSS Statistics: version 23 with significance set at  $p < 0.05$ . The demographic variables (see Table 1) were described with frequencies and percentages. For the main study variables, means, standard deviations, reliability value (i.e., Cronbach alphas) and normality check (i.e., Skewness and Kurtosis) were computed. It can be seen in Table 2 that all the variables were within normally acceptable ranges of  $\pm 2$  (Field, 2013). To ensure easy analysis and interpretation, multiple indicator variables were re-categorized. For marital status (new variable being single/ever married vs married), the value of "0" was assigned to parents who identified as single, separated, divorced and widowed while "1" for parents who were married. Likewise, educational level (new variable becoming pre-tertiary vs higher education) was recoded "0" for parents who only attended basic and secondary school and "1" for first degree and postgraduate. Child diagnosis was recoded with cerebral palsy assigned "1" and all other diagnoses as "0". Finally, the gender variable was recoded as this: fathers "0" and mothers "1".

To examine the strength and direction of all study variables, a Pearson product-moment correlation was utilized. Simple and hierarchical multiple regression analyses were performed to predict the influence of the domains of social support (predictors) on resilience (outcome) adjusting for covariates. The simple regression (see Appendix A) according to the strategy by Field (2013) was used to confirm the selection of covariates to include in the final model. Parents' gender, marital status and education status were selected as covariates for approaching significance or being significant predictors. Building the best model to fit the data required checking assumptions of multicollinearity and sample size. The result of this preliminary check revealed that the variables of interest were not overly related to each other ( $r \geq .9$ ); thus, multicollinearity was not violated. Sample size adequacy with 6 predictors was attained via

G\*Power 3.1.9.2 (Faul et al., 2007) which determined 98 participants as sufficient.

3. Results

3.1. Descriptive statistics and correlations

The results of the descriptive analyses are reported in Table 1. A positive significant relationship was observed between total score of social support ( $r = .40, p < .001$ ), significant other ( $r = .42, p < .001$ ), family ( $r = .35, p < .001$ ) and resilience except for friends ( $r = .19, p = .054$ ). Marital status was the only sociodemographic variable significantly related to resilience ( $r = .34, p < .001$ ). See Table 2 for summary.

3.2. Regression analysis

A hierarchical multiple regression was conducted with parent characteristics entered at the first step and sources of social support entered at the second step. The findings for the regression analysis are in Table 3. We found that both models were significant. In the first step ( $R^2 = .12, F(3, 97) = 4.27, p = .007$ ) only marital status of parents was a statistically significant predictor ( $\beta = .32, p = .002$ ), implying that being married predicts resilience. In the second model ( $\Delta R^2 = .21, F(7, 91) = 7.61, p < .001$ ) after adjusting for parental characteristics, the significant predictors of resilience were being married ( $\beta = .27, p = .005$ ), holding a higher education ( $\beta = -.22, p = .031$ ) and support perceived from significant others ( $\beta = .34, p = .001$ ). Support perceived from significant others moreover made the most unique contribution to the variance in resilience. In sum, the results showed that support perceived from significant others was the only significant predictor of resilience but not support from perceived from family and friends.

4. Discussion

We examined the influence of three sources of perceived social support—family, friends and significant others—on the resilience of Ghanaian parents of children with special needs after controlling the effects of parental characteristics. Our results showed that only support perceived from significant others significantly predicted resilience. We did not find support for other predictors. Unexpectedly, resilience was also predicted by being married and holding a higher education.

Even though the relationship was not hypothesized, it is worth mentioning that a positive relationship between overall perceived social support and resilience was found in the zero-order correlation. This finding is congruent with previous studies among parents of children

Table 3. Hierarchical multiple regression of the domains of social support predicting resilience while controlling parent's demographic factors.

Step	Variables	B (SE B)	$\beta$	t	p	95% CI
1	(Constant)	19.44 (1.44)		13.46	.000	16.57, 22.30
	Marital Status					
	Married	3.44 (1.07)	.32	3.20	.002*	1.30, 5.57
	Education Status					
	Higher education	-.20 (.89)	-.02	-.23	.819	-1.96, 1.56
2	Parent Gender					
	Mothers	-.67 (.99)	-.07	-.67	.503	-2.64, 1.30
	(Constant)	12.29 (1.89)		6.511	.000	8.54, 16.04
	Married	2.87 (1.01)	.27	2.85	.005*	.87, 4.86
	Higher education	-1.90 (.86)	-.22	-2.20	.031*	-3.61, -.18
	Mothers	-1.48 (.92)	-.15	-1.60	.113	-3.31, .36
	Significant other	.28 (.08)	.34	3.40	.001*	.12, .45
Family	.13 (.07)	.20	1.95	.055	-.00, .27	
Friends	.05 (.06)	.08	.81	.422	-.07, .17	

Note. \* $p \leq 0.05$ .

with special needs (Bayat, 2007; Ruiz-Robledillo et al., 2014) implying that the support one perceives from his/her networks have the potential to foster the ability to overcome distress and sustain well-being. The finding also lends support to the growing literature on the influence of specific sources or types of social support on the resilience of parents (Bayrakli and Kaner, 2012; Farrell et al., 2014; Karaman and Efilci, 2019). We did not find significant effect for the relation between support perceived from friends and family and resilience although association was in the expected direction. This contradicts the notion that Ghanaians place high premium on the supportive roles of close relations in times of need (Adams and Dzokoto, 2003; Gyekye, 1996; Wilson et al., 2017). We may expect however that this premium dissipates in the face of rejection, stigmatization and discrimination particularly from friends and families of parents raising children with special needs (Ae-Ngibise et al., 2015; Nyante and Carpenter, 2019; Oti-Boadi, 2017; Oti-Boadi et al., 2020; Oti-Boadi et al., 2020). These mistreatments by close relations could potentially subdue the perception of support from friends and family, thus impairing the resilience of parents. Parents may also be forced to socially withdraw to avoid unfavourable confrontations and harsh commentaries from family members or friends. These have the consequences of poor perception of support from families and friends.

In spite of these, support perceived from significant others like spouses or partners acted as a protective resource against adversity for the parents in this study. Compared to family and friends, significant others in a person's life play expansive and virtually guaranteed emotional, informational and instrumental roles situated in the provision of empathy, a sense of relationship stability, financial support and non-judgmental counsel, among others (Thoits, 2020). Once available, these forms of support are noted to improve wellbeing, reduce stress and foster resilience (Bergström et al., 2020; Peer and Hillman, 2014). From the foregoing, the result suggested that parents higher on significant others support endorsed increased levels of resilience. This finding is consistent with what we found about the relation between being married and resilience. It further cements the relevance of spousal support on the wellbeing and resilience of parents of children with special needs by ensuring harmonious living, effective family interaction, increased marital quality and an equal share of caregiving burdens (Aydogan and Kizildag, 2017; Robinson et al., 2016).

It is possible that parents in this study may have recognized and accepted other parents in their support group as significant others because of the group bonding and long-term relationships. Although this argument may seem overstretched, the support from other parents in the support group who are now considered as significant others might be contributing to resilience. If this argument is true, then it complements prior studies that have highlighted the essence and several psychosocial benefits experienced by parents of children with special needs who belong to parent support groups (Hammarberg et al., 2014; Mueller et al., 2009). This assertion is consistent with a recent study among Ghanaian caregivers of children with cerebral palsy participating in a support group programme. It is reported that support groups offered an alternative source of support where they felt included and the relationships with other parents were perceived as important enough to instil hope (Zuurmond et al., 2018).

With regard to educational level, we found that higher levels of education had lower levels of resilience. Although this may appear counterintuitive and contrary to evidence asserting that possessing a higher education massively affords a person the capability to mobilize resources in times of crisis (Campbell-Sills et al., 2009), other studies have reported similar findings, that college graduates had lower levels of resilient outcomes than those with lower education status (Bonanno et al., 2007). Possibly, parents holding higher education in this study may not be using their educational status as a route to mobilize resilience enhancing resources. Differing parental expectations between highly educated parents and lower-educated parents held about children could be another plausible explanation for this finding (Davis-Kean, 2005; Long and Pang, 2016; Osborn, 1971). Perchance, parents with higher educational levels

may have similar expectations for their children, but the knowledge of their children's developmental limitations may reduce their expectations. In recently published paper, it was reported that caregivers of children with intellectual disability in Ghana have lowered expectations (Opoku et al., 2020). The diminished expectation of the children may indirectly impact the resilience of highly educated parents in this study (Ekas et al., 2010; Sulimani-Aidan, 2017). This calls for more future research to investigate the direct and indirect effect of parental expectations on wellbeing outcomes amongst parents of children with special needs.

#### 4.1. Limitations and future directions

The study is not without limitations. First, it is important to note that the findings may be culture-sensitive or specific, thus caution should be applied during interpretation. We admit that our sample size is small, but it was statistically determined as adequate for this study and consistent with previous studies amongst parents of children with disabilities (Cappe et al., 2017; Cuzzocrea et al., 2016; Ekas et al., 2009; Lu et al., 2018). Moreover, data collection with these parents is challenging because they are hard-to-reach and time-pressed (Gallagher and Whiteley, 2012). A larger sample could have provided greater statistical power, encouraged the inclusion of all potential covariates into the final model and ensured that age variables be treated categorically. Also, closely examining the demographics of the study show an unbalanced distribution where the majority of parents were mothers, had children with cerebral palsy, resided in an urban city and held a higher education. Future research should endeavour to collect a more representative sample or limit the analysis to a single category of parents. Further, the study was correlational and a longitudinal design could provide a comprehensive explanation for these bi-directional relationships. Besides, any attempt at a longitudinal study among parents could examine resilience as a state or trait or a mixture of both as evidenced in a recent publication by Ye et al. (2020). Though the study demonstrates some statistical rigour by adjusting covariates, we acknowledge the presence of some confounds because of unaccounted covariates. Future studies should adopt sterner statistical control.

#### 4.2. Implications for interventions

The findings of this study call on more nationwide desensitization exercises on the causes of disability, experiences of children and family members and the need to demonstrate empathy and compassion to eliminate the myths surrounding childhood disability. This is intended to dispel, even among friends and family, the stigma in Ghana (or elsewhere), giving real chances to caregivers or parents of children with special needs to overcome their burdens through the perception of familial and friendship support. The information provided in this study could therefore be used by non-governmental organizations (NGO) or support groups such as the Special Mothers Project in Ghana and Parents of Children with Intellectual Disability (PACID-Ghana) towards their advocacy and destigmatizing programmes. These support groups can also utilize the information to strengthen members against self-stigma and instil hope. Any wellbeing or resilience enhancing intervention by mental health professionals targeted at parents should be holistic, integrating the eminence of support from several sources including significant others, family and friends.

#### 4.3. Conclusion

The study examined how the sources of perceived social support (family, friends and significant others) influence the resilience of parents raising children with special needs in Ghana covarying parental gender, marital status and educational level. We found that only support perceived from significant others alongside being married and holding higher education predicted resilience. The findings extend literature about the role and sources of social support in enhancing the resilience of

parents raising children with special needs in Ghana. Lastly, it underscores the need to integrate and emphasize not only support from significant others but all other sources in resilience enhancing interventions intended to reduce stress and increase wellbeing.

**Declarations**

*Author contribution statement*

B. Amponsah, N. E. Y. Dey: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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The authors declare no conflict of interest.

*Additional information*

No additional information is available for this paper.

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**Appendix A**

Model	B	Std. Error	□	t	Sig.	95.0% Confidence Interval for B	
						Lower Bound	Upper Bound
(Constant)	11.754	3.487		3.370	.001	4.819	18.689
Parent Gender	-1.718	1.005	-.175	-1.711	<b>.091</b>	-3.716	.279
Parent Age	.017	.070	.034	.251	.803	-.121	.156
Marital Status							
Married	2.733	1.070	.253	2.554	<b>.012</b>	.605	4.862
Educational Status							
Higher education	-1.804	.914	-.206	-1.974	<b>.052</b>	-3.621	.014
Special Child Gender	.546	.831	.062	.657	.513	-1.106	2.199
Special Child Age	-.055	.128	-.056	-.430	.668	-.310	.200
Child Diagnosis	.252	.857	.030	.294	.769	-1.452	1.956
Significant other	.298	.089	.359	3.348	.001	.121	.475
Family	.126	.073	.192	1.723	.089	-.019	.272
Friends	.062	.065	.102	.949	.345	-.067	.191

Note. DV = Resilience; Bold sig. values are covariates selected for the final model.

**References**

Adams, G., Dzokoto, V.A., 2003. Self and identity in African studies. *Self Ident.* 2 (4), 345–359.  
 Ae-Ngibise, K.A., Doku, V.C.K., Asante, K.P., Owusu-Agyei, S., 2015. The experience of caregivers of people living with serious mental disorders: a study from rural Ghana. *Glob. Health Action* 8 (1), 1–9.

Al-Farsi, O.A., Al-Farsi, Y.M., Al-Sharbaty, M.M., Al-Adawi, S., 2016. Stress, anxiety, and depression among parents of children with autism spectrum disorder in Oman: a case-control study. *Neuropsychiatric Dis. Treat.* 12, 1943–1951.  
 Aydogan, D., Kizildag, S., 2017. Examination of relational resilience with couple burnout and spousal support in families with a disabled child. *Fam. J.* 25 (4), 407–413.  
 Bariola, E., Lyons, A., Leonard, W., Pitts, M., Badcock, P., Couch, M., 2015. Demographic and psychosocial factors associated with psychological distress and resilience among transgender individuals. *Am. J. Publ. Health* 105 (10), 2108–2116.  
 Bayat, M., 2007. Evidence of resilience in families of children with autism. *J. Intellect. Disabil. Res.* 51 (9), 702–714.  
 Bayrakli, H., Kaner, S., 2012. Investigating the factors affecting resiliency in mothers of children with and without intellectual disability. *Educ. Sci. Theor. Pract.* 12 (2), 936–943. <https://files.eric.ed.gov/fulltext/EJ981825.pdf>.  
 Bekhet, A.K., Johnson, N.L., Zauszniewski, J.A., 2012. Resilience in family members of persons with autism spectrum disorder: a review of the literature. *Issues Ment. Health Nurs.* 33 (10), 650–656.  
 Bergström, M., Sverker, A., Larsson Ranada, Å., Valtersson, E., Thyberg, I., Östlund, G., Björk, M., 2020. Significant others' influence on participation in everyday life—the perspectives of persons with early diagnosed rheumatoid arthritis. *Disabil. Rehabil.* 42 (3), 385–393.  
 Bonanno, G.A., Galea, S., Bucchiarelli, A., Vlahov, D., 2007. What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *J. Consult. Clin. Psychol.* 75 (5), 671.  
 Cappe, E., Bolduc, M., Rougé, M.C., Saiag, M.C., Delorme, R., 2017. Quality of life, psychological characteristics, and adjustment in parents of children with Attention-Deficit/Hyperactivity Disorder. *Qual. Life Res.* 26 (5), 1283–1294.  
 Campbell-Sills, L., Forde, D.R., Stein, M.B., 2009. Demographic and childhood environmental predictors of resilience in a community sample. *J. Psychiatr. Res.* 43 (12), 1007–1012.  
 Cohen, J., 1992. A power primer. *Psychol. Bull.* 112 (1), 155–159. Retrieved from <http://www2.psych.ubc.ca/%7Eschaller/528Readings/Cohen1992.pdf>.  
 Compton, W.C., Hoffman, E., 2013. *Positive Psychology: the Science of Happiness and Flourishing*, second ed. Wadsworth, Belmont, CA (Chapter 6).  
 Cuzzocrea, F., Murdaca, A.M., Costa, S., Filippello, P., Larcan, R., 2016. Parental stress, coping strategies and social support in families of children with a disability. *Child Care Pract.* 22 (1), 3–19.  
 Davis-Kean, P.E., 2005. The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. *J. Fam. Psychol.* 19 (2), 294.  
 Dey, N.E.Y., Amponsah, B., Wiafe-Akenteng, C.B., 2019. Spirituality and subjective well-being of Ghanaian parents of children with special needs: the mediating role of resilience. *J. Health Psychol.* 1–12.  
 Dieleman, L.M., De Pauw, S.S., Soenens, B., Mabbe, E., Campbell, R., Prinzie, P., 2018. Relations between problem behaviors, perceived symptom severity and parenting in

adolescents and emerging adults with ASD: the mediating role of parental psychological need frustration. *Res. Dev. Disabil.* 73, 21–30.  
 Doku, P.N., Dotse, J.E., Mensah, K.A., 2015. Perceived social support disparities among children affected by HIV/AIDS in Ghana: a cross-sectional Survey. *BMC Publ. Health* 15 (1), 1–10.  
 Ekas, N.V., Whitman, T.L., Shivers, C., 2009. Religiosity, spirituality, and socioemotional functioning in mothers of children with autism spectrum disorder. *J. Autism Dev. Disord.* 39 (5), 706–719.  
 Ekas, N.V., Lickenbrock, D.M., Whitman, T.L., 2010. Optimism, social support, and well-being in mothers of children with autism spectrum disorder. *J. Autism Dev. Disord.* 40 (10), 1274–1284.

- Falk, N.H., Norris, K., Quinn, M.G., 2014. The factors predicting stress, anxiety and depression in the parents of children with autism. *J. Autism Dev. Disord.* 44 (12), 3185–3203.
- Farrell, A.F., Bowen, G.L., Swick, D.C., 2014. Network supports and resiliency among US military spouses with children with special health care needs. *Fam. Relat.* 63 (1), 55–70.
- Faul, F., Erdfelder, E., Lang, A., Buchner, A., 2007. G\*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behav. Res. Methods* 39 (2), 175–191.
- Field, A., 2013. *Discovering Statistics Using IBM SPSS Statistics*, fourth ed. Sage, London, England (Chapter 5).
- Gallagher, S., Whiteley, J., 2012. Social support is associated with blood pressure responses in parents caring for children with developmental disabilities. *Res. Dev. Disabil.* 33 (6), 2099–2105.
- Garipey, G., Honkaniemi, H., Quesnel-Vallee, A., 2016. Social support and protection from depression: systematic review of current findings in Western countries. *Br. J. Psychiatr.* 209 (4), 284–293.
- Gottlieb, B.H., 2009. Social support. In: Lopez, S.J. (Ed.), *The Encyclopedia of Positive Psychology*, 1. Wiley-Blackwell, Malden, MA, pp. 913–916.
- Gottlieb, B.H., Bergen, A.E., 2010. Social support concepts and measures. *J. Psychosom. Res.* 69 (5), 511–520.
- Goudie, A., Narcisse, M.R., Hall, D.E., Kuo, D.Z., 2014. Financial and psychological stressors associated with caring for children with disability. *Fam. Syst. Health* 32 (3), 280.
- Gyekye, K., 1996. *African Cultural Values: an Introduction*. Sankofa Publishing Company, Accra, Ghana.
- Halstead, E., Ekas, N., Hastings, R.P., Griffith, G.M., 2018. Associations between resilience and the well-being of mothers of children with autism spectrum disorder and other developmental disabilities. *J. Autism Dev. Disord.* 48 (4), 1108–1121.
- Hammarberg, K., Sartore, G., Cann, W., Fisher, J.R., 2014. Barriers and promoters of participation in facilitated peer support groups for carers of children with special needs. *Scand. J. Caring Sci.* 28 (4), 775–783.
- Hayes, S.A., Watson, S.L., 2013. The impact of parenting stress: a meta-analysis of studies comparing the experience of parenting stress in parents of children with and without autism spectrum disorder. *J. Autism Dev. Disord.* 43 (3), 629–642.
- Iacob, C.I., Avram, E., Cojocaru, D., Podina, I.R., 2020. Resilience in familial caregivers of children with developmental disabilities: a meta-analysis. *J. Autism Dev. Disord.* 1–16.
- Karaman, E., Efiltili, E., 2019. Investigation of social support perception and self-esteem as predictors of psychological resilience of parents who have children with special educational needs. *Asian J. Educ. Train.* 5 (1), 112–120. <https://files.eric.ed.gov/fulltext/EJ1204682.pdf>.
- Kim, R.Y., 2020. What makes people happy? An empirical investigation of panel data. *Appl. Econ. Lett.* 1–4.
- Long, H., Pang, W., 2016. Family socioeconomic status, parental expectations, and adolescents' academic achievements: a case of China. *Educ. Res. Eval.* 22 (5–6), 283–304.
- Lovell, B., Moss, M., Wetherell, M.A., 2012. With a little help from my friends: psychological, endocrine and health corollaries of social support in parental caregivers of children with autism or ADHD. *Res. Dev. Disabil.* 33 (2), 682–687.
- Lu, M.H., Wang, G.H., Lei, H., Shi, M.L., Zhu, R., Jiang, F., 2018. Social Support as mediator and moderator of the relationship between parenting stress and life satisfaction among the Chinese parents of children with ASD. *J. Autism Dev. Disord.* 48 (4), 1–8.
- Ma, J.L., Lai, K.Y.C., Lo, J.W.K., 2017. Perceived social support in Chinese parents of children with attention deficit hyperactivity disorder in a Chinese context: implications for social work practice. *Soc. Work. Ment. Health* 15 (1), 28–46.
- Mathew, R.T., Nair, B.P., 2017. Quality of life and resilience in relation to perceived social support among mothers of children with learning disability. *Ind. J. Health Well.* 8 (7), 665–667. [http://www.iahrw.com/index.php/home/journal\\_detail/19#list](http://www.iahrw.com/index.php/home/journal_detail/19#list).
- Masten, A.S., 2014. Global perspectives on resilience in children and youth. *Child Dev.* 85 (1), 6–20.
- Masulani-Mwale, C., Kauye, F., Gladstone, M., Mathanga, D., 2018. Prevalence of psychological distress among parents of children with intellectual disabilities in Malawi. *BMC Psychiatr.* 18 (1), 1–7.
- Meadan, H., Halle, J.W., Ebata, A.T., 2010. Families with children who have autism spectrum disorders: stress and support. *Except. Child.* 77 (1), 7–36.
- Melrose, K.L., Brown, G.D., Wood, A.M., 2015. When is received social support related to perceived support and well-being? When it is needed. *Pers. Individ. Differ.* 77, 97–105.
- Mueller, T.G., Milian, M., Lopez, M.I., 2009. Latina mothers' views of a parent-to-parent support group in the special education system. *Res. Pract. Pers. Severe Disabil.* 34 (3–4), 113–122.
- Myers, D.G., Diener, E., 2018. The scientific pursuit of happiness. *Perspect. Psychol. Sci.* 13 (2), 218–225.
- Nyante, G.G., Carpenter, C., 2019. The experience of carers of children with cerebral palsy living in rural areas of Ghana who have received no rehabilitation services: a qualitative study. *Child Care Health Dev.* 45 (6), 815–822.
- Osborn, M.E., 1971. The impact of differing parental educational level on the educational achievement, attitude, aspiration, and expectation of the child. *J. Educ. Res.* 65 (4), 163–167.
- Opoku, M.P., Nketsia, W., Banye, M.A., Mprah, W.K., Dogbe, J.A., Badu, E., 2020. Caregiving experiences and expectations of parents with in-school children with intellectual disability in Ghana. *Res. Dev. Disabil.* 96, 103524.
- Oti-Boadi, M., 2017. Exploring the lived experiences of mothers of children with intellectual disability in Ghana. *Sage Open* 7 (4), 2158244017745578.
- Oti-Boadi, M., Asante, K.O., Malm, E.K., 2020. The experiences of ageing parents of young adults with autism spectrum disorders (ASD). *J. Adult Dev.* 27 (1), 58–69.
- Oti-Boadi, M., Dankyi, E., Kwakye-Nuako, C.O., 2020. Stigma and forgiveness in Ghanaian mothers of children with autism spectrum disorders (ASD). *J. Autism Dev. Disord.* 1–10.
- Peer, J.W., Hillman, S.B., 2014. Stress and resilience for parents of children with intellectual and developmental disabilities: a review of key factors and recommendations for practitioners. *J. Pol. Pract. Intellect. Disabil.* 11 (2), 92–98.
- Quoidbach, J., Taquet, M., Deseilles, M., de Montjoye, Y.A., Gross, J.J., 2019. Happiness and social behavior. *Psychol. Sci.* 30 (8), 1111–1122.
- Reinhardt, J.P., Boerner, K., Horowitz, A., 2006. Good to have but not to use: differential impact of perceived and received support on well-being. *J. Soc. Pers. Relat.* 23 (1), 117–129.
- Rivard, M., Terroux, A., Parent-Boursier, C., Mercier, C., 2014. Determinants of stress in parents of children with autism spectrum disorders. *J. Autism Dev. Disord.* 44 (7), 1609–1620.
- Robinson, S., Weiss, J.A., Lunsby, Y., Ouellette-Kuntz, H., 2016. Informal support and burden among parents of adults with intellectual and/or developmental disabilities. *J. Appl. Res. Intellect. Disabil.* 29 (4), 356–365.
- Ruiz-Robledillo, N., De Andrés-García, S., Pérez-Blasco, J., González-Bono, E., Moya-Albiol, L., 2014. Highly resilient coping entails better perceived health, high social support and low morning cortisol levels in parents of children with autism spectrum disorder. *Res. Dev. Disabil.* 35 (3), 686–695.
- Rutter, M., 2012. Resilience as a dynamic concept. *Dev. Psychopathol.* 24 (2), 335–344.
- Smith, B.W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., Bernard, J., 2008. The brief resilience scale: assessing the ability to bounce back. *Int. J. Behav. Med.* 15 (3), 194–200.
- Southwick, S.M., Bonanno, G.A., Masten, A.S., Panter-Brick, C., Yehuda, R., 2014. Resilience definitions, theory, and challenges: interdisciplinary perspectives. *Eur. J. Psychotraumatol.* 5 (1), 25338.
- Sulimani-Aidan, Y., 2017. Future expectations as a source of resilience among young people leaving care. *Br. J. Soc. Work* 47 (4), 1111–1127.
- Tariq, A., Beihai, T., Abbas, N., Ali, S., Yao, W., Imran, M., 2020. Role of perceived social support on the association between physical disability and symptoms of depression in senior citizens of Pakistan. *Int. J. Environ. Res. Publ. Health* 17 (5), 1485.
- Thoits, P.A., 2020. “We know what they’re going through”: social support from similar versus significant others. *Socio. Q.* 1–22.
- Trute, B., Benzies, K.M., Worthington, C., Reddon, J.R., Moore, M., 2010. Accentuate the positive to mitigate the negative: mother psychological coping resources and family adjustment in childhood disability. *J. Intellect. Dev. Disabil.* 35 (1), 36–43.
- Vilaseca, R., Ferrer, F., Olmos, J.G., 2014. Gender differences in positive perceptions, anxiety, and depression among mothers and fathers of children with intellectual disabilities: a logistic regression analysis. *Qual. Quantity* 48 (4), 2241–2253.
- Wilson, A., Yendork, J.S., Somhlaba, N.Z., 2017. Psychometric properties of multidimensional scale of perceived social support among Ghanaian adolescents. *Child Indic. Res.* 10 (1), 101–115.
- Ye, Z.J., Zhang, Z., Zhang, X.Y., Tang, Y., Chen, P., Liang, M.Z., et al., 2020. State or trait? Measuring resilience by generalisability theory in breast cancer. *Eur. J. Oncol. Nurs.* 101727.
- Zimet, G.D., Dahlem, N.W., Zimet, S.G., Farley, G.K., 1988. The multidimensional scale of perceived social support. *J. Pers. Assess.* 52, 30–41.
- Zuurmond, M., O'Banion, D., Gladstone, M., Carsamar, S., Kerac, M., Baltussen, M., et al., 2018. Evaluating the impact of a community-based parent training programme for children with cerebral palsy in Ghana. *PLoS One* 13 (9), e0202096.