



# Effects of Benefit Finding, Social Support and Caregiving on Youth Adjustment in a Parental Illness Context

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## Abstract

Social support and benefit finding are two related processes that may protect youth from the adverse effects of caring for an ill parent. The primary purpose of this study was to test a mediational model proposal that benefit finding mediates the effects of social support and caregiving on youth adjustment in the context of parental illness. Given the dearth of research on benefit finding in the youth caregiving field, an additional aim was to further clarify the benefit finding construct in the parental illness context. A total of 428 Australian youth (mean age 12.77 years) who had a parent with a serious health problem completed a questionnaire. Exploration of the benefit finding construct showed that it was unidimensional, relevant to youth caregivers, unrelated to measured demographics, but highly linked to caregiving demands and engagement. Results from path modelling analysis supported the mediational model proposal that benefit finding mediates the effects of social support and caregiving on youth adjustment. While caregiving responsibilities in general has a detrimental effect on adjustment, a small counter-balancing indirect effect was detected via the role of increased benefit finding due to caregiving responsibilities. Most of the benefit finding research in youth has been conducted in the context of trauma, where parental support is a significant protective factor. This study makes an important contribution to understanding benefit finding and social support processes in the context of a chronic stressor where one of the usual sources (parents) of significant coping support is limited.

**Keywords** Parental illness · Young caregivers · Caregiving · Social support · Benefit finding · Youth adjustment

Given the advances in medical technologies, more adults are living with serious chronic health problems. Based on estimates of the number of parents with a serious illness in developed countries, 5 to 15% of youth (aged 4–18) are likely to have parents who suffer a serious medical condition (Barkmann et al. 2007; Sieh et al. 2013; Worsham et al. 1997). These young people often assume extra family caregiving roles, including caring for their parent with illness. Intensive youth caregiving may interfere or disrupt normative development in youth and, thereby, pose a potential threat to their physical, mental and social functioning.

Youth who have a parent with an illness report higher levels of caregiving and poorer mental health than youth with “healthy” parents (Pakenham and Cox 2014, 2015; Sieh et al. 2010), and higher youth caregiving is related to poorer mental health outcomes (Becker 2007; Levine et al. 2005; Pakenham and Cox 2012). Research has focused primarily on the risk factors associated with these adverse outcomes, while protective factors have been largely ignored. Social support and benefit finding are two related protective processes that have beneficial impacts on youth wellbeing. Benefit finding, in particular, has been neglected by researchers in the youth caregiver field. Although social support and benefit finding are considered to be related, their precise roles in relation to each other and caregiving, and how they, in turn, impact youth wellbeing have not been determined.

A mediational model may explain the interrelations among caregiving, social support, and benefit finding and their effects on youth adjustment. Consistent with such a mediational model, benefit finding is likely to mediate the effects of social support and caregiving on youth

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adjustment. The evidence supporting these proposed interrelations is reviewed below.

Regarding youth caregiving, parental illness often necessitates altering household routines requiring the redistribution of roles among family members. Role-redistribution often involves children taking on a range of potentially demanding caregiving tasks including instrumental, social, emotional, intimate, and domestic care tasks (Ireland and Pakenham 2010; Pakenham and Cox 2012). In view of the extent and nature of youth caregiving, it is not surprising that research has shown that higher levels of caregiving are associated with poorer outcomes including distress, missed opportunities, and isolation (see review Pakenham 2009). However, recent research has shown that caring for a parent with illness can also be associated with positive outcomes, including self-perceived maturity, increased confidence in caring, pro-social behaviour, and strengthened relationships (Pakenham et al. 2006; Pakenham et al. 2007; Pakenham and Cox 2012). This pattern of positive and negative outcomes associated with youth caregiving reflects the costs and benefits associated with caregiving that is evident in adult caregiver research (Pakenham 2005).

Social support is an important protective factor during child and adolescent development. Social support can be a preventative and buffering agent in stressful childhood circumstances (Thompson et al. 2006). As children mature, social support may be obtained from peer relationships as well as family networks. Both parent-child and peer relations are primary social influences on development that have direct and indirect effects on risk for mental health problems. The absence of social support is a risk factor for the development and maintenance of childhood problems. The presence of social support is associated with a wide range of positive outcomes. Two meta-analyses of social support studies in youth showed that social support had a small, but positive association with wellbeing (Chu et al. 2010), and an inverse association with depression (Rueger et al. 2016). These reviews also showed that qualitative social support (e.g., support satisfaction) was more strongly associated with wellbeing and depression than quantitative social support (e.g., network size).

A theme that has emerged in many qualitative studies of youth caregivers is a sense of isolation regarding their caregiving role, and the need to talk to supportive others about their situation (e.g., Bursnall and Pakenham 2013). Few quantitative studies have examined the role of social support in youth caregivers despite evidence supporting an association between social support and better wellbeing in adult caregivers (e.g., Pakenham 2001). One study showed that youth caregiver social support satisfaction, but not number of support persons, was the strongest and most consistent predictor of greater life satisfaction and positive

affect, and lower psychological distress, relative to caregiving context, stress appraisal and coping strategy predictors (Pakenham et al. 2007). Anderson and Hammen (1993) examined protective factors for the children (aged 8–16) of mothers who were medically ill, had a mood disorder, or were well. They found that regardless of the mother's condition, social support was one of several protective factors associated with reduced rates of psychological problems.

Benefit finding is defined as the identification of benefits in adversity (Tennen and Affleck 2002), and has been used interchangeably with a variety of terms including “post-traumatic growth” and “stress-related growth”. Benefit finding has been conceptualised as a meaning making construct (Janoff-Bulman and Yopyk 2004). According to the Assumptive Worlds theory (Janoff-Bulman 1992), significant negative life events, such as illness in a loved one and the associated caregiving, can disrupt fundamental assumptions about the world and self (e.g., invulnerability), triggering a state of meaninglessness with associated distress. Two cognitive processes contribute to the rebuilding of meaning in the face of the new realities: making sense of the event through developing explanations for the adversity (sense making), and finding significance or benefits in the event (Janoff-Bulman and Yopyk 2004). The latter involves re-evaluating adverse circumstances positively, thereby mitigating the negative implications, and protecting self-worth (Taylor 1983). Other theorists have also proposed a central role for benefit finding as a meaning making process in adapting to significant negative life events. For example, Tedeschi and Calhoun (2004) discussed benefit finding in the context of posttraumatic growth, and drawing on a stress and coping framework, Park and Folkman (1997) conceptualised benefit finding as a cognitive reappraisal coping strategy belonging to the meaning-based category of coping processes.

A growing body of research has examined benefit finding in youth (Meyerson et al. 2011), although only three published studies have examined it in youth caregivers. Several measures have been developed to measure benefit finding in youth in the context of traumatic or acute stressful events (Kilmer et al. 2014). Increasing evidence shows that children and adolescents can derive and report on benefits from adversity. However, the extent to which developmental stage affects the capacity to report benefits in hardship is unclear. With age comes an increase in abstract thinking, life experiences and future oriented thinking. To the extent that benefit finding is an abstract cognitive skill, it may be expected that benefit finding will increase with age, yet the literature provides no clear direction as to whether age is related to reports of benefits.

A meta-analysis of youth benefit finding studies found that despite some mixed findings, the weight of evidence

favoured associations between benefit finding and positive indicators of wellbeing (e.g., positive affect and quality of life), and fewer psychological problems (e.g., emotional distress, externalising problems and substance misuse) (Meyerson et al. 2011). Most of the youth benefit finding studies have focused on one-off traumatic events or a severe medical condition (e.g., cancer), and highlight the important role of parents as a primary source of support and guidance in dealing with the target stressor. Youth caregivers differ in that they deal with a chronic stressor typically over the course of their development into adulthood, and they have an ill parent who is the recipient of their care.

Searching for and identifying benefits in the caregiving experience may help caregivers find meaning in their role and, thereby, help to restore meaningfulness. Adult caregivers in various caregiving contexts have reported benefits or gains from their adversity, including perceptions of personal growth, the strengthening of relationships, and changes in priorities and goals (e.g., McCausland and Pakenham 2003; Pakenham and Cox 2008). Regarding youth caregivers, several studies show that they report similar benefits associated with their caregiving role (Earley et al. 2007; Pakenham et al. 2006). However, with only three published youth caregiver benefit finding studies, the benefit finding construct is not well developed in the parental illness context.

The limited evidence available suggests an association between greater benefit finding and youth caregiver adjustment and reflects a similar pattern of findings in the adult caregiver literature. In a study of youth of a parent with illness, benefit finding was related to greater positive affect, but unrelated to life satisfaction and distress (Pakenham et al. 2007). However, in a sub-sample of children of a parent with multiple sclerosis, benefit finding was related to higher life satisfaction and positive affect, and lower distress and somatisation (Pakenham and Bursnall 2006). Cassidy and Giles (2013) found that benefit finding was associated with fewer psychological symptoms and lower perceived stress and caregiving burden in youth caregivers. In addition, benefit finding was related to fewer adverse caregiving impacts on school, socialising and family.

Regarding the interrelations among caregiving, social support, benefit finding and youth adjustment, several theoretical frameworks propose that the social context can influence benefit finding. According to social cognition theory, social support facilitates benefit finding through promoting cognitive adaptation processes (Lepore and Kernan 2009). For example, supportive others may direct the caregivers' attention to positive information, help them positively reframe the situation, offer alternative perspectives, point out that some youth are worse off than them (i.e., downward comparison), identify possible positive

outcomes from the caregiving situation (e.g., becoming more responsible), encourage the caregiver's adaptive coping efforts, and assist with the caregiver's practical and emotional needs. Such expressions of social support are likely to reaffirm self-worth and the belief in the benevolence of the world (Lepore and Kernan 2009).

Similarly, Tedeschi and Calhoun (2004) suggested that the social environment can facilitate psychological growth by providing new positive perspectives and schemas. They also emphasised the role of empathic responses to self-disclosures about stressors, which provide opportunities for expression of feelings and development of new life narratives. In the process of sharing caring-related experiences with others, caregivers articulate a story of their caregiving. Caregiving narratives that include hopeful and optimistic messages are likely to be better received and reinforced by others. Hence, through these varied channels, social network members may help the caregiver to perceive themselves and their situation more positively.

Consistent with these theoretical frameworks, two reviews of the youth benefit finding literature have derived models of posttraumatic growth that propose social support as a key determinant of benefit finding (Kilmer et al. 2014; Meyerson et al. 2011). As with the adult literature, studies of benefit finding among children and adolescents have rarely examined the role of social support (Helgeson et al. 2009). However, a recent review showed preliminary evidence for a positive association between social support and benefit finding in young people (Meyerson et al. 2011), which is consistent with the above mentioned theorising and findings from adult studies (e.g., Prati and Pietrantonio 2009).

Regarding youth caregivers, Cassidy and Giles (2013) found that support from family and friends was related to greater benefit finding. They also found that social recognition of the value of the youth caregiving role was strongly associated with benefit finding. Two youth caregiver studies found that benefit finding was related to seeking social support, but was unrelated to the number of support providers or support satisfaction (Pakenham and Bursnall 2006; Pakenham et al. 2007).

Caregiving is also proposed to influence benefit finding given that in the parental illness context, it constitutes a primary stressor that evokes benefit finding (as mentioned above). Consistent with benefit finding theory, it is proposed that the more engaged in caregiving, the more likely the caregiver is to search for meaning in their caregiving activities and, thereby, find benefits in their role. Support for this proposal comes from data showing that adult caregivers who had higher engagement in caregiving tasks reported greater benefit finding (Pakenham 2007a, b). Similarly, Cassidy and Giles (2013) found that greater caregiving stress and burden were related to greater benefit finding in youth caregivers.

The primary purpose of the present study is to test a mediational model of the effects of caregiving, social support, and benefit finding on youth adjustment. However, given the dearth of research on benefit finding in the youth caregiving field, an initial aim of this study is to further clarify the benefit finding construct in the context of youth providing caregiving to a parent who has a serious health condition. In this regard, the psychometrics and descriptive data of the benefit finding measure will be explored. The second aim is to test the mediational model proposal that benefit finding mediates the effects of social support and caregiving on youth adjustment outcomes (behavioural-emotional-social difficulties, somatisation, family satisfaction, life satisfaction, positive affect and pro-social behaviour). Derived from the preceding discussion, three sets of direct effects are hypothesised, along with two mediated effects. Specific hypotheses are as follows. First, it is hypothesised that higher social support satisfaction will be related to better adjustment across all outcomes, and that these effects will be mediated through increased benefit finding. Second, it is hypothesised that a larger social network size will be related to better adjustment across all outcomes, and that these effects will be mediated through increased benefit finding. Finally, it is hypothesised that greater caregiving will be related to increased prosocial behaviour, but poorer adjustment on all other outcome measures, and that these effects will be mediated through increased benefit finding.

## Method

### Participants

A total of 2542 youth aged 9–20 years were recruited from 130 schools in the state of Queensland, Australia ( $n = 2429$ ), church groups ( $n = 35$ ), scouts ( $n = 23$ ), university vacation care ( $n = 13$ ), and a youth caregiver association ( $n = 42$ ). Participants completed a questionnaire. Forty-eight were excluded due to extensive missing data and 20 removed because of being under 9 years, leaving a total of 2474. To determine parental health status, respondents were asked to indicate whether any person in their home had a serious physical or mental health condition (“yes/no”). If “yes”, the respondent was asked to indicate from a list which family member had the health condition (with an “other” option and description of same). A total of 71% ( $n = 1768$ ) reported no family member with a serious health condition, 14% ( $n = 336$ ) indicated a parent only with a serious health condition, 5% ( $n = 116$ ) reported both a parent and a family member other than a parent with a serious health condition, and the remaining 10% ( $n = 254$ ) indicated a non-parent family member only with a serious

health condition. Hence, the total sample of youth who reported a parent with a serious health condition is 452. Of these, 34 youth did not answer the benefit finding scale (13 with only a parent with a health condition, and 11 with both a parent and another family member) and were removed from further analyses leaving a sample of 428. Compared to those who completed the benefit finding scale, youth who did not were on average almost 1 year younger (missing:  $M = 11.88$ ,  $SD = 2.87$ ; not-missing:  $M = 12.77$ ,  $SD = 3.77$ ;  $t_{(450)} = .249$ ,  $p = .019$  unequal variances assumed). No other significant differences were found for substantive or control variables. See Table 1 for characteristics of the youth who reported having a parent with a serious health condition.

### Procedure

The majority of participants were recruited through schools. A two-step sampling method was used: first schools were approached and then youth were recruited from participating schools. Parent information sheets and permission forms were distributed to children in grades 5–12. Teachers distributed questionnaires and information sheets in class groups to youth with parental permission and children completed the questionnaires in class. Ethical clearances for the recruitment of all samples were obtained from (blinded) and relevant institutions including (blinded). Questionnaires required no identifying information, took 30 to 45 min to complete, and contained three sections. All participants completed Section I. Only those who had a parent with a serious health condition completed Section II, whereas participants with “healthy” parents completed Section III, which consisted of face valid filler items that took the same amount of time to complete as Section II.

### Measures

Identical versions of the questionnaire had been piloted on youth in a similar age range, with all measures shown to have satisfactory reliability and validity (e.g., Pakenham et al. 2006).

### Benefit finding

We are aware of only two benefit finding scales for youth caregivers. One was only recently derived from a broader youth caregiver stress scale (Cassidy and Giles 2013), whereas the second more widely used scale was developed as a dedicated youth caregiver benefit finding scale and was used in the present study (Pakenham et al. 2007; Pakenham and Bursnall 2006). Items reflect the following benefit finding themes: caregiving gains, personal growth, the strengthening of relationships, appreciation of life, health

**Table 1** Participant characteristics: predictors, adjustment outcomes, parental illness, caregiving context, family structure and demographics ( $N = 428$ )

Variable	%	Mean	SD	Range
<i>Predictors</i>				
1. Benefit finding		2.42	.78	0–4
2. Social support satisfaction		5.14	.81	0–5
3. Social support network size		1.37	.47	0–3
4. Caregiving responsibilities		1.63	.83	0–4
<i>Adjustment outcomes</i>				
5. Somatisation		.76	.74	0–4
6. Total difficulties		3.60	1.52	.25–8.25
7. Prosocial behaviour		1.56	.36	0–4
8. Positive affect		1.84	.59	0–3
9. Life satisfaction		2.41	.87	0–4
10. Family satisfaction		2.66	.91	0–4
<i>Parental illness</i>				
Illness type				
Substance	10.98			
Mental illness	24.53			
Physical disability	81.54			
Parent				
Ill mother	47.43			
Ill father	38.55			
Both parents	12.85			
Illness duration (years)		13.86	13.75	
Seriousness of illness		3.31	1.02	
Parental functional difficulty		2.09	1.15	
Illness unpredictability		1.88	1.05	
<i>Caregiving context variables</i>				
Amount of help		3.06	1.04	
Choice in helping		2.70	1.01	
Help duration (years)		2.98	2.85	
<i>Family structure variables</i>				
Family size		5.06	2.04	
Number of older brothers		0.67	1.06	
Number of older sisters		0.54	0.88	
Single parent family	28.50			
Daily contact with ill parent	83.64			
<i>Demographic variables</i>				
Age years		12.77	2.33	
Sex: male/female	36.67 /63.33			
Caregiver working part time	16.59			
Relative Disadvantage Percentile		44.55	28.68	
Region				
Major city	57.01			
Inner regional	25.93			
Outer regional	14.49			

**Table 1** (continued)

Variable	%	Mean	SD	Range
Remote	2.57			
<i>National origin</i>				
Australian	76.10			
Aboriginal and Torres Strait Islander	4.63			
European decent	12.93			
Other	6.34			

gains, spiritual growth and positive changes in life priorities and personal goals. The following orienting instruction is given, “Sometimes people who help a family member who has an illness/disability get something positive out of it. Please rate how much you have experienced each item below as a result of helping your parent”. Respondents rate the extent to which they agree with each of the statements on a 5-point rating scale (1 “strongly disagree” to 5 “strongly agree”). Prior factor analysis on the scale using a sample of youth with a parent with a serious health condition showed it to be a unitary factor (Pakenham et al. 2007). Preliminary data on the youth caregiver benefit finding scale showed that it had acceptable internal reliability ( $\alpha = .92$ ), and criterion and construct validity (Pakenham et al. 2007; Pakenham and Bursnall 2006).

### Social support

The 6-item Brief Social Support Questionnaire (Sarason et al. 1987) was used to measure both qualitative (satisfaction with social support) and quantitative support (number of sources of support). For each of the 6 items respondents rate their level of satisfaction with the social support and indicate whether they receive support from three sources: “family”, “friends”, “other” or “there is no-one”. For both variables, the mean of the item responses was used. The scale has been validated for use with adolescents (Herzberg et al. 1999). It has been shown to have adequate test-retest reliability over a 4 week period ( $\alpha = .84$ ), and high correlations with the parent 27-item version ( $\alpha = .93$ ) (Sarason et al. 1987). The scale has demonstrated high internal consistency ( $\alpha = .94$ ) (Herzberg et al. 1999).

### Caregiving

The 11-item family responsibilities subscale of the Young Carer of Parents Inventory (Pakenham et al. 2006) was used to assess youth caregiving. The inventory is a self-report measure of youth caregiving experiences in the context of

parental illness. The family responsibilities subscale assesses the extent to which respondents contribute to family tasks (e.g., “My parent(s) relies on me to help them with household chores”). Items were rated by youth on a 5-point scale (0 “strongly disagree” to 4 “strongly agree”). The scale has demonstrated good internal reliability ( $\alpha = .84$ ), and content and predictive validity (Pakenham et al. 2006).

Positive and negative youth adjustment outcomes were measured as described below. Negative adjustment outcomes were behavioural-emotional-social difficulties and somatisation, and positive adjustment outcomes were family satisfaction, life satisfaction, positive affect and pro-social behaviour.

### Behavioural-emotional-social difficulties and pro-social behaviour

The widely used standardised 25-item Strengths and Difficulties Questionnaire (SDQ; Goodman et al. 1998) was used to assess behavioural, emotional, and social functioning. The SDQ consists of five subscales: conduct problems, hyperactivity/inattention, peer relationship problems, emotional symptoms, and prosocial behaviour. The first four subscales are summed to give a Total Difficulties score, whereas the pro-social behaviour subscale is used as a measure of positive adjustment. SDQ items are worded as thoughts, feelings, and behaviours to which respondents rate the extent it represents them across 0 (“not at all”), 1 (“a little, sometimes”), or 2 (“very much, all of the time”). The SDQ has demonstrated good internal reliability (alphas  $> .70$ ) and external validity in both clinical and non-clinical samples, as well as across a broad age-range (Muris et al. 2004; Roy et al. 2006).

### Somatisation

Five items with the highest factor loadings on the Symptom Checklist-90 somatisation subscale in the derivation study were used to assess somatic complaints (Derogatis and Cleary 1977). Respondents indicated how much each problem had upset them in the past 7 days using a 5-point scale (0 “not at all” to 4 “extremely”).

### Positive affect

Positive affect was measured by the 10-item positive subscale of the widely used Positive and Negative Affect Schedule (Watson et al. 1988). Respondents rate the extent to which they have experienced various emotions (e.g., “Interested”, “Enthusiastic”) in the last month on a 4-point scale (0 “Not at all”, to 3 “Very often”). The 10-item positive affect scale has been validated for use among Australian adolescents (Melvin and Molloy 2000). The

scale has been shown to have good internal reliability ( $\alpha = .89$ ; Crawford and Henry 2004) and validity (Watson et al. 1988),

### Life satisfaction

The 7-item Student’s Life Satisfaction Scale (Huebner 1991) was used to assess global life satisfaction. This scale is applicable for use with youth aged 8–18 years and has demonstrated adequate reliability and validity (see review Proctor et al. 2009). Respondents rate their level of agreement with each item (e.g., “My life is going well”) on a 5-point scale (0 “Strongly disagree”, to 4 “Strongly agree”).

### Family life satisfaction

The 7-item family subscale of the Multidimensional Students’ Life Satisfaction Scale (Huebner 1994) assessed perceptions of family life satisfaction. This scale has been designed for youth aged 8–18 years and the family subscale has demonstrated reliability and validity (see review Proctor et al. 2009). Students rate their level of agreement with each item (e.g., “My family is better than most”) on a 5-point scale (0 “Strongly disagree”, to 4 “Strongly agree”).

Four sets of control variables were measured (parental illness, caregiving context, family structure, and demographic variables) to provide a relevant context for examining relations among the focal variables. The control variables are described below. Descriptive data for each control variable are summarised in Table 1.

### Parental illness variables

A forced-choice question asked participants to identify which parent had a serious health condition (mother, father, both). If “both” was endorsed, the respondent was asked to complete all questions that referred to their “parent” in relation to the parent with the most severe health condition. *Type of parental illness*: participants were asked to provide the name of their parent’s health condition. The health problems were collapsed into three broad categories for which participants could have reported multiple categories: physical condition (81.54%), mental illness (24.53%), and alcohol and/or drug problems (10.98%), the latter is from here-on referred to as substance problem. *Illness seriousness*: participants rated the seriousness of their parent’s health condition on a 5-point scale (1 “not at all serious” to 5 “very serious”). *Illness duration*: participants were asked to give the duration of their parent’s illness in years and months. *Parental functional difficulty*: participants rated the extent to which their parent had difficulty performing daily activities (e.g., eating and dressing) as a result of their illness on a 5-point scale (1 “no difficulty”, 3 “some

difficulty”, 5 “extreme difficulty”). *Illness unpredictability*: a 5-item scale measured parental illness unpredictability (Pakenham et al. 2006). Respondents rated the extent to which they agreed with each item (e.g., “My parent’s condition could change at any time with little warning”) on a 5-point scale (0 “strongly disagree” to 4 “strongly agree”).

### Caregiving context

*Amount of caregiving*: participants rated how much help they gave their parent on a 5-point scale (1 “no help at all” to 5 “lots of help”). *Caregiving duration*: participants indicated in years and months the length of time they had been helping to care for their parent. *Choice in caregiving*: participants rated the extent to which they perceived they had a choice in helping their parent on a 4-point scale (1 “no choice”, 2 “a little choice”, 3 “quite a lot of choice”, 4 “I am free to make any choice”). Nearly half (44.86%) of the participants indicated “no choice” or “a little choice”, just over a quarter (26.57%) indicated “quite a lot of choice”, and almost a third (28.57%) indicated they were free to choose whether or not they helped their parent.

### Family structure variables

Participants answered questions on: dual or single parent family, number of family members, number and gender of siblings, and amount of contact with their ill parent.

### Demographic variables

Information was obtained from youth on their age (via date of birth), gender, employment (“Do you have a paid part-time job”), and location (postcode). Based on home postcode, participants were allocated a relative socio-economic disadvantage score derived from 2006 Australian census data. The index requires each postcode to be allocated a percentile of relative socio-economic disadvantage as calculated by the Australian Bureau of Statistics (ABS 2006), with 1% referring to areas with the greatest relative disadvantage. In this study, deciles were used by dividing the original score by 10. An open-question asked respondents to identify their ethnicity. In the main, respondents provided their national origins. The ABS standard classification of cultural and ethnic groups (ABS 2011) was used to guide the coding of responses.

### Data Analyses

The benefit finding items were subjected to an exploratory factor analysis. Factors with eigenvalues greater than 1.0 were used in principal axis factor extraction, and subjected to a direct oblimin rotation. All substantive variables and item based control variables were computed as the mean of

summed scales. Internal consistency of all scales were estimated using Cronbach’s alpha. A path modelling approach was employed to test the hypothesised direct and mediated paths simultaneously. All substantive and control variables were included as single item indicators. Categorical control variables were included as dummy variables. In the path model, the five outcome variables were regressed onto benefit finding, the two substantive predictors, social support and caregiving responsibilities, plus the four sets of control variables (parental illness, caregiving context, family structure, and youth demographics). In turn, benefit finding was regressed onto the two substantive predictors, plus the four sets of control variables. All endogenous predictors were allowed to correlate, as were the error variances of the five outcome variables, thus creating a saturated model for which model fit statistics are not meaningful. To not include the error covariances would risk biasing the magnitude of the structural paths in the attempt to minimise the reproduced covariance matrix, thus inflating the magnitude and significance of the substantive results. The standardised direct effects of caregiving responsibilities, social support and network size on adjustment variables are reported along with the total effects, equivalent to estimation without the presence of benefit finding (C’ and C paths respectively), plus the standardised indirect effects of caregiving responsibilities, social support and network size through benefit finding to the six adjustment variables. Standard errors and 95% confidence intervals for the indirect effects were obtained by requesting 5000 bias corrected bootstrap samples. Estimation of the path model was undertaken using ML estimation. All path analyses were conducted using MPlus V7.4

## Results

### Analysis of Benefit Finding Scale

Two factors emerged with eigenvalues of 1 or greater. The eigenvalue of the first factor was comparatively very large (8.59) and accounted for 50.54% of the variance of the items. The eigenvalue of the second factor was only just above one (1.001), accounted for an additional 5.89% of the variance, had high loadings by only two items, and was strongly correlated with the first factor (.68). Consequently only the first factor was retained. As shown in Table 2, loadings on the single factor ranged from .60 to .75 with an average loading of .69. This pattern supports the interpretation of benefit finding being a single dimension. Stability of the factor structure across different age groups was examined, but no compelling evidence emerged that departed from the single dominant factor. Factor loadings did not markedly differ across age groups.

**Table 2** Principal factor loadings, means, standard deviations and percent agree or strongly agree with experiencing each benefit. ( $N = 428$ )

Benefits	Loading	Mean	SD	Percent agree/ strongly agree
I have become more independent	.62	2.63	1.08	63.16
I have become more mature or grown up	.71	2.60	1.13	61.00
I have become more accepting of others	.74	2.57	1.02	60.29
I have learned to appreciate my health more	.63	2.57	1.00	59.81
I have developed new skills	.75	2.49	1.07	56.46
I have become closer to my family	.72	2.54	1.20	55.98
I have learned lots about health	.63	2.45	1.08	55.02
I have become more kind/passionate towards others	.73	2.48	1.00	54.55
My relationship with my parent is much stronger	.71	2.49	1.24	53.11
I have become more patient	.73	2.30	1.17	50.96
I appreciate life	.71	2.41	1.04	50.48
I have learned that I am wanted and needed	.74	2.38	1.13	50.24
I have changed my life goals/plans for the better	.66	2.30	1.09	46.17
What is important in my life (my priorities) has changed	.70	2.33	1.14	44.50
I have learned lots from helping my parent	.69	2.29	1.08	44.02
I have made positive changes in my life	.61	2.23	1.02	39.23
I have become more spiritual	.60	2.05	1.24	37.08

The total benefit finding scale exhibited an internal consistency of .94; item intercorrelations ranged from .31 to .75 with an average of .47. Cronbach's alpha is biased upwards with a large number of items (Sijtsma 2009), but the moderate to strong item intercorrelations provide some additional support for high reliability of the items when used as a scale.

To understand which benefits were most commonly reported, the number of caregivers who agreed or strongly agreed that they experienced each benefit was calculated: see Table 2. The proportions ranged from 63% (becoming more independent) to 37% (becoming more spiritual). The average number of benefits reported was 8.61 ( $SD = 5.45$ ), with 10.51% ( $n = 45$ ) of caregivers reporting no benefits, up to all items being endorsed by 6.54% ( $n = 28$ ).

Correlations between benefit finding and all other substantive variables are reported in Table 3. Benefit finding was positively associated with caregiving responsibilities and both social support variables, albeit only weakly with support network size. With respect to adjustment, benefit finding was associated with improved adjustment on all variables except for somatisation. With respect to control variables, benefit finding was significantly correlated with two parental illness variables: parental functional difficulty ( $r = .14$ ,  $p > .01$ ) and illness unpredictability ( $r = .15$ ,  $p > .01$ ); and two caregiving context variables: amount of caregiving ( $r = .31$ ,  $p > .001$ ), and duration of caregiving, albeit only weakly ( $r = .10$ ,  $p = .04$ ). Finally, while neither total family size ( $r = -.02$ ,  $p = .76$ ) nor the number of older

sisters ( $r = -.09$ ,  $p = .08$ ) were significantly correlated with benefit finding, having more brothers was ( $r = .14$ ,  $p > .01$ ). No other significant correlations between benefit finding and the range of control variables emerged.

### Path Analysis

The model tested is shown in Fig. 1 and the direct and indirect estimates are presented in Table 4. Increased benefit finding significantly predicted better adjustment on all variables except for somatisation for which a significant relationship was not found. The absolute magnitude of the significant standardised coefficients of benefit finding on adjustment was small for life satisfaction and total difficulties ( $\beta = .11$  and  $-.16$ , respectively), but moderate in size for prosocial behaviour, family satisfaction and positive affect ( $\beta = .22$ ,  $.24$ , and  $.29$ , respectively).

Increased social support satisfaction was significantly associated with increased benefit finding ( $\beta = .18$ ,  $p < .001$ ). As shown in Fig. 1, without the presence of benefit finding in the model, social support satisfaction directly and significantly predicted increased adjustment on all variables (see C paths in Fig. 1). The introduction of benefit finding as a mediator led to a small diminution in the magnitude of direct coefficients from social support satisfaction to all adjustment variables (see C' paths), but each remained significant. Significant indirect effects were found for five of the six adjustment outcomes: total difficulties ( $\beta_c = -.20$ ,  $p < .001$ ,  $\beta_{c'} = -.17$ ,  $p < .01$ ,  $\beta_{ab} = -.03$ , 95% CI  $[-.06$ ,



**Table 3** Cronbach’s alphas for substantive variables, and correlations among predictors, control variables and adjustment outcomes ( $N = 428$ )

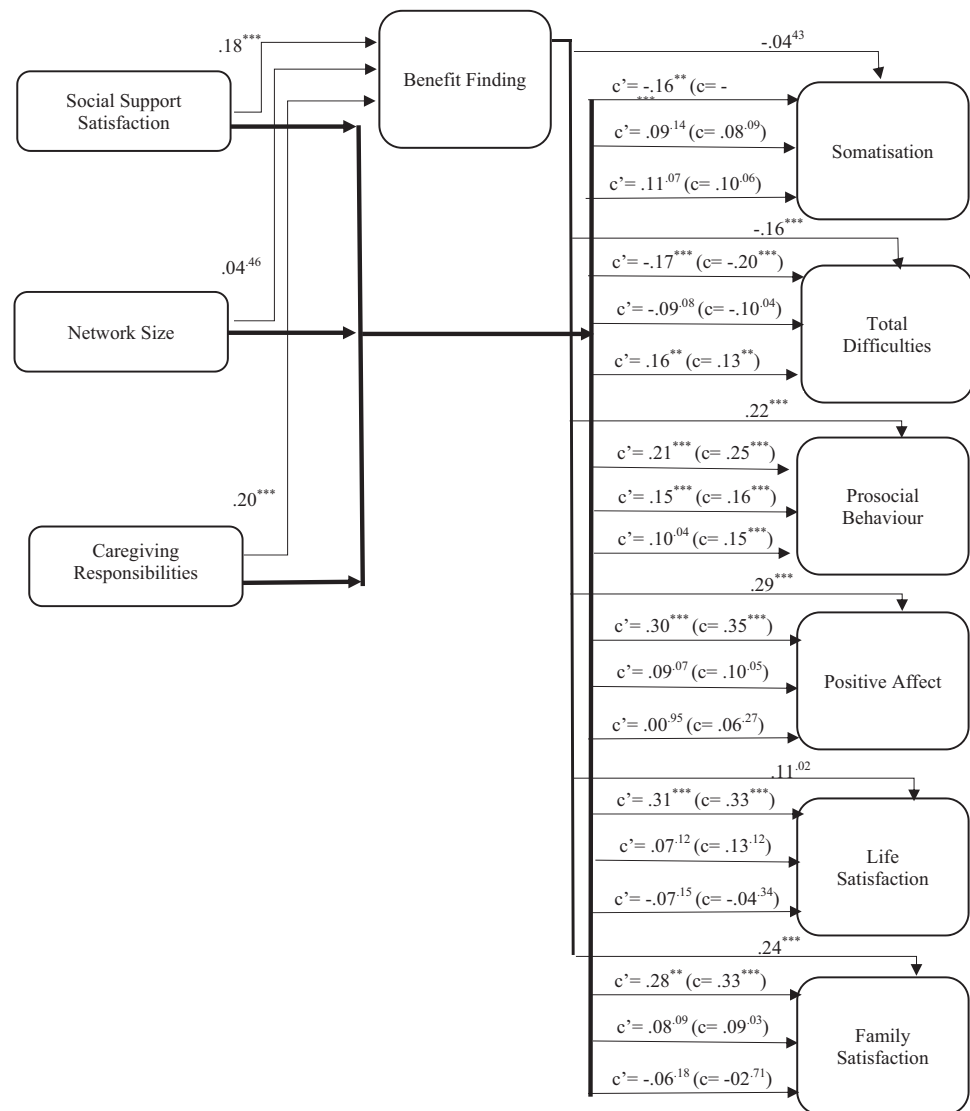
	1	2	3	4	5	6	7	8	9	10
<i>Substantive variables</i>										
1. Benefit finding	.94									
2. Social support satisfaction	.19**	.87								
3. Social support network	.11*	.35**	.85							
4. Caregiving responsibilities	.25**	-.15**	-.05	.84						
5. Somatisation	-.01	-.20**	.01	.20**	.73					
6. Total difficulties	-.12*	-.29**	-.19**	.24**	.48**	.66				
7. Prosocial behaviour	.31**	.30**	.26**	.11*	.01	-.19**	.65			
8. Positive affect	.36**	.42**	.24**	-.02	-.19**	-.30**	.43**	.86		
9. Life satisfaction	.14**	.45**	.21**	-.20**	-.31**	-.49**	.21**	.53**	.86	
10. Family satisfaction	.31**	.45	.24**	-.12*	-.15**	-.30**	.25**	.45**	.61**	.91
<i>Control variables</i>										
11. Substance	-.05	-.19**	-.13**	.09	.13**	.09	-.08	-.09	-.13**	-.20**
12. Mental	.00	-.05	.01	.11*	.10	.12	.07	-.10	-.13**	-.16**
13. Physical	.07	.03	.05	-.02	-.01	-.07	.10*	.08	.05	.15**
14. Illness duration	-.10	-.02	.05	-.09	.19**	.02	-.06	-.05	.06	.12*
15. Seriousness	.02	-.11*	-.09	.23**	.19**	.24**	-.03	-.10*	-.32**	-.19**
16. Parental difficulty	.14**	-.02	-.03	.22**	.11*	.12*	.08	.00	-.19**	-.13**
17. Illness predictability	.15**	-.07	-.07	.28**	.23**	.22**	.07	-.08	-.27**	-.19**
18. Mother ill	-.04	-.03	-.05	-.01	-.03	.03	.09	-.03	-.02	-.02
19. Both ill	.06	-.11*	.02	.13**	.18**	.11*	-.09	-.04	-.15**	-.06
20. Father ill	.00	.11*	.03	-.09	-.11	-.11*	-.01	.07	.13**	.07
21. Amount of carer help	.31**	.04	.03	.35**	.15**	.18**	.15**	.05	-.09	.10*
22. Choice in helping	.05	.10*	-.06	-.22**	-.06	-.10*	.12*	.11*	.20**	.24**
23. Helping duration	.10*	-.09	.00	.20**	.20**	.02	.01	-.07	-.05	-.06
24. Family Size	-.02	.00	-.01	-.01	.02	.04	.00	.03	-.03	-.07
25. Number of older brothers	.14*	.04	.09	.04	-.02	-.06	.07	.07	.00	.02
26. Number of older sisters	-.09	-.01	.04	.01	.06	.02	.04	-.03	.02	-.03
27. Single parent family	.02	.14**	.09*	-.02	.00	-.08	.00	.10*	.17**	.13**
28. Frequency of contact	-.06	-.10*	-.10	.03	.04	.01	-.03	-.10*	-.08	-.13
29. Age	-.08	-.16**	-.05	.03	.09	.07	-.10*	-.24**	-.20**	-.29**
30. Gender	-.02	.05	.12*	-.10	.05	-.01	.21**	-.03	-.05	-.07
31. Economic disadvantage	-.08	-.04	-.05	.01	-.08	-.06	.11*	.02	.00	-.05
32. Carer works part time	.00	-.04	.02	.08	.06	-.02	.01	-.05	-.06	-.06
33. Reside in major city	-.05	-.04	.10*	-.05	-.07	-.03	.06	.02	.00	-.04
34. Reside in inner region	.03	.02	.01	.02	.06	-.02	-.07	.03	.00	.08
35. Reside in outer region	.05	.06	-.12*	.04	.02	.05	.05	-.04	.03	-.02
36. Reside in remote region	-.06	-.07	-.06	.01	.00	.04	-.08	-.04	-.07	-.05
37. Australian	-.09	.09	-.04	-.07	-.02	-.07	-.09	.00	.11*	.09
38. Indigenous Australian	.03	-.09	.02	-.01	.02	.09	-.01	.00	-.11*	-.10*
39. European descent	.03	.01	.07	.09	-.01	-.03	.11*	.05	-.02	.00
40. Other ethnicity	.09	-.10*	-.04	.00	.04	.07	.01	-.07	-.08	-.07

\* $p < .05$ ; \*\* $p < .01$ ; Cronbach’s alpha reported on diagonal

-.01],  $p = .03$ ); prosocial behaviour ( $\beta_c = .25, p < .001, \beta_{c'} = .21, p < .001, \beta_{ab} = .04, 95\% \text{ CI } [.02, .08], p = .01$ ); positive affect ( $\beta_c = .35, p < .001, \beta_{c'} = .30, p < .001, \beta_{ab} = .05, 95\% \text{ CI } [.02, .10], p < .01$ ); life satisfaction ( $\beta_c = .33,$

$p < .001, \beta_{c'} = .31, p < .001, \beta_{ab} = .02, 95\% \text{ CI } [.01, .04], p = .05$ ).and family satisfaction ( $\beta_c = .33, p < .001, \beta_{c'} = .28, p < .001, \beta_{ab} = .04, 95\% \text{ CI } [.02, .08], p > .01$ ). The indirect effect to somatisation was not significant ( $\beta_c = -.17, p$

**Fig. 1** Mediation model of the effects of caregiving, social support, and benefit finding on youth adjustment. Note: Exact significance shown where  $p > .01$ ;  $**p < .01$ ;  $***p < .001$ . Standardized coefficients shown; direct effects ( $c'$ ) and total effects ( $c$ ) from predictors to outcome variables shown in order of social support satisfaction, network size, and caregiving responsibilities. Direct effects from control variables to mediator and outcome variables not shown. All exogenous variables allowed to covary, and error variances of outcome variables. See Table 4 for full results



$< .001$ ,  $\beta_{c'} = -.16$ ,  $p < .01$ ,  $\beta_{ab} = -.05$ , 95% CI  $[-.03, .01]$ ,  $p = .45$ ).

Social support network size was not significantly associated with increased benefit finding ( $\beta = .04$ ,  $p = .46$ ). As shown in Fig. 1, without the presence of benefit finding in the model, social support network size directly and significantly predicted increased adjustment on four adjustment outcomes: total difficulties, and prosocial behaviour, positive affect and family satisfaction (see C paths in Fig. 1). The introduction of benefit finding into the model as a mediator led to a small diminution in the magnitude of direct coefficients from social support network to all adjustment variables (see C' paths), with only prosocial behaviour remaining significant. Due to the non-significant path from network size to benefit finding, none of the paths could be mediated: the 95% CI for the mediation effect included zero for all variables.

Greater caregiving responsibilities was significantly associated with increased benefit finding ( $\beta = .20$ ,  $p < .001$ ). As shown in Fig. 1, without the presence of benefit finding in the model, caregiving responsibilities directly and significantly predicted adjustment on only two variables: increased total difficulties ( $\beta = .13$ ,  $p < .01$ ) and increased prosocial behaviour ( $\beta = .15$ ,  $p < .001$ ) (see C paths in Fig. 1). The introduction of benefit finding as a mediator led to a small increase in the magnitude of the direct effect of caregiving responsibilities on total difficulties, and a small decrease of that on prosocial behaviour (see C' paths), and both remained significant. Despite only those two direct effects being significant, significant indirect effects were found for five of the six adjustment outcomes: total difficulties ( $\beta_c = .13$ ,  $p < .01$ ,  $\beta_{c'} = .16$ ,  $p < .01$ ,  $\beta_{ab} = -.03$ , 95% CI  $[-.02, .09]$ ,  $p = .03$ ); prosocial behaviour ( $\beta_c = .15$ ,  $p < .001$ ,  $\beta_{c'} = .10$ ,  $p = .04$ ,  $\beta_{ab} = .04$ , 95% CI  $[-.02, .08]$ ,

**Table 4** Unstandardised, standardised and significance levels of path coefficients for direct and indirect effects for all outcome variables (N = 428)

Predictors	Benefit finding			Somatisation			Total difficulties			Prosocial behaviour			Positive affect			Life satisfaction			Family satisfaction			
	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	
Benefit finding	.18	.00	.18	-.04	.41	-.04	-.31	.00	-.16	.10	.00	.22	.22	.00	.29	.12	.02	.11	.27	.00	.24	
Social support satisfaction				-.15	.00	-.16	-.33	.00	-.17	.09	.00	.21	.22	.00	.30	.33	.00	.31	.32	.00	.28	
Indirect effect				-.01	.42	-.01	-.05	.02	-.05	.02	.01	.04	.04	.00	.05	.02	.04	.02	.05	.01	.04	
Social support network				.13	.14	.09	-.31	.08	-.09	.11	.00	.15	.11	.06	.09	.13	.12	.07	.16	.09	.08	
Indirect effect				.00	.58	-.01	-.02	.47	-.01	.01	.46	.01	.01	.46	.01	.01	.48	.00	.02	.46	.01	
Caregiving responsibilities				.10	.07	.11	.30	.00	.16	.05	.04	.10	.00	.95	.00	-.07	.15	-.07	-.07	.18	-.06	
Indirect effect				-.01	.42	-.01	-.06	.01	-.03	.02	.01	.04	.04	.00	.06	.02	.04	.02	.05	.01	.05	
<i>Parental illness variables</i>																						
Substance	.04	.76	.02	.26	.05	.11	.15	.57	.03	.13	.03	.11	.02	.80	.01	-.09	.49	-.03	-.17	.21	-.06	
Mental illness	-.08	.45	-.04	.14	.17	.08	.19	.35	.06	.16	.00	.20	-.04	.56	-.03	-.11	.32	-.05	-.12	.26	-.06	
Physical disability	.08	.51	.04	.15	.21	.08	-.02	.95	.00	.23	.00	.25	.01	.94	.00	-.10	.39	-.05	.06	.64	.02	
Illness duration	-.01	.02	-.14	.01	.00	.17	.01	.35	.05	.00	.86	-.01	.00	.70	-.02	.00	.89	.01	.01	.09	.08	
Seriousness of illness	-.08	.09	-.10	.05	.21	.07	.11	.22	.07	-.02	.30	-.06	-.02	.60	-.03	-.15	.00	-.17	-.06	.24	-.06	
Parental difficulty	.01	.81	.01	.00	.97	.00	-.03	.68	-.02	.00	.91	.01	.03	.36	.05	-.02	.65	-.02	-.06	.13	-.07	
Unpredictability	.05	.20	.07	.10	.01	.15	.18	.02	.12	.02	.25	.06	-.03	.35	-.05	-.10	.01	-.12	-.07	.09	-.08	
Mother—ill	-.08	.33	-.05	.01	.85	.01	.05	.74	.02	.03	.33	.05	.00	.99	.00	-.05	.51	-.03	.01	.91	.01	
Both parents ill	.03	.83	.01	.20	.08	.09	.25	.27	.06	-.13	.01	-.12	-.03	.73	-.02	-.26	.02	-.10	-.07	.57	-.02	
<i>Caregiving context variables</i>																						
Amount of help	.16	.00	.21	.02	.60	.03	.21	.01	.14	.00	.87	.01	-.02	.61	-.03	-.01	.87	-.01	.09	.04	.10	
Choice in help	.09	.02	.11	.02	.60	.03	-.09	.22	-.06	.03	.07	.08	.04	.14	.07	.12	.00	.13	.18	.00	.20	
Help duration	.03	.05	.10	.02	.21	.07	-.06	.03	-.11	.00	.79	.01	.00	.78	-.01	.03	.06	.09	.01	.38	.04	
<i>Family structure variables</i>																						
Family size	-.02	.30	-.06	.01	.72	.02	.06	.17	.07	-.01	.51	-.03	.01	.44	.04	-.01	.51	-.03	-.02	.30	-.05	
Number of older brothers	.09	.02	.12	-.05	.14	-.08	-.12	.10	-.09	.01	.71	.02	.00	.95	.00	-.02	.61	-.02	-.03	.49	-.03	
Number of older sisters	-.09	.04	-.10	.03	.41	.04	-.01	.87	-.01	.04	.04	.09	.00	.95	.00	.05	.21	.05	.01	.81	.01	
Single parent family	.02	.81	.01	.08	.34	.05	-.09	.58	-.03	-.02	.61	-.02	.02	.71	.02	.16	.05	.09	.05	.54	.03	
Frequency of contact	-.04	.16	-.06	.01	.61	.02	-.06	.23	-.05	.00	.97	.00	-.02	.24	-.05	-.01	.71	-.02	-.03	.20	-.05	
<i>Demographic variables</i>																						
Age	-.02	.21	-.06	.00	.96	.00	.01	.82	.01	-.01	.07	-.09	-.04	.00	-.17	-.04	.02	-.11	-.08	.00	-.20	
Gender	-.04	.61	-.02	.09	.20	.06	.08	.59	.03	.13	.00	.18	-.05	.38	-.04	-.14	.07	-.08	-.20	.01	-.11	
Social Disadvantage	.00	.21	-.06	.00	.24	-.06	.00	.15	-.07	.00	.03	.10	.00	.31	.05	.00	.87	.01	.00	.75	-.01	
Caregiver works	.06	.57	.03	.00	.99	.00	-.12	.52	-.03	-.01	.89	-.01	.06	.38	.04	.03	.78	.01	.13	.18	.05	
Inner regional	-.06	.51	-.03	.10	.24	.06	-.13	.44	-.04	-.03	.44	-.04	.01	.87	.01	.02	.84	.01	.10	.28	.05	

Table 4 (continued)

Predictors	Benefit finding			Somatisation			Total difficulties			Prosocial behaviour			Positive affect			Life satisfaction			Family satisfaction		
	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std	b	Sig	std
Outer regional	-.02	.83	-.01	.06	.55	.03	.08	.70	.02	.01	.81	.01	-.11	.17	-.06	.02	.83	.01	-.16	.14	-.06
Remote	-.17	.45	-.04	.06	.78	.01	-.10	.82	-.01	-.01	.91	-.01	.00	.99	.00	-.20	.39	-.04	.00	.99	.00
ATSI	.32	.08	.09	-.07	.68	-.02	.35	.30	.05	.05	.52	.03	.08	.51	.03	-.15	.40	-.04	-.31	.08	-.07
European decent	.02	.84	.01	.06	.58	.03	.03	.88	.01	.09	.06	.08	.01	.88	.01	-.15	.17	-.06	-.09	.42	-.03
Other ethnicity	.39	.01	.12	.06	.66	.02	.36	.21	.06	.02	.73	.02	-.13	.22	-.05	-.17	.25	-.05	-.13	.38	-.04
R <sup>2</sup> with no controls	.12	.00		.08	.01		.14	.00		.19	.00		.27	.00		.23	.00		.28	.00	
R <sup>2</sup> with controls	.25	.00		.20	.00		.23	.00		.32	.00		.33	.00		.37	.00		.44	.00	

b = unstandardized coefficient, std = standardized coefficient, sig = significance of unstandardized coefficient

$p = .01$ ); positive affect ( $\beta_c = .06, p = .27, \beta_{c'} = .00, p = .95, \beta_{ab} = .06, 95\% \text{ CI } [.03, .11], p < .01$ ); life satisfaction ( $\beta_c = -.04, p = .34, \beta_{c'} = -.07, p = .15, \beta_{ab} = .02, 95\% \text{ CI } [.01, .05], p = .05$ ); family satisfaction ( $\beta_c = -.02, p < .71, \beta_{c'} = -.06, p = .18, \beta_{ab} = .05, 95\% \text{ CI } [.03, .08], p > .01$ ).

Interaction effects between gender, age and socio-economic disadvantage and the three predictors, and with benefit finding, were tested. None were found to be significant. The control variables explained significant additional variance across all adjustment variables and benefit finding, ranging from an additional 6% for positive affect up to an additional 16% for family satisfaction. Despite this significant additional variance, no clear patterns of results between specific control variables or category of control variables and outcomes emerged. Due to the large number of effects tested and the lack of clear patterns, no conclusions are drawn about specific control variables. Table 4 shows all effects.

### Discussion

The primary purpose of the present study was to test a mediational model of the effects of caregiving, social support, and benefit finding on youth adjustment. In the main, findings support the hypothesised model. While the cross sectional study design prohibits casual inference, the results are consistent with the hypothesis that to the degree that youth carers identify benefits from caregiving, those increased benefits operate as a positive effect on carer adjustment. The results are also consistent with the hypothesis that increased benefit finding is a possible mechanism through which social support operates to improve adjustment outcomes. Another aim of this study was to further clarify the benefit finding construct in the context of youth caring for a parent who has a serious health condition. Results showed that the benefit finding construct was unidimensional, relevant to youth caregivers, unrelated to measured demographics, but highly linked to caregiving demands and engagement. These two aims are discussed in more detail below.

Both the youth caregiver benefit finding scale in the present study and that of Cassidy and Giles' (2013) have emerged as unidimensional. Although some adult caregiver studies have demonstrated benefit finding to be multi-dimensional (e.g., Pakenham and Cox 2008), these scales typically contain many more items, with each benefit finding theme reflected by multiple items. In contrast, the scale used in the present study was shorter, and developed with one item reflecting each benefit finding theme. The benefit finding scale demonstrated sound psychometric properties, including internal reliability and criterion validity. Most

youth caregivers (90%) endorsed one or more benefits indicating the relevance of benefit finding to this population. Benefit finding was unrelated to all demographic variables and only one family structure variable. Interestingly, benefit finding was unrelated to age, as has been found in other youth caregiver studies (Pakenham et al. 2007), suggesting youth caregivers as young as nine are able to identify benefits in their caregiving role. Also of interest is the significant association between benefit finding and having more brothers, and the non-significant links with total family size and number of sisters. In view of the trend for females to take on greater caregiving within families, it is possible that having more brothers increases the caregiving workload for the “designated” youth caregiver, whether that caregiver is male or female.

Regarding the mediational model, it was hypothesised that benefit finding would mediate the effects on adjustment outcomes for both social support measures and caregiving. Results demonstrated support for the partial mediation of caregiving and social support satisfaction, but not support network size. The latter finding is due to the very weak, non-significant relationship between support network and benefit finding, in contrast to the stronger relationship between social support satisfaction and benefit finding. There were, however, direct effects from support network to three adjustment outcomes: decreased total difficulties, and increased prosocial behaviour and family satisfaction. Social support satisfaction exhibited direct effects with all adjustment outcomes, and all effects were larger in magnitude than those for support network. This suggests that one mechanism of social support may indeed be a reframing of the caregiving experience as captured by benefit finding, but that it is the quality of that social support, not just the number of supports that is instrumental in promoting benefit finding. However, the indirect effects are much smaller than the direct effects, suggesting that while benefit finding is one mechanism through which social support can operate, there may be others at play.

Caregiving exhibited direct effects with two adjustment outcomes, increased total difficulties and prosocial behaviour. There were, however, significant indirect effects from caregiving to all adjustment outcomes except for somatisation. The valence of the indirect effect for total difficulties is of particular interest when examined in comparison with the direct effect and the correlation. When only the direct effect and correlation is examined, increased caregiving responsibilities was associated with poorer adjustment. In contrast, the indirect effects of caregiving through benefit finding showed improved adjustment outcomes. The indirect effect through benefit finding introduces a positive pathway from caregiving to total difficulties, producing a small counter balancing pathway from the negative impact of caregiving. This important finding reveals that while

increased caregiving responsibilities has a detrimental effect on youth adjustment, those effects can, in part, be ameliorated to the degree that increased benefit finding results from the caregiving role, which in turn, improves adjustment outcomes. Again, the indirect effects are quite small in magnitude, so caution is advised.

Overall, the key contextual variables most strongly related to benefit finding were those that reflected greater caregiving demands and engagement. Specifically, benefit finding was significantly correlated with parental functional difficulty and illness unpredictability (reflecting caregiving demands), and amount and duration of caregiving (reflecting caregiving engagement). There is of course an inherent reciprocity between greater caregiving demands and more caregiving engagement. This pattern of associations is consistent with benefit finding theory which, in the context of youth caregiving, proposes that the greater the caregiving demands and associated care tasks, the more likely the caregiver is to search for meaning in caregiving activities and, thereby find benefits in his or her role. These findings are consistent with those from adult caregiver research (e.g., Pakenham 2007a, b), and other youth caregiver studies (e.g., Cassidy and Giles 2013), which have also found that greater caregiving demands and engagement are related to higher benefit finding.

Data from the present study supports the relevance of benefit finding and social support for youth caregivers and provides some balance to the greater research focus on the risks and costs of youth caregiving. In addition, the important role of benefit finding and social support in promoting wellbeing in youth caregivers has implications for services and interventions. Undue focus on the costs and risks of youth caregiving could result in interventions that interfere with important growth-full processes, such as benefit finding and mutual care among family members, which are naturally embedded in the reciprocity of family caregiving. Services and interventions should support youth caregivers in strengthening their identified caregiving benefits, realising the unrecognised potential benefits, and in facilitating social connections with peers, and relevant helping professionals.

As demonstrated in the present study, social support and benefit finding are inextricably linked. Hence, both benefit finding and social support should be promoted together. Benefit finding in particular, is likely to be most effectively fostered in the context of supportive relationships, as suggested by the significant relationship with social support satisfaction. For example, significant others could validate a caregiver’s self-expression of caregiving benefits, and provide the resources, support and information that facilitates further exploration of the significance of their role (e.g., by including youth caregivers as a valued member of the ill parent’s support team and providing them with the necessary

resources to undertake their caregiving role). Of course, any facilitation of benefit finding must take into account and respect the costs and distress associated with caring for an ill parent (see guidelines Tedeschi and Calhoun 2009). Indeed, findings from prior research have shown that wellbeing is maximised when there is a balance between realistic perceptions of both the positives and negatives in adversity (Cheng et al. 2006). There is also the potential for developing specific benefit finding interventions for youth caregivers, as has been developed for adult caregivers (Cheng et al. 2017). Interpersonal resources such as support groups and online chat forums may also assist in networking youth caregivers and, thereby provide opportunities for finding validation of their caregiving role. Facilitating social support and benefit finding is consistent with intervention trends in positive psychology, third generation cognitive behaviour therapies, and strength-based approaches to mental health promotion, which build on youths' resources, affirm their values, support their active coping, and help them navigate changes in the context of caregiving.

## Limitations

Findings should be tempered by a consideration of study limitations. First, the non-random sampling employed limits generalizability of findings. Second, causal directions and inferences among variables cannot be established from this cross-sectional study. The results are consistent with the mediation hypotheses, but the inference of causality that mediation implies cannot be claimed. Longitudinal data is required to demonstrate that it is within caregiver changes in caregiving and social support over time that produce benefit finding, and in turn, changes in benefit finding over time that promote adjustment. Although difficult to undertake, such multi-wave longitudinal research is now required. Third, support network size was operationalised as the number of categories of social support, not the absolute network size, which could downward bias correlations and effects. Fourth, age was the only variable that gauged developmental phase. Future research should examine cognitive maturity rather than relying on age alone as an indicator of developmental stage. Extensive tests of age-based differences in the benefit finding factor structure, or differences in model results, failed to establish any robust variations. Nevertheless, longitudinal research using a developmental framework is necessary to explore the effects of developmental cognitive and social changes in developing benefit finding. Two measures, total difficulties and prosocial behaviour, exhibited lower internal consistency than is recommended. These two measures are widely used in youth samples. Finally, the exclusive reliance on self-report increased common method biases, as well as possible expectancy or social desirability biases.

Given the dearth of theory driven studies and research on benefit finding in the youth caregiver field, this study makes an important contribution in testing a mediational model of benefit finding and providing further construct validation data. A comparatively large sample was accessed via a variety of recruitment strategies in an attempt to capture a broader sample. Analyses provided a fairly conservative test of the effects of social support, benefit finding and caregiving on adjustment in that analyses controlled for the effects of a wide range of contextual variables. Most of the benefit finding research in youth has been conducted in the context of trauma, where parental support is a significant protective factor. This study makes an important contribution to understanding benefit finding and social support processes in the context of a chronic stressor where one of the usual sources (parents) of significant coping support is limited.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All research procedures (including informed consent) were in accordance with the ethical standards of The University of Queensland's ethical clearance research committee and with the 1964 Helsinki declaration and its later amendments.

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