Parents’ psychological well-being when a child has cancer: Contribution of individual and family factors

<table>
<thead>
<tr>
<th>Journal:</th>
<th><em>Psycho-Oncology</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuscript ID</td>
<td>Draft</td>
</tr>
<tr>
<td>Wiley - Manuscript type:</td>
<td>Paper</td>
</tr>
<tr>
<td>Date Submitted by the Author:</td>
<td>n/a</td>
</tr>
<tr>
<td>Complete List of Authors:</td>
<td>Salvador, Ágata; CICPSI, Faculdade de Psicologia, Universidade de Lisboa, Crespo, Carla; CICPSI, Faculdade de Psicologia, Universidade de Lisboa Barros, Luisa; CICPSI, Faculdade de Psicologia, Universidade de Lisboa</td>
</tr>
<tr>
<td>Keywords:</td>
<td>coping, family condition management, parenting satisfaction, pediatric cancer and oncology, psychological well-being, relationship quality</td>
</tr>
</tbody>
</table>

http://mc.manuscriptcentral.com/pon
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

Parents’ psychological well-being when a child has cancer: Contribution of individual and family factors

Ágata Salvador1,*, Carla Crespo2, & Luísa Barros3

1 CICPSI, Faculdade de Psicologia, Universidade de Lisboa

agata.m.salvador@gmail.com

2 carlacrespo@psicologia.ulisboa.pt

3 lbarros@psicologia.ulisboa.pt

Correspondence should be addressed to Ágata Salvador:
CICPSI, Faculdade de Psicologia, Universidade de Lisboa, Alameda da Universidade, 1649-013 Lisboa, Portugal.
Email: agata.m.salvador@gmail.com

Funding
This work was supported by the Portuguese Foundation for Science and Technology [Ph.D. Scholarship SFRH/BD/103265/2014 to the first author] and the Gulbenkian Human Development Programme (PGDH) from the Calouste Gulbenkian Foundation.
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

Abstract

Objective: The aim of the present study was to examine the contribution of individual (positive reappraisal) and family factors (parenting satisfaction, couple relationship quality, and family life difficulty) to the psychological well-being of parents of children/adolescents diagnosed with cancer.

Method: This cross-sectional study was conducted at two pediatric oncology wards in Portugal. Two-hundred and five parents of pediatric cancer patients completed self-report questionnaires assessing the use of positive reappraisal as a coping strategy (Ways of Coping Questionnaire), parenting satisfaction (Parenting Sense of Competence Scale), relationship quality (Perceived Relationship Quality Components Inventory), family life difficulty (Family Management Measure), and psychological well-being (Ryff’s Psychological Well-being scales). Sociodemographic and clinical data were also assessed.

Results: Standard multiple regression analysis showed a significant contribution of both individual and family-level factors to parents’ psychological well-being. Specifically, the use of positive reappraisal as a coping strategy, parenting satisfaction, and relationship quality were associated with higher psychological well-being; conversely, family life difficulty was linked to lower psychological well-being.

Conclusions: The findings of this study provide an important contribution to the identification of parents at higher risk for poor psychological well-being. Screening and addressing both individual- and family-level aspects may be crucial to foster parents’ mental health when a child is diagnosed with an oncological disease.

Keywords: coping; family condition management; parenting satisfaction; pediatric cancer and oncology; psychological well-being; relationship quality.
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

Background

The diagnosis of pediatric cancer represents one of the most difficult experiences a parent can face [1, 2]. Despite the significant improvement in survival rates, pediatric cancer remains the first non-accidental cause of death by disease among children aged 1–14 years [3]. In addition to the risk of death, other challenges arise on the illness trajectory, for instance, treatment side effects, long-term impairments [1] and the risk of relapse [4]. These stressors may have a pronounced negative impact on parents, who are mainly responsible for managing the technical, nursing, and emotional requirements of their child’s cancer care [5]. While some studies have shown that parents have a heightened risk for psychological distress [6] and lower quality of life [7], another found no evidence of serious psychosocial difficulties [8]. Research in the field has moved from a deficit to a competence-oriented perspective, with an increasing focus on parents’ positive adaptation outcomes [9]. Among these, psychological well-being emerged as a comprehensive construct that, more than simply the absence of psychopathological symptoms, concerns the development and self-realization of the human being, including positive feelings and attitudes towards one’s life [10].

Despite substantial research describing parents’ adaptation in the context of pediatric oncology, there is a recognized need for studies targeting the reasons why some parents are able to successfully adapt to this stressful situation, whilst others exhibit considerable difficulties [11]. Using a systems-oriented lens [12], the current study examined different factors potentially explaining the variability in parents’ psychological well-being, focusing not only individual factors but also on family-related variables, specifically addressing different subsystems within the family.

Research has provided evidence that psychological variables like coping strategies that parents use to manage this threatening situation are predictive of their psychological adaptation [13]. Research on this topic has typically grouped individual coping strategies into broad coping categories (e.g., emotion-focused and problem-focused), and, as such, the understanding of the role of specific coping strategies in parents’ adaptation remains limited. A topic of particular interest concerns the parents’ efforts to reappraise the illness situation in a more positive
For Peer Review

PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

manner. In line with the recent resilience-oriented perspective [9], examining the effectiveness
of positive reappraisal may clarify the role of this manageable intervention target to facilitate
positivity in such adverse circumstances. When there are very few available areas for parents to
exert control over their child’s illness [14], they frequently try to change the meaning of this
stressful situation, for example, by focusing on the positive aspects of this challenging
experience [4]. The few available quantitative studies examining the effectiveness of positive
reappraisal in the face of pediatric cancer yielded mixed results; whereas some studies found no
evidence for a significant link between the use of this specific coping strategy and parental
adjustment outcomes (e.g., anxiety, depression, distress) [15,16], other studies found that
positive reappraisal was associated with decreased parental depression [17]. Similarly, studies
with other pediatric medical conditions (e.g., developmental disabilities) found that this coping
strategy was associated with higher levels of parents’ subjective well-being [18].

Social-ecological theory [12] posits that the individual’s adaptation is influenced not
only by individual characteristics but also by factors pertaining to the social systems.
Accordingly, the parents’ adaptation is expected to be shaped by such a relevant context as their
own family. Among relevant family-level factors are the interpersonal relations with other
family members, such as with the ill child and with the partner. Pediatric cancer can bring a
range of changes in the child’s needs, thus influencing the nature and the quality of parent-child
interactions [5], and consequently the experience of parenthood. After a cancer diagnosis, caring
and supporting the ill child becomes the main focus of the parents [1, 5], a commitment that is
enlarged by the child’s vulnerability and dependency. Given the prominence of the parenting
role, the experience of parenthood is perceived as an important resource for their adaptation [4].
To our knowledge, research concerning the role of parenting satisfaction in pediatric cancer
context is lacking. Nevertheless, studies with other pediatric conditions (e.g., spina bifida) have
highlighted that higher levels of parenting satisfaction were associated with lower levels of
psychological distress [19].

Another important factor within the family interactions’ sphere concerns the parents’
couple relationship. Mixed findings have suggested that couple functioning can either improve,
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

decline, or remain stable after the child’s diagnosis [1]. From a different perspective, another set
of studies have explored the role of couple relationship on parents’ adaptation, documenting that
parents perceive the relationship with their partner as an important resource to deal with the
illness experience [4]. Existing research has shown that marital satisfaction was associated with
decreased levels of parents’ psychological distress [20].

Finally, in addition to the dyadic relationships, family functioning emerges as a relevant
broader family-level factor. Pediatric cancer care and the child’s health status demand a
significant reorganization of family life [2]. Hence, trying to accommodate complex care
requirements (e.g., hospitalizations, clinic visits, treatment side-effects) with family routines can
be problematic [4, 21]. Research has highlighted that parents may vary in their perception of the
family’s ability to balance the illness needs with everyday family life [21]. When perceiving
higher difficulties in family life as a consequence of caring for a child with a complex medical
condition (e.g., asthma, autism), parents reported higher levels of anxiety [22] and depression
[22, 23]. As such, studies suggest that family life difficulty arising from a child’s condition
management is an important determinant of parents’ adaptation. However, to our knowledge,
quantitative studies addressing this topic in the pediatric oncology context are lacking.

A better understanding of the factors influencing the parental experience can guide
future research and improve interventions directed to foster parents’ well-being. Following a
system-oriented framework [12], the current study aimed to examine the contribution of
individual (i.e., positive reappraisal) and family factors (i.e., parenting satisfaction, couple
relationship quality, and family life difficulty) to psychological well-being of parents of
children with cancer. Based on previous research, we predicted that positive reappraisal,
parenting satisfaction, and relationship quality would be associated with enhanced parents’
psychological well-being, whereas family life difficulty would be associated with reduced
psychological well-being.

Methods

Participants
For Peer Review

PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

Participants were 205 parents of children with cancer attending the pediatric oncology departments of two public hospitals in Portugal. Eligible parents were the caregivers primarily responsible for the child’s healthcare issues and currently in a relationship. Their children had to meet the following criteria: had a diagnosis of malignant cancer for at least 3 months; aged between 8 and 20 years; and were receiving antineoplastic treatment (on-treatment) or had finished treatment within the last 5 years (off-treatment). Exclusion criteria included comorbidity with other chronic health conditions, major developmental delay, or end-of-life care. Table 1 shows the sample’s sociodemographic and clinical characteristics.

Procedure

Ethical approval was obtained from the Ethics Committees of the Portuguese Institutes of Oncology in Lisbon [UIC/995] and Porto [141/2015]. Parents were recruited from August 2015 to February 2017 through a consecutive sampling method. Eligible parents were provided with information concerning the study, and those willing to participate provided their informed consent. Of the 207 eligible participants approached, only two refused to participate due to time constraints or an unwillingness to revisit the cancer experience. Self-report questionnaires were completed while waiting for medical appointments or procedures. A trained research assistant was available to provide support when needed.

Measures

Ways of Coping Questionnaire (WCQ) [24]

The WCQ measures the extent to which parents use specific coping strategies in response to difficult situations. The subscales of this measure were all administered, but given the main purpose of the present study, we specifically used the positive reappraisal subscale focusing on the parents’ efforts to create a positive meaning of their child’s illness situation (e.g., “Rediscovered what is important in life”). The seven items composing this subscale were answered on a 4-point Likert scale, ranging from 0 (not used) to 3 (used a great deal). Higher scores indicated a more frequent use of positive reappraisal strategies. In our sample, this subscale’s Cronbach’s α was .68.

Parenting Sense of Competence Scale (PSOC) [25]
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

The PSOC is a commonly used measure of parental self-efficacy. We used the satisfaction subscale to assess the affective dimension of parenting, namely the individual’s feelings of gratification and pleasure deriving from his/her role as a parent (e.g., “Being a good mother/father is a reward in itself”). Parents were asked to give their answers referring to the ill child. The nine items of the subscale were scored on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores represented a higher satisfaction with the parenting role. The Cronbach’s α was .71 for this study’s sample.

Perceived Relationship Quality Components Inventory (PRQC) [26]

The PRQC inventory measured the parents’ perceived quality of the relationship with their partner on six components (satisfaction, commitment, intimacy, trust, passion, and love; e.g., “how satisfied are you with your relationship?”). Each of the six items measure one component and were answered on a 7-point Likert scale, ranging from ranging from 1 (not at all) to 7 (extremely). Higher scores indicated a more positive perception of their couple relationship. The Cronbach’s α in our sample was .93.

Family Management Measure (FaMM) [27]

The FaMM assesses the family response to the child’s condition in regarding concerns to the incorporation of illness demands into family life. In the current study, we used the family life difficulty subscale to evaluate the parents’ perception of the extent to which the child’s condition makes family life more demanding (e.g., “Dealing with our child’s condition makes family life more difficult”). The 14 items were rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated more difficulties in balancing condition management and the family’s everyday life. In this study, the Cronbach’s α was .87.

Ryff’s Psychological Well-being scales (PWB) [28]

The PWB is an 18-item self-report measure comprising six components (self-acceptance, personal growth, purpose in life, positive relations with others, environmental mastery, and autonomy) and a global score of psychological well-being. Items were rated from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating higher levels of psychological well-being. In this study, the Cronbach’s α was .83 for the global score.
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

Sociodemographic and clinical data

Participants completed a questionnaire on sociodemographic (e.g., sex, age) and clinical information about their child (e.g., treatment status, diagnosis). Based on the educational level and current jobs of the child’s caregivers, the family’s socioeconomic status (SES) was classified as low, medium, or high [29].

Analyses

Statistical analyses were conducted using SPSS software (v.24). First, descriptive statistics for sociodemographic, clinical, and study variables were performed. Preliminary analyses were conducted to determine possible covariates and to describe the pattern of associations among the variables of interest. Pearson correlations were computed to examine the associations between psychological well-being and continuous variables (child’s age, time elapsed since diagnosis, and individual and family factors). For categorical data (child’s treatment status and family’s SES), differences between groups on psychological well-being scores were tested with independent t-tests. Each family’s SES, a categorical variable with three levels (low, medium, and high) was transformed into a dichotomous variable, collapsing medium and high levels into one, due to heterogeneous group sizes. Finally, a multiple regression analysis was performed to examine the associations between individual and family factors and psychological well-being. Variables were entered into the regression equation when reaching statistical significance at the bivariate level of analysis. The preliminary assumptions of regression analysis were first checked, with no violations being detected.

Results

Descriptive and bivariate analyses

Table 2 provides means, standard deviations, and intercorrelations between parents’ psychological well-being and continuous variables. Regarding the sociodemographic and clinical variables, correlations showed that parents’ psychological well-being was not significantly associated with child’s age or time since diagnosis. Independent t-tests also showed that parents’ psychological well-being did not differ as a function of treatment status \[t (203) = 1.18, p = 0.24\] or family’s SES \[t (203) = 1.18, p = 0.24\]. In what concerns to
individual and family factors, there was a strong correlation between parenting satisfaction and psychological well-being. Additionally, parents’ psychological well-being was moderately correlated with family life difficulty. Finally, significant weak correlations were found between parents’ psychological well-being and relationship quality and positive reappraisal.

**Multiple regression analysis**

A standard multiple regression analysis examined the relationship between parents’ psychological well-being and all the study variables that reached significance at the bivariate analyses (see Table 2). The tested model reached significance \[F(4, 200) = 37.52, p < .001\], accounting for 43% of the variance in parents’ psychological well-being. As shown in Table 3, all the independent variables made significant contributions for parents’ psychological well-being, with higher scores on positive reappraisal, parenting satisfaction, and relationship quality being associated with higher psychological well-being; and higher scores on family life difficulty being associated with lower psychological well-being.

**Discussion**

This study identified key factors associated with parents’ psychological well-being when a child is diagnosed with cancer. Overall, our results showed that when parents had higher scores on positive reappraisal, parenting satisfaction, and relationship quality and lower scores on family life difficulty, their levels of psychological well-being were increased.

First, the mean score of psychological well-being for the parents in our study was above the middle point of the PWB response scale. This result possibly points to a successful adaptation of most of these parents in terms of psychological well-being. Despite the stressful and taxing nature of parenting a child diagnosed with cancer, parents often report that their child’s life-threatening illness led to a change in their life perspective and priorities [30], which may possibly explain their reports of psychological well-being. Indeed, prior research has documented that emotional strains that parents report shortly after a child’s diagnosis tend to decrease over time, with only a small subset of parents reporting continuing elevated distress [2, 6]. These findings support the need for identifying the potential factors explaining the
maintenance of a disruptive psychosocial functioning throughout the illness course in a subset of parents.

Concerning the factors potentially contributing to parents’ adaptation, the multiple regression model explained 43% of the variance of parents’ psychological well-being. Both individual and family factors had an important role in explaining the psychological well-being of parents of children with cancer. First, our findings showed that the endorsement of positive reappraisal as a coping strategy was related to increased psychological well-being, replicating previous findings [17, 18]. The adaptive or maladaptive nature of a coping strategy is known to be dependent on the perceived controllability of the stressor [31]. Given the potential unpredictable and uncontrollable nature of pediatric cancer, coping strategies, such as positive thinking and reframing, may be effective coping efforts in such a disempowered situation. According to Lazarus & Folkman[32], reappraising a stressful situation in a positive light is one of the most powerful ways of reducing negative emotions, possibly explaining the increased levels of psychological well-being. Furthermore, having a positive perspective concerning the illness experience may help parents to be more aware of other positive aspects of their lives, resulting in greater psychological well-being. Another possible explanation for this finding may be related to the fact that positive reappraisal is understood as a dispositional characteristic [32], and for that reason, it may be used by the individual in a consistent manner. It follows that parents attaching a positive meaning to the illness situation are more likely to have a similar general attitude in their lives.

Second, the current findings showed that parenting satisfaction had a significant contribution to the psychological well-being of parents of children with cancer, as previously suggested in studies with other pediatric conditions [19]. When interpreting this finding, we need to consider that parenthood is a significant part of one’s life. The diagnosis of a life-threatening pediatric condition, with the increased child’s vulnerability and dependency, carries the potential of amplifying the importance of the parenting role [30]. When parents become caregivers of a child with cancer, they have to witness the child’s suffering [33]. And, as a way of protecting the child’s well-being, parents try their utmost to be close to the child, provide
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

comfort, and advocate for him/her [5]. This commitment to such an intensified role may explain the critical importance of the sense of fulfillment and gratification with parenting on parents’ psychological well-being.

Additionally, our findings pointed to the significant association between relationship quality and parents’ psychological well-being. This result is consistent with those obtained in other studies suggesting that the parents’ satisfaction with their couple relationship is an important adaptation resource [20]. When parents face their child’s cancer, their partners become important sources of support, not only for practical reasons (e.g., sharing responsibilities), but also on emotional level (e.g., providing comfort) [1]. A supportive couple relationship is acknowledged as an important factor in dealing with this adverse situation. In contrast, perceiving a lack of support from their partners may instigate parents’ emotional strains [4]. Future research could extend the understanding of this association, exploring, for example, the role of the relationships’ length.

Finally, findings also demonstrated that the parents’ perception of family life difficulty may be a critical factor in determining parents’ psychological well-being. We found that when parents perceived greater family strains to accommodate the child’s condition into everyday life, they also reported lower psychological well-being, a result similar to previous findings in families with other pediatric health conditions [22, 23]. According to the Family Management Framework [34], the family system response to the child’s cancer exerts a critical influence on the family members’ functioning, namely those of parents. When parents believe that caring for the ill child has negative consequences on the family life, they are more likely to perceive that the child’s condition controls their lives [35]. The difficulty in putting this illness’ negative view in the background may be overwhelming, thus negatively impacting the parents’ psychological well-being. Furthermore, in the face of considerable family life difficulty, parents tend to perceive that caring for the ill child is a burdensome experience [35], which can also explain the lower reports on psychological well-being.

Parenting satisfaction and family life difficulty also showed a prominent contribution to parents’ psychological well-being. When interpreting this finding, it must be noted that both
parenting satisfaction and family life difficulty (as a specific dimension of family condition management) pertains to the caregiving sphere. This may be a plausible explanation for the key role of these two constructs on parents’ psychological well-being. With the onset of pediatric cancer, the parents’ lives focus shift to be centered on the strong commitment to caring and supporting the ill child [5]. As such, it is understandable that the experience related to providing care to their child is a key factor when determining their adaptation trajectory. This provides evidence for the relevance and need to further explore the role of these constructs in the specific context of pediatric cancer.

Study limitations and strengths

This study has limitations that ought to be considered when interpreting our findings. First, the study’s cross-sectional design provides only a snapshot of the parents’ experience of well-being. Future studies with a longitudinal design are required to make definite conclusions about the direction of the associations between individual and family factors and parents’ psychological well-being. Additionally, the present data is limited to two of the four pediatric oncology wards in Portugal, raising questions concerning the generalizability of our findings to other settings. Furthermore, the heterogeneity regarding the sample’s characteristics (e.g., caregivers’ sex, diagnosis, treatment status) limited the examination of the role of sociodemographic and clinical factors. Another significant shortcoming of this study concerns the use of traditional analytic methods (multiple regression) that does not capture the complex interaction between factors potentially explaining parents’ psychological well-being. Finally, we must highlight that our study focused only a subset of the factors potentially associated with parents’ psychological well-being in this disruptive situation.

In terms of this study’s strengths, so far, much of the research in this field has been mainly focused on parents’ reports of psychopathological symptoms. This study addressed the emerging call for competence-oriented models [9], providing valuable information concerning the specific factors related to parental positive adaptation, specifically assessing psychological well-being. Moreover, the current study was grounded on a systems-oriented perspective [12], focusing on individual and family-level determinants of parents’ psychological well-being. In
this domain, we addressed variables for which there is little empirical research in the specific
context of pediatric oncology, namely family condition management, which has been an
understudied topic. Finally, existing research on coping typically group different strategies on
basic categories (e.g., emotion-focused and problem-focused coping), despite the lack of
consensus concerning the conceptualization of this construct [36]. To address this literature
shortcoming, this study explored the role of a specific coping strategy (i.e., positive reappraisal)
on parents’ well-being.

Clinical implications

This study’s findings raise important practical considerations for health professionals
working in the pediatric oncology setting. While examining the role of modifiable factors
associated with the variability of parents’ psychological well-being, this study can guide
appropriate and effective interventions for families of children with cancer. First, results
reinforce the need for early screening for individual and family risk factors for poorer parental
well-being. Second, concerning the potential targets of professionals’ intervention, our findings
underlined the relevance of developing parental adaptive coping strategies. In this domain,
helping parents to positively reframe their experience as a parent and a caregiver of a child with
a life-threatening condition could be a way of enhancing their psychological well-being.
Another promising avenue for promoting parents’ well-being is the parenthood experience. For
instance, parents could benefit from guidance on concerns arising not only from their child’s
development but also from the illness experience. Moreover, interventions tailored to promote
positive and pleasurable experiences while performing the parenting role may also be beneficial.
Another possible target of professionals’ intervention could be the couple’s relationship.
However, we need to take into account that it may not be timely to ask parents to refocus their
attention from their child’s illness to their couple relationship issues (e.g., lack of physical
intimacy or couple time) [37]. Instead, it could be more beneficial, and more welcomed by the
parents, to discuss ways of expressing emotions and seeking and providing support to the
partner. Finally, this study also underscored the importance of considering the broader family
functioning, specifically addressing family condition management needs. Those families
PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

experiencing greater difficulties in family condition management could benefit from guidance and support in their efforts to engage in a “new normal” [38]. Whenever possible, professionals could adapt the illness and treatment demands so they align with the daily life and goals of each family [39].

Conclusion

In summary, this study shed light into the modifiable factors linked to the psychological well-being of the parents of children with cancer. The use of positive reappraisal as a coping strategy, the parents’ satisfaction with their parenting role, and the quality of their couple relationship may be potential resources for improving parents’ well-being. In turn, family life difficulty as a consequence of a child’s health condition is associated with poorer psychological well-being. Both parent- and family-based interventions could be an important avenue for promoting parents’ psychological well-being through their child’s illness course.

Acknowledgements

The authors would like to thank all the families who participated in the study and the health professionals and personnel of the Portuguese Institute of Oncology in Lisbon and Porto.

Conflict of interest statement

No conflict of interest to declare.

References


PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS


PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS


PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS


PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS


Table 1. Participants’ socio-demographic and clinical characteristics.

<table>
<thead>
<tr>
<th>Category</th>
<th>n (%) / M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caregivers</strong></td>
<td></td>
</tr>
<tr>
<td>Family caregiver</td>
<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>177 (86.3%)</td>
</tr>
<tr>
<td>Fathers</td>
<td>28 (13.7%)</td>
</tr>
<tr>
<td>Age</td>
<td>42.23 (6.11)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
</tr>
<tr>
<td>Married / Cohabiting</td>
<td>190 (92.7%)</td>
</tr>
<tr>
<td>Single / Divorced</td>
<td>15 (7.3%)</td>
</tr>
<tr>
<td>Couple relationship length (years)</td>
<td>16.90 (6.71)</td>
</tr>
<tr>
<td>Education level (completed)</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>22 (10.7%)</td>
</tr>
<tr>
<td>Basic/Secondary</td>
<td>137 (66.8%)</td>
</tr>
<tr>
<td>Graduate/Post-graduate</td>
<td>46 (22.5%)</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>93 (45.4%)</td>
</tr>
<tr>
<td>Medium</td>
<td>76 (37.1%)</td>
</tr>
<tr>
<td>High</td>
<td>36 (17.5%)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>127 (62.0%)</td>
</tr>
<tr>
<td>Sick leave, unemployed, retired</td>
<td>78 (38.0%)</td>
</tr>
<tr>
<td>Other children at home</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>135 (65.9%)</td>
</tr>
<tr>
<td>No</td>
<td>70 (34.1%)</td>
</tr>
<tr>
<td><strong>Pediatric patients</strong></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>132 (64.4%)</td>
</tr>
<tr>
<td>Female</td>
<td>73 (35.6%)</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
</tr>
<tr>
<td>Children (8-12y)</td>
<td>103 (50.2%)</td>
</tr>
<tr>
<td>Adolescents (13-20y)</td>
<td>102 (49.8%)</td>
</tr>
<tr>
<td>Cancer diagnosis</td>
<td></td>
</tr>
<tr>
<td>Leukemia</td>
<td>90 (43.9%)</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>65 (31.7%)</td>
</tr>
<tr>
<td>Solid tumor (extra CNS tumor)</td>
<td>40 (19.5%)</td>
</tr>
<tr>
<td>Central Nervous System (CNS) tumor</td>
<td>7 (3.4%)</td>
</tr>
<tr>
<td>Langerhans’s cell histiocytosis</td>
<td>3 (1.5%)</td>
</tr>
<tr>
<td>Treatment status</td>
<td></td>
</tr>
<tr>
<td>On-Treatment</td>
<td>90 (43.9%)</td>
</tr>
<tr>
<td>Off-Treatment</td>
<td>115 (56.1%)</td>
</tr>
<tr>
<td>Time after treatment completion (months)</td>
<td>23.30 (16.23)</td>
</tr>
<tr>
<td>Relapse</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>191 (93.2%)</td>
</tr>
<tr>
<td>Yes</td>
<td>14 (6.8%)</td>
</tr>
<tr>
<td>Time since diagnosis (months)</td>
<td>30.06 (26.43)</td>
</tr>
</tbody>
</table>
Sixteen participants did not report the length of their relationship with their actual partner.
# PARENTS’ PSYCHOLOGICAL WELL-BEING: INDIVIDUAL AND FAMILY FACTORS

Table 2. Means, standard deviations, and intercorrelations for parents’ psychological well-being.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological well-being</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.54</td>
<td>0.65</td>
</tr>
<tr>
<td>2. Positive reappraisal</td>
<td>.19**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.93</td>
<td>0.59</td>
</tr>
<tr>
<td>3. Parenting satisfaction</td>
<td>.54**</td>
<td>.01</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.64</td>
<td>0.57</td>
</tr>
<tr>
<td>4. Relationship quality</td>
<td>.29**</td>
<td>.06</td>
<td>.13</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>6.07</td>
<td>1.24</td>
</tr>
<tr>
<td>5. Family life difficulty</td>
<td>-.49**</td>
<td>-.05</td>
<td>-.48**</td>
<td>-.15*</td>
<td>-</td>
<td></td>
<td></td>
<td>2.68</td>
<td>0.73</td>
</tr>
<tr>
<td>6. Child’s age</td>
<td>-.06</td>
<td>.02</td>
<td>-.05</td>
<td>-.09</td>
<td>-.04</td>
<td>-</td>
<td></td>
<td>12.86</td>
<td>3.21</td>
</tr>
<tr>
<td>7. Time elapsed since diagnosis</td>
<td>.07</td>
<td>.09</td>
<td>.03</td>
<td>.00</td>
<td>-.24**</td>
<td>.07</td>
<td>-</td>
<td>30.06</td>
<td>26.43</td>
</tr>
</tbody>
</table>

* p ≤ .05. ** p ≤ .01.
Table 3. Multiple regression analysis for individual and family factors predicting parents’ psychological well-being.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE_B$</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive reappraisal</td>
<td>.18</td>
<td>.06</td>
<td>.16</td>
<td>3.07</td>
<td>.002</td>
</tr>
<tr>
<td>Relationship quality</td>
<td>.10</td>
<td>.03</td>
<td>.19</td>
<td>3.50</td>
<td>.001</td>
</tr>
<tr>
<td>Parenting satisfaction</td>
<td>.44</td>
<td>.07</td>
<td>.39</td>
<td>6.31</td>
<td>.000</td>
</tr>
<tr>
<td>Family life difficulty</td>
<td>-.24</td>
<td>.05</td>
<td>-.27</td>
<td>-4.41</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. $R^2 = .43$ ($N = 205$).