

Running head: POSTTRAUMATIC GROWTH IN CHILDREN AND PARENTS

POSTTRAUMATIC GROWTH IN CHILDREN AND THEIR PARENTS
FOLLOWING CHILD SEXUAL ABUSE

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ABSTRACT

Posttraumatic growth (PTG) is defined as the perception of positive changes following an exceptionally distressing life event (Tedeschi & Calhoun, 1996). While PTG has been observed in a wide variety of traumas, there is limited research on PTG within the context of child sexual abuse (CSA). Evidence suggests that though victims of sexual abuse can experience positive posttraumatic changes, they tend to report more and stronger negative outcomes (Simon, Smith, Fava, & Feiring, 2015), and their parents commonly experience PTSD as a result of the trauma (Şimşek, Fettahoğlu, & Özatalay, 2011). However, more research is needed to examine how PTG may present in families following CSA. This study used the short-form of the Posttraumatic Growth Inventory (PTGI-SF) and the revised Posttraumatic Growth Inventory for Children (PTGI-C-R) to explore the presentation of PTG in CSA survivors and their biological parents. The study also compared PTG levels in this population to PTG presentations following other forms of child trauma that have been examined in the literature. Participants included 10 children (ages 6-17) and their biological mothers ($n = 10$) who, following allegations of CSA, were referred for an evaluation at a child maltreatment center in Newark, New Jersey. The children in the study reported moderate to high levels of PTG ($M = 20.70$, $SD = 6.20$), with non-significantly higher scores amongst younger children. Parents reported high levels of PTG ($M = 43.80$, $SD = 8.84$). Results of the study suggest that PTG exists among families impacted by CSA, at similar or higher levels than survivors and parents of other forms of child trauma. Future research should include replication of this study in larger samples to better understand PTG following CSA.

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Introduction

The American Psychological Association defines child sexual abuse (CSA) as using a child to engage in sexual acts or imitate sexual acts, via methods such as, but not limited to, persuasion and force (American Psychological Association, 2016). It is estimated that 8.3% of children in the United States who are victims of maltreatment experienced sexual abuse, with an estimated 60,000 of U.S. children having experienced sexual abuse in 2014 (U.S. Department of Health and Human Services, 2015). The risk of CSA is higher for girls than boys, with an estimated one in four female victims as compared to one in six male victims (American Psychological Association, 2011).

CSA has been linked to many adverse mental health outcomes. Depression and anxiety (e.g., Naar-King, Silvern, Ryan, & Sebring, 2002), PTSD (e.g., Runyon, Deblinger, & Steer, 2014), suicidality (Nelson, Faust, Doyle, & Delucia, 2015), and sexual risk-taking behaviors (e.g., Jones et al., 2013) are among some of the common adverse outcomes that CSA victims experience during childhood. Yet, much research has shown that these problems may persist even beyond childhood. For example, on average, adolescent survivors of earlier CSA have PTSD scores in the clinical range (McLean, 2014). In adulthood, symptoms may continue, with one study suggesting that CSA leads to a direct increase in risk for lifetime Major Depression in women (Kendler & Aggen, 2014). While these negative outcomes are frequently associated with CSA, recent research suggests that positive posttraumatic changes, also known as posttraumatic growth, are a possible trajectory for CSA victims (Simon, Smith, Fava, & Feiring, 2015).

Posttraumatic growth (PTG) is defined as the perception of positive changes following an exceptionally distressing life event (Tedeschi & Calhoun, 1996). The perceived positive changes of PTG can be in the self, interpersonal relationships, or life philosophy (Tedeschi & Calhoun,

1996). In regard to the self, survivors of trauma may report that their crisis forced them to realize their competence, leading to an endorsement of greater self-assurance or self-reliance after the event (Tedeschi & Calhoun, 1996). Those that feel the events made them stronger tend to experience lower severity of PTSD (Tsai, Mota, Southwick, & Pietrzak, 2016). Additionally, survivors who are willing to disclose their trauma to family or other members of their network may cultivate greater social support in their lives and experience decreased trauma symptoms (Rivers, McPherson, & Hughes, 2010). They may also then report a greater appreciation for their family and friends (Tedeschi & Calhoun, 2004) and work toward improving their relationships (Collins, Taylor, & Skokan, 1990). PTG can also be reflected via a changed philosophy of life, as a spiritual strengthening may occur while survivors search for meaning of their trauma (Tedeschi & Calhoun, 1996). Trauma survivors may also rearrange their priorities in ways that enable them to invest more energy and resources on life experiences that are of greater meaning or typically underappreciated (Tedeschi & Calhoun, 2004).

PTG is often studied in the context of posttraumatic stress symptoms (PTSS) and posttraumatic stress disorder (PTSD) in an effort to understand how the various stressors of trauma can affect growth. Contrary to what may be expected, studies have shown that higher PTSS may be associated with greater PTG (Felix et al., 2015; Siqueland, Nygaard, Hussain, Tedeschi, & Heir, 2015). Others have found evidence of a curvilinear relationship between PTG and PTSS, in which low and high levels of PTSS are associated with lower levels of PTG, whereas levels of PTG are maximized at moderate levels of PTSS (Riva et al., 2014).

While there is a growing body of PTG research on various forms of trauma, few studies have examined the nature of PTG in sexual abuse survivors, particularly in children. Much of the research on PTG has focused on medically ill patients, and while this adds immensely to the

literature, other types of trauma may differentially impact PTG. It is likely that the outcome of sexual abuse, in particular, would be different because it is an interpersonal trauma rather than an event such as a natural disaster or a medical illness. The latter forms of trauma have no apparent human cause and may thus be interpreted differently emotionally and psychologically (Ickovics et al., 2014). Studying sexual trauma, as a separate entity, is also critical considering that sexual violence is associated with increased risk for lifetime PTSD (Walsh, Koenen, Aiello, Uddin, & Galea, 2014). For instance, Shakespeare-Finch and Armstrong (2010) recruited 94 adult survivors of trauma and found that the survivors of serious sexual assault endorsed significantly higher levels of PTSD and reported the lowest levels of PTG as compared to people who had experienced the death of a first-degree relative or a serious motor vehicle accident. In particular, they endorsed significantly less growth than others in areas of spiritual change, relationships, and appreciation of life. The perception of changes in personal strength was the only area that was similar across the trauma types (Shakespeare-Finch & Armstrong, 2010).

Although there is limited data on PTG in child populations, the research on PTSD/PTSS in children suggests a similar pattern as what is seen in adults. Specifically, child sexual abuse survivors report more and stronger negative outcomes from their trauma than positive outcomes. While this would suggest that CSA may foster less PTG than other forms of trauma, one study found that CSA survivors (between 13 to 19 years old) simultaneously experienced higher levels of PTG and PTSS than children who experienced nonsexual trauma (Vloet et al., 2014). This is the only study to date that has looked at PTG in child survivors of CSA. While studies have concluded that PTG is prevalent in adult survivors of CSA (Gil, 2015; Shakespeare-Finch & de Dassel, 2009; Wright, Crawford, & Sebastian, 2007), it is unclear how PTG presents during childhood following CSA. Further study is needed in the child population to better understand

how children may or may not experience positive outcomes prior to adulthood and closer in time to their trauma.

Even amongst other forms of trauma, few studies have examined the nature of PTG in children. Considering that the thought processes of children are not as advanced as adults (Fisher & Pruyne, 2003), it is possible that PTG is manifested differently in this younger population. While age may not be related to the prevalence of PTSD (Hunt, Martens, & Belcher, 2011), making meaning of a traumatic event requires more sophisticated thought processes, such as abstract reasoning and meta-cognition (Fisher & Pruyne, 2003). Thus, some researchers hypothesize that, although children of all ages can experience PTG, older children cultivate greater PTG because they have more life experience to assist them in creating adaptive schemas about themselves and the world following their trauma (Picoraro, Womer, Kazak, and Feudtner, 2014). This was also illustrated in a study of adolescent CSA survivors, in which the adolescents were able to generate a sense of meaning from their CSA experience, measured via coding of semi-structured interviews with the adolescents. The coders rated positive and negative responses to views of self, relationships, and the world, similar to what is measured in PTG, in addition to their sexual self-concept and functioning. The participants' responses indicated that adolescent survivors of trauma can simultaneously experience positive and negative post-trauma outcomes (Simon, Smith, Fava, & Feiring, 2015). Other studies of non-CSA traumatized youth have found, though, that younger age was positively correlated with PTG (Felix et al., 2015), while others noted no age-related differences in either negative or positive posttraumatic outcomes (Shakespeare-Finch & De Dassel, 2009). In sum, the research on PTG in children is in its nascent stages with mixed evidence about whether PTG varies as a function of age. Thus, future studies are needed in this area.

While the majority of the research on child trauma has focused on outcomes in the children, some studies have looked at parents' reactions and adaptation to their child's trauma. For example, in a study of 132 children, seven to twelve months following traffic injury, 25% of the child survivors as well as 15% of the parents had PTSD. Across the sample, 49% of the children (ages 3 to 18) and 44% of the parents reported PTSS with impairment. Additionally, child PTSD was positively correlated with parent PTSD (de Vries & Kassam-Adams, 1999). Similar studies have been conducted in parents of child sexual abuse survivors. In one study four years after multiple incidents of CSA at a day care in Norway, multiple parents reported high levels of PTSD intrusion and avoidance and this correlated with low psychological well-being (Dyb, Holen, Steinberg, Rodriguez, & Pynoos, 2003). Further, in a study of parents of thirty-six sexually abused children, 75% of mothers and 64% of fathers had a PTSD diagnosis. Based on this data, the authors of this study concluded that evaluating parents in addition to children following CSA can be beneficial (Şimşek, Fettahoğlu, & Özatalay, 2011).

The research on parents' PTG, however, is more limited. In one study, parents' PTG was measured three years following their child being diagnosed with either cancer or type I diabetes. Of the 126 participating parents, 62.7% of them indicated moderate to high levels of PTG, with parents of children with a cancer diagnosis endorsing higher levels. The mothers in the study had both higher psychological distress and PTG than the participating fathers (Hungerbuehler, Vollrath, & Landolt, 2011). This same pattern was seen in another study of pediatric stem cell transplant patients, in which 14% of parents reported PTSS and 39% reported PTG, both higher in mothers than in fathers (Riva et al., 2014). Hence, there is evidence to show that childhood traumas are not only distressing for children, but for their parents as well. PTG in parents has been a valuable construct to study and the literature shows that a large subset of parents

experience PTG following their child's medical illness. However, the current research is limited to parents of children with chronic illnesses. PTG in parents of CSA survivors, in particular, is an area not yet studied and thus warrants further exploration.

There is also mixed evidence that parents' PTG may be associated with their child's PTG. When children experience an event, let alone a traumatic one, their caregivers may play an immense role in their reaction, considering that caregivers' attitudes influence children's attitudes and perceptions (Kilmer et al., 2009). Hence, it is possible that caregivers' perception of positive changes, or PTG, would have an effect on children's PTG. One study examining PTG and PTSS found a significant relationship between parent PTG and child PTSS in survivors of the 2004 tsunami in Norway. Parent's PTG was positively correlated to children's self-reported PTSS both 1 year and 2.5 years following the tsunami. From their data, the researchers of the study concluded that children's distress impacts the development of their parents' PTG (Siqueland, Hafstad, & Tedeschi, 2012). In a study directly comparing PTG in both parents and their children, Yonemoto, Kamibeppu, Ishii, Iwata, and Tatezaki (2012) found that parents of pediatric osteosarcoma patients experience PTG, although overall at lower levels than patients. Another study, however, concluded that parents of pediatric cancer patients experience PTG at similar levels to the patients (Turner-Sack, Menna, Setchell, Maan, & Cataudella, 2015). The relationship between PTG in parents and their children is both limited and conflictual in the current literature. Future studies should explore this relationship further, especially in traumas, such as CSA, in which parent outcomes are less documented.

Considering the gaps in the literature, the present study was developed to contribute to the overall body of knowledge on PTG. Given that CSA has been a less studied area of PTG research, the population of interest was child survivors of sexual abuse and their non-offending

biological parents. The main objective of the study was to explore how posttraumatic growth presents in child survivors of sexual abuse and their parents, as well as the relationship between PTG in children and their parents. Results of the study add to current research by providing a preliminary examination of PTG in CSA survivors and their non-offending parents.

Method

Participants

This study took place at the Metropolitan Regional Diagnostic and Treatment Center (RDTC) at Robert Wood Johnson Barnabas Health in Newark, New Jersey from November 2016 to April 2017. The Metro RDTC is a multidisciplinary center for the evaluation and treatment of children who are survivors of abuse and/or neglect. Children with their biological non-offending parents referred to the RDTC for psychosocial evaluations following an allegation of child sexual abuse were eligible to participate. The sample consisted of 10 children and 10 non-offending parents (one biological parent per child). Child participants were all female and ranged in age from 8-17 years ($M = 12.1$, $SD = 3.4$). The parent participants were all biological mothers of the children and above the age of 18 ($M = 33.0$, $SD = 4.2$). Four of the children reported single incidents of sexual abuse and six reported multiple incidents. The sample consisted of five families (parent-child pair) who identified as Hispanic, three as African-American, and two as Multicultural. The majority of families identified as Christian or Catholic ($n = 8$), while two families identified as having no religion or "Other." All participants resided in areas of primarily low socioeconomic status.

Procedures

Each eligible parent was explained the details of the study and received a study consent form in a private room while waiting for her child to complete a psychosocial evaluation. Participants were informed during the consent process that participation in this study was not linked in any way to their child's evaluations or treatment at the RDTC. Those parents who agreed to participate were given a demographics form and a Posttraumatic Growth Inventory-Short Form (PTGI-SF) to complete. One of the study investigators explained these forms to each parent and answered any questions. The parent's child was then asked to sign the assent form upon receiving an age-appropriate explanation of the study. The investigator administered a Posttraumatic Growth Inventory for Children-Revised (PTGI-C-R) to the child at the end of the child's RDTC evaluation or screening. The total duration of an individual participant's involvement was approximately ten to fifteen minutes.

This study was approved by the IRBs at Robert Wood Johnson Barnabas Health and Rutgers, The State University of New Jersey. There was no exclusion based on gender, race, ethnic background, or economic status. However, no children or individuals who were decisionally impaired or did not have the capacity to consent/assent were included in the study. Non-English speaking parents and children were also excluded because the study materials were only available in English. Finally, due to concerns of consent and the enhancement of the methodology, only biological parents were included as participants. Of the families approached to participate, several were unable to due to a lack of proficiency in English or because the child was brought to the evaluation by a caseworker or family member other than his/her biological parent. Only a few eligible participants denied participation, due to time constraints or concern about additional questionnaires.

Measures

Demographics form. The demographics form that the non-offending parents were asked to complete was created for the purposes of this study. This form asked each parent to report her age and the age of her child. Additionally, each parent was asked to report her gender, ethnicity, and religious affiliation, as well as that of her child. The demographics form also allowed each parent to report her relationship to the child (i.e., biological mother).

Posttraumatic Growth Inventory-Short Form (PTGI-SF). Parents were asked to complete the Posttraumatic Growth Inventory-Short Form (PTGI-SF) (Cann et al., 2010). The PTGI-SF is based on the original Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996), a 21-item self-report questionnaire used to assess the following five factors: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. In 2010, the PTGI-SF was developed to minimize the amount of time and energy respondents would need to complete each questionnaire, while continuing to validly assess PTG (Cann et al., 2010). The PTGI-SF consists of 10 questions, two per each of the five factors of PTG. Participants are instructed to use a 6-point Likert-type scale, ranging from 0 (no change) to 5 (very great degree of change) to indicate the degree to which each question item changed in their lives as a result of their crisis (e.g., “I changed my priorities about what is important in life;” “I know better that I can handle difficulties”). The total possible sum score ranges from 0 to 50. The PTGI-SF has a Cronbach alpha coefficient of .89 and is highly correlated with the original PTGI, with an average adjusted Pearson r correlation of .90. The authors found that the internal validity of the PTGI-SF is also at a considerably high level and only slightly lower than that of the PTGI (Cann et al., 2010).

Posttraumatic Growth Inventory for Children-Revised (PTGI-C-R). Child participants were administered the Posttraumatic Growth Inventory for Children-Revised (PTGI-C-R)

(Kilmer et al., 2009). The PTGI-C-R is based on the original Posttraumatic Growth Inventory for Children (PTGI-C) (Cryder, Kilmer, Tedeschi, & Calhoun, 2006). Consistent with the PTGI, the PTGI-C ($\alpha = 0.89$) (Cryder et al., 2006) was developed to measure the following five factors: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. However, this measure asks each question in a developmentally appropriate way for children (Cryder et al., 2006). The PTGI-C-R (Kilmer et al. (2009) is a 10-item version of the PTGI-C. Some word changes were made on the PTGI-C-R in order to better adapt the measure to young children, in particular. Additionally, the metric format was edited to ask about degree of change rather than degree of truth. The PTGI-C-R also includes two open-ended verification items assessing a child's ability to accurately complete the measure (Kilmer et al., 2009). For each item, participants are instructed to indicate on a 4-point Likert-type scale how much they have changed since their crisis (e.g., "I can now handle big problems better than I used to," "I have new ideas about how I want things to be when I grow up"). A rating of "0" indicates no change, "1" a little change, "2" some change, and "3" a lot of change. Participants are also given the option to select "I don't know" for any item, but this does not count toward the total PTGI-C-R score, which ranges from a possible 0 to 30. In a sample of Hurricane Katrina survivors, aged 7-10, Kilmer et al. (2009) found a Cronbach's alpha coefficient of 0.77 for the measure.

Study Aims

Aim 1. Explore how PTG presents in CSA survivors, including how this may vary between children (ages 8-12) and adolescents (ages 13-17).

Aim 2. Identify how PTG in child survivors of sexual abuse compares to PTG in child survivors of other forms of trauma, according to the literature.

Aim 3. Explore how PTG presents in parents of CSA survivors, and how this compares to PTG in parents of other trauma.

Aim 4. Explore whether there is a relationship between PTG in parents and their children.

Analyses

A review of the sample's PTGI-C-R descriptive statistics provided information for Aim 1. This included looking at means and standard deviations of scores as well as frequencies of individual PTGI-C-R items. Qualitative review of the child participants' open-ended responses on the PTGI-C-R were examined to provide a more in-depth understanding of how the participants perceive changes in their lives following their CSA trauma. An independent-samples t-test was included for statistical analysis of Aim 1 to determine whether there was a difference between two independent means. The independent means of interest were PTGI scores of children (ages 8-12) and adolescents (ages 13-17). Aim 2 compared the PTGI-C-R scores in this study to other samples in the literature that used the same questionnaire. Aim 3 examined the mean and standard deviation of parents' PTGI-SF and compared levels of PTG in parents of CSA victims to other samples in the literature. A Pearson product-moment correlation was calculated for Aim 4 to provide information on the strength and direction of the association between parents' PTGI-SF scores and their children's PTGI-C-R scores.

Results

Aim 1

All of the child participants reported at least some degree of positive change on the PTGI-C-R. The sum scores ranged from 12-28 out of possible 30, with a mean score of 20.70 ($SD = 6.20$), suggesting that on average, the participants reported moderate levels of PTG. Item frequencies are displayed in Table 1. The most highly endorsed item was "I have learned that I

can deal with more things than I thought I could before” ($M = 2.70$, $SD = 0.95$), which is in the Personal Strength domain of PTG. Item 4, representative of the Spiritual Change domain, and item 7, of the New Possibilities domain, were the least endorsed items (“I understand how God works better than I used to” and “I now have a chance to do some things I couldn't do before.”), both with a mean rating of 1.60 ($SD = 1.35$ and 1.26 , respectively). Fifty-three percent of all responses were in the highest response category (“a lot” of change) and 19% were in the second highest (“some” change). Ten percent of all responses indicated “a little” change, while 18% indicated no perceived change.

PTGI-C-R scores were higher in children than adolescents. The mean score for children, aged 8-12, was 22.60 ($SD = 5.64$), while the mean score for adolescents, aged 13-17, was 18.80 ($SD = 6.76$). The difference between mean PTGI-C-R scores of children and adolescents was not significantly different, $t(8) = 0.97$, $p = 0.36$. However, according to Cohen (1992), the power to detect a small effect in a sample size of 10 was 5.90%; 10.77% to detect a medium effect, and 20.07% to detect a large effect. Given the very limited power to detect a difference due to the small sample size, Cohen’s d was calculated as an estimate of effect size. The difference between mean PTGI-C-R scores of children and adolescents was a medium to large effect (Cohen’s $d = 0.61$). This suggests that, despite being non-significant, children in this sample had meaningfully higher scores than adolescents. However, this requires replication in larger studies.

The open-ended questions of the PTGI-C-R allowed participants to provide spontaneous reflections as to how they have changed since their crisis. Some participants endorsed changes aligned with PTG, such as becoming more positive and happy, and growing closer to loved ones. One participant explained, “I know what I want in life and I know what I'm doing. I used to want to give up and now I realize I have a lot of things to look forward to.” Other participants reported

negative outcomes, including externalizing symptoms (“yelling and screaming and ripping up papers”) and internalizing symptoms (“I feel disgusted and helpless because I was vulnerable”). Some also expressed disappointment in losing contact with specific family members due to the incident. One participant recognized both negative and positive outcomes, stating, “I’ve been a little more stressed. I’m a lot more sensitive. But I’m a lot closer with my friends.” Two participants presented with more neutral outcomes, indicating that they had not noticed any change, whether negative or positive. One of these participants explained it as, “My thinking was already high up there; I have an intelligent way of thinking about things, so no, I don’t think any differently now.”

Aim 2

The PTGI-C-R scores in this sample are comparable to scores in the existing literature. The mean score in this study of 20.70 ($SD = 6.20$) is less than a two-point difference than scores of Hurricane Katrina survivors, aged 7-10, both one year ($M = 20.0$; $SD = 6.5$) and two years following the hurricane ($M = 19.2$; $SD = 7.3$) (Kilmer et al., 2009). Similarly, PTGI-C-R scores from 10-15 year old youth, following the 2010 tsunami in Chile averaged at 20.88 ($SD = 8.26$) (Andrades, García, Reyes-Reyes, Martínez-Arias, & Calonge, 2016), and a study of adolescent refugees in the Netherlands had a mean score of 20.2 ($SD = 5.8$) (Sleijpen, Haagen, Mooren, & Kleber, 2016). A study with a comparable age group (8-17) to the current study found a mean PTGI-C-R score of 20.96 ($SD = 5.53$) in survivors of the 2004 tsunami in Tamil Nadu, South India (Exenberger, Ramalingam, & Höfer, 2016).

However, the PTGI-C-R scores in the current study are also higher than multiple studies in the current literature. A study following the 2011 tsunami in Japan found a mean of 16.5 ($SD = 7.5$) in survivors aged 9-15 (Yoshida et al., 2016). Additionally, a small sample of pediatric

inflammatory bowel disease patients (ages 11-18) found mean PTGI-C-R scores ranging from 15.81 to 18.06 across different time points before and after attending a pediatric summer camp (Lawton, 2016). While the means in these studies do not represent a large difference from the current study, other researchers have found much lower PTG in their samples. For example, following the 2004 Southeast Asian tsunami, PTGI-C-R scores of children ages 6 to 17 averaged at 8.1 ($SD = 5.1$) (Hafstad, Gil-Rivas, Kilmer, & Raeder, 2010). Two studies including children with any trauma meeting PTSD A1 criteria found mean scores of 11.73 ($SD = 7.47$) (Laceulle, Kleber, & Alisic, 2015) and 11.23 ($SD = 6.56$) (Vloet et al., 2014). The researchers of the latter study indicated that participants with sexual trauma had higher PTG scores than the rest of the sample ($M = 11.23$, $SD = 6.56$ versus $M = 7.04$, $SD = 5.07$), although this is still much lower than the current sample. No studies using the PTGI-C-R had scores that are meaningfully higher than the current study.

Of the aforementioned studies, there were mixed findings on age differences in PTGI-C-R scores. While one study noted a positive correlation between age and PTGI-C-R (Exenberger, Ramalingam, & Höfer, 2016), two of the studies found a negative correlation between the variables (Laceulle, Kleber, & Alisic, 2015; Yoshida et al., 2016). The latter studies are similar to the current, in which there was a medium to large age difference, with younger children having higher scores than adolescents. Two studies, however, found there were no age-related differences (Hafstad, Gil-Rivas, Kilmer, & Raeder, 2010; Kilmer et al., 2009), and the remaining studies did not report differences based on age.

Aim 3

Similar to the child participants, the participating parents also reported at least some degree of positive change on the PTGI-SF. The parent sum scores ranged from 20-50 (highest

possible score), with a mean score of 43.80 ($SD = 8.84$), suggesting that on average, the parents reported high levels of PTG. Item frequencies are displayed in Table 2. The most highly endorsed items were in the Relating to Others and Personal Strength domains (“I have a greater sense of closeness with others” and “I discovered that I'm stronger than I thought I was”), with a mean of 4.90 ($SD = 0.32$) for each. The least endorsed item ($M = 3.60$, $SD = 2.01$) was “I have a stronger religious faith,” which is reflective of the Spiritual Change domain of PTG. Seventy-one percent of all responses were in the highest response category (“very great degree” of change) and 18% were in the second highest response category (“great degree” of change). Only 7% of responses were in the lowest category, indicating no perceived change.

No studies to date have used the PTGI-SF to measure PTG in parents. Rather, only the original PTGI has been used. Seeing that there is not equivalency between the numerical scores of the PTGI-SF to those of the PTGI, comparisons for this aim of the study are qualitative. The parent participants in this study endorsed, on average, a high degree of PTG. This is greater than what was seen in other parent studies in which only a moderate degree of PTG was endorsed (Hullmann, Fedele, Molzon, Mayes, & Mullins, 2014; Hungerbuehler, Vollrath, & Landolt, 2011; Yonemoto, Kamibeppu, Ishii, Iwata, & Tatzaki, 2012). All of these studies were on parents of children with severe chronic illness.

Aim 4

The Pearson correlation of parent PTGI-SF score and child PTGI-C-R score was $r = -.01$, $p = 0.49$. Given the sample size and according to Cohen and Cohen (1983), there was less than a 6.00% chance of detecting a small linear relation if there were one; a 19% chance for detecting a medium effect, and a 50% chance for detecting a large effect. Thus, the failure to detect a

correlation between parent PTG and child PTG is inconclusive. However, the results from this preliminary investigation suggest that parent and child PTG are unrelated.

Discussion

The current study aimed to explore PTG in child CSA survivors and their parents. The children in this study all reported moderate to high levels of PTG. Additionally, they each endorsed the highest category of change to a majority of the PTGI-C-R items; on most of the other items, they reported at least some change. The most endorsed item was in the Personal Strength domain, while the least endorsed items included one each in the Spiritual Change domain and New Possibilities domain. When asked open-ended questions about changes since their crisis, some of the children spontaneously reported positive outcomes, reflective of the Relating to Others and Appreciation of Life domains of PTG. These results show that children can perceive positive changes following CSA.

The results also indicated that PTG among CSA survivors develops relatively quickly following the trauma. Participants in this study were recruited very close in time to their CSA disclosure, as all of the psychosocial evaluations at the RDTC are scheduled as soon as possible following a report of abuse to the Division of Child Protection and Permanency. Many PTG studies have measured this construct only after a minimum of several months to years following the traumatic event. For child CSA survivors that disclosed their abuse, this extended time period would have likely included therapy, which is considered a moderator of PTG and can sometimes lead to greater PTGI scores for these survivors than those of nonsexual trauma (Vloet et al., 2014). However, the participants in this study had not yet had therapy for the reported incident of abuse. This illustrates that CSA survivors can develop comparable levels of PTG to survivors of other trauma, soon after their abuse and even prior to attending therapy.

The PTGI-C-R scores in this study were around the same or higher than PTGI-C-R scores of other trauma in the existing literature. This suggests that child CSA survivors may experience PTG at comparable or higher levels than survivors of nonsexual trauma. This is consistent with one study that has looked directly at PTG in child CSA survivors (Vloet et al., 2014). However, this contrasts previous literature stating that sexual abuse is likely to foster less PTG (Shakespeare-Finch & Armstrong, 2010), considering that it is an interpersonal trauma unlike a natural disaster or medical illness (Ickovics et al., 2014). It is unclear what fostered greater PTG in this sample; replication of this study with larger samples should be done to better understand the levels of PTG in this population.

When looking at age of the child participants, the results of the current study also align with some of the existing research. The children, ages 8-12, in this study reported higher levels of PTG than the adolescents, ages 13-17. Similarly, in a 2015 study of children ($M = 14.5$ years old, $SD = 3.61$) that experienced a wildlife disaster, younger children had higher PTG scores than older children (Felix et al., 2015). This has been found in other studies as well (Laceulle, Kleber, & Alisic, 2015; Yoshida et al., 2016) but is unexpected, considering that younger children are less capable of creating adaptive schemas about trauma (Exenberger, Ramalingam, & Höfer, 2016; Picoraro, Womer, Kazak, & Feudtner, 2014). While some studies have shown no age-related differences in PTG (Hafstad, Gil-Rivas, Kilmer, & Raeder, 2010; Kilmer et al., 2009), the findings from the current study suggests that there may be age-related differences, particularly for child CSA survivors.

The parents in this study overall reported high levels of PTG. Similar to the child participants, the parents endorsed the highest category of change to a majority of the PTGI items and at least some change on the remaining items. The least endorsed item was in the Spiritual

Change domain, while the two most endorsed items were in the Personal Strength and Relating to Others domain. The results show that the idea of finding positive changes after a crisis resonates with parents impacted by CSA.

The reported levels of PTG for parents in this study were also higher than what is seen in the existing literature. The only studies measuring parents' PTG following a trauma that occurred with their child consist of parents of children with chronic illness (Hullmann, Fedele, Molzon, Mayes, & Mullins, 2014; Hungerbuehler, Vollrath, & Landolt, 2011; Yonemoto, Kamibeppu, Ishii, Iwata, & Tatezaki, 2012). The current study suggests that parents of CSA survivors may be more likely to cultivate PTG than parents of pediatric patients. This difference may be due to the continual challenges that arise when caring for a child with chronic illness (Hullmann, Fedele, Molzon, Mayes, & Mullins, 2014). However, more studies are needed in diverse types of trauma, as well as replication specifically in CSA.

This study also aimed to explore the relationship between child and parent PTG, but found no evidence of a relationship between child and parent PTG scores. Parents reported higher levels of PTG than did children in the study, suggesting that parents perceive greater positive change than their children following CSA. This is different from previous research indicating that parents experience PTG at the same levels (Turner-Sack, Menna, Setchell, Maan, & Cataudella, 2015) or lower levels (Yonemoto, Kamibeppu, Ishii, Iwata, & Tatezaki, 2012) than their children following a child trauma. It is possible that the pattern is different in CSA-affected families; however, further studies, with considerably larger sample sizes, are needed in this population for this to be determined.

Limitations

The findings of this study provide a preliminary investigation of PTG in child CSA survivors and their non-offending parents. However, there are limitations to be considered. First, the use of self-report measures for PTG may be subject to response bias of the participants. Additionally, because the shortened versions of the inventories (PTGI-S-F and PTGI-C-R) were used in this study, scores could only be discussed at the total and item level, but not the subscale level. Thus, it is unclear how the participants' PTG varies across domains.

The small sample size in the study limits its generalizability as well as statistical power. There were several barriers to recruiting families for this study. The initial plan was to recruit 50 families, but only 10 were recruited. Seeing that only English-speaking, biological parent-child pairs were eligible to participate, more families than expected were ineligible during the recruitment process. The RDTC serves a minority population, including many Spanish-speaking families, and children in kinship or foster care. These families were excluded due to additional consent requirements and to eliminate any confounding variables that may have resulted from including caregivers who had a kinship or foster relationship with the children. However, this latter exclusion puts into question how representative the current findings are of youth living with non-biological families. Because family type and functioning may influence PTG (Felix et al., 2005; Teixeira, & Pereira, 2013), it is possible that children in foster or kinship care may experience PTG at different levels than the children in the current sample. This is worth studying, as it may increase understanding of how to cultivate greater PTG in different types of families.

Additionally, the sample consisted only of individuals who identify themselves as African-American, Hispanic/Latino, or Bicultural, and who reside in an urban community of

primarily low socioeconomic status. Therefore, findings from this study may not be generalizable to other racial/ethnic groups or to individuals in geographical locations with different social and economical demographics. Further, all of the participants were female; thus the results of this study may not be generalizable to PTG among male CSA survivors and/or fathers. Though there are many studies showing no sex differences in PTG (i.e., Exenberger, Ramalingam, & Höfer, S., 2016; Laceulle, Kleber, & Alisic, 2015; Yoshida et al., 2016), some research indicates that females tend to have higher PTGI scores than males (Tedeschi & Calhoun, 1996; Riva et al., 2014). While the study was open to male participants, the majority of the patients at the RDTC are girls escorted by their mothers. This is not surprising, as statistics show that girls are at higher risk for CSA (American Psychological Association, 2011) and are more likely to disclose the abuse than boys (Ungar et al., 2009).

Of note, all child participants in this study disclosed an incident of CSA, which resulted in their evaluation at the RDTC. Thus, while the goals of the study aim to illustrate presentation of PTG in children following CSA, it is possible that disclosure of the abuse uniquely impacts PTG. It is estimated that 62% of child sexual abuse incidents are unreported (Ullman, 2007). Children who report the incident of CSA may differ in levels of PTG than those who do not, especially considering that CSA disclosure is associated with positive adjustment (Kogan, 2005). Hence, the findings of this study may not be generalizable to child victims who did not disclose their CSA history.

Future Research

Considering the lack of power in this study, future research should include more participants to better examine PTG in CSA survivors. These participants should be of varied ethnic and SES backgrounds to enhance the generalizability of the findings and determine

whether there are differences amongst the varied populations. Additionally, future research should include all types of caregivers to better understand how different types of families experience PTG, as well as how this compares to that of biological families.

Further, factors known to influence PTG and adjustment in CSA survivors, including child-perpetrator relationship and frequency of sexual contact were not investigated in this study. Seeing that abuse from a close family member may result in higher PTSS (Lev-Wiesel, Amir, & Besser, 2005) and higher frequency of sexual contact is associated with lower adjustment (Kendall-Tackett, Williams, & Finkelhor, 1993; Wolfe, Sas, & Wekerle, 1994), future research on PTG in child CSA survivors should include analyses of how these factors may impact children's and parents' PTG. Using the original versions of the questionnaires (PTGI and PTGI-C) would also allow for the calculation of factor scores in order to better understand what domains of PTG most resonates with these families. Finally, longitudinal studies that assess PTG at multiple time points would provide important information about levels of PTG at different periods following the traumatic event.

Despite its limitations, this study provides a preliminary exploration of PTG in CSA survivors and their parents. The findings support the idea that PTG exists in this population, at similar to or higher levels than populations affected by other traumas. As such, PTG appears to be a relevant construct for CSA-affected families, yet the research remains very limited. Further studies are warranted to better understand the presentation of CSA-related PTG.

References

- American Psychological Association (2011). Understanding child sexual abuse. Retrieved from <http://www.apa.org/pi/about/newsletter/2011/12/sexual-abuse.aspx>
- American Psychological Association (2016). Understanding and preventing child abuse and neglect [Brochure]. Retrieved from <http://www.apa.org/pi/families/resources/understanding-child-abuse.aspx>
- Andrades, M., García, F. E., Reyes-Reyes, A., Martínez-Arias, R., & Calonge, I. (2016). Psychometric properties of the Posttraumatic Growth Inventory for Children in Chilean population affected by the earthquake of 2010. *American Journal of Orthopsychiatry*, 86(6), 686-692. doi:10.1037/ort0000182
- Cann, A., Calhoun, L. G., Tedeschi, R. G., Taku, K., Vishnevsky, T., Triplett, K. N., & Danhauer, S. C. (2010). A short form of the Posttraumatic Growth Inventory. *Anxiety, Stress & Coping*, 23(2), 127-137. doi:10.1080/10615800903094273
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. doi:10.1037/0033-2909.112.1.155
- Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences (2nd ed). Hillside, NJ: Erlbaum.
- Collins, R. L., Taylor, S. E., & Skokan, L. A. (1990). A better world or a shattered vision? Changes in life perspectives following victimization. *Social Cognition*, 8, 263-285. doi:10.1521/soco.1990.8.3.263
- Cryder, C. H., Kilmer, R. P., Tedeschi, R. G., & Calhoun, L. G. (2006). An exploratory study of posttraumatic growth in children following a natural disaster. *American Journal of Orthopsychiatry*, 76(1), 65-69. doi:10.1037/0002-9432.76.1.65

- de Vries, A. P., & Kassam-Adams, N. (1999). Looking beyond the physical injury: posttraumatic stress disorder in children and parents after pediatric traffic injury. *Pediatrics*, 104(6), 1293. doi:10.1542/peds.104.6.1293
- Dyb, G., Holen, A., Steinberg, A. M., Rodriguez, N., & Pynoos, R. S. (2003). Alleged sexual abuse at a day care center: impact on parents. *Child Abuse & Neglect*, 27(8), 939-950. doi:10.1016/S0145-2134(03)00141-8
- Exenberger, S., Ramalingam, P., & Höfer, S. (2016). Exploring posttraumatic growth in Tamil children affected by the Indian Ocean Tsunami in 2004. *International journal of psychology*. doi:10.1002/ijop.12395
- Felix, E., Afifi, T., Kia-Keating, M., Brown, L., Afifi, W., & Reyes, G. (2015). Family functioning and posttraumatic growth among parents and youth following wildfire disasters. *American Journal of Orthopsychiatry*, 85(2), 191-200. doi:10.1037/ort0000054
- Fischer, K. W. & Pruyne, E. (2003). Reflective thinking in adulthood development: Emergence, development, and variation. In J. Demick and C. Andreoletti, *Handbook of Adult Development*. New York: Plenum Press.
- Gil, S. (2015). Comparison between males and females sexually abused in childhood by a male or female perpetrator. *Journal of Traumatic Stress Disorders & Treatment*, 4(3), 2. doi:10.4172/2324-8947.1000142
- Hafstad, G. S., Gil-Rivas, V., Kilmer, R. P., & Raeder, S. (2010). Parental adjustment, family functioning, and posttraumatic growth among Norwegian children and adolescents following a natural disaster. *American Journal of Orthopsychiatry*, 80(2), 248-257. doi:10.1111/j.1939-0025.2010.01028.x

- Hullmann, S. E., Fedele, D. A., Molzon, E. S., Mayes, S., & Mullins, L. L. (2014). Posttraumatic growth and hope in parents of children with cancer. *Journal of Psychosocial Oncology*, 32(6), 696-707. doi:10.1080/07347332.2014.955241
- Hungerbuehler, I., Vollrath, M. E., & Landolt, M. A. (2011). Posttraumatic growth in mothers and fathers of children with severe illnesses. *Journal of Health Psychology*, 16(8), 1259-1267. doi:10.1177/1359105311405872
- Hunt, K. L., Martens, P. M., & Belcher, H. E. (2011). Risky business: Trauma exposure and rate of posttraumatic stress disorder in African American children and adolescents. *Journal of Traumatic Stress*, 24(3), 365-369. doi:10.1002/jts.20648
- Ickovics, J. R., Meade, C. S., Kershaw, T. S., Milan, S., Lewis, J. B., & Ethier, K. A. (2006). Urban teens: Trauma, posttraumatic growth, and emotional distress among female adolescents. *Journal of Consulting and Clinical Psychology*, 74, 841-850. doi:10.1037/0022-006X.74.5.841
- Jones, D., Lewis, T., Litrownik, A., Thompson, R., Proctor, L., Isbell, P., & Runyan, D. (2013). Linking childhood sexual abuse and early adolescent risk behavior: The intervening role of internalizing and externalizing problems. *Journal of Abnormal Child Psychology*, 41(1), 139-150. doi:10.1007/s10802-012-9656-1
- Kendall-Tackett, K. A., Williams, L. M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin*, 113, 164. doi:10.1037//0033-2909.113.1.164
- Kendler, K. S., & Aggen, S. H. (2014). Clarifying the causal relationship in women between childhood sexual abuse and lifetime major depression. *Psychological Medicine*, 44(6), 1213-1221. doi:10.1017/S0033291713001797

- Kilmer, R. P., Gil-Rivas, V., Tedeschi, R. G., Cann, A., Calhoun, L. G., Buchanan, T., & Taku, K. (2009). Use of the revised Posttraumatic Growth Inventory for Children. *Journal of Traumatic Stress, 22*(3), 248-253. doi:10.1002/jts.20410
- Kogan, S. M. (2005). The role of disclosing child sexual abuse on adolescent adjustment and revictimization. *Journal of Child Sexual Abuse, 14*(2), 25–47.
doi:10.1300/J070v14n02_02
- Laceulle, O. M., Kleber, R. J., & Alisic, E. (2015). Children's experience of posttraumatic growth: Distinguishing general from domain-specific correlates. *Plos ONE, 10*(12), 1-12.
doi:10.1371/journal.pone.0145736
- Lawton, R. C. (2016). *Let's go camping!: Understanding the positive psychosocial impact of summer camp for children and adolescents with pediatric inflammatory bowel disease*. Retrieved from ProQuest Dissertations & Theses Global. (10160434)
- Lev-Wiesel, R., Amir, M., & Besser, A. (2005). Posttraumatic growth among female survivors of childhood sexual abuse in relation to the perpetrator identity. *Journal of Loss & Trauma, 10*(1), 7-17. doi:10.1080/15325020490890606
- McLean, C., Morris, S., Conklin, P., Jayawickreme, N., & Foa, E. (2014). Trauma characteristics and posttraumatic stress disorder among adolescent survivors of childhood sexual abuse. *Journal of Family Violence, 29*(5), 559-566. doi:10.1007/s10896-014-9613-6
- Naar-King, S., Silvern, L., Ryan, V., & Sebring, D. (2002). Type and severity of abuse as predictors of psychiatric symptoms in adolescence. *Journal of Family Violence, 17*(2), 133-149. doi:10.1023/A:1015057416979

- Nelson, S., Faust, J., Doyle, K., & Delucia, C. (2015). Beyond depression: Correlates of suicidal behavior in abused children. *Journal of Child & Adolescent Trauma*, 8(2), 93-101.
doi:10.1007/s40653-015-0043-2
- Picoraro, J. A., Womer, J. W., Kazak, A. E., & Feudtner, C. (2014). Posttraumatic growth in parents and pediatric patients. *Journal of Palliative Medicine*, 17(2), 209-218.
doi:10.1089/jpm.2013.0280
- Riva, R., Forinder, U., Arvidson, J., Mellgren, K., Toporski, J., Winiarski, J., & Norberg, A. L. (2014). Patterns of psychological responses in parents of children that underwent stem cell transplantation. *Psycho-Oncology*, 23(11), 1307-1313. doi:10.1002/pon.3567
- Rivers, I., McPherson, K. E., & Hughes, J. R. (2010). The role of social and professional support seeking in trauma recovery: lesbian, gay and bisexual experiences of crime and fears for safety. *Psychology & Sexuality*, 1(2), 145-155. doi:10.1080/19419899.2010.484596
- Runyon, M. K., Deblinger, E., & Steer, R. A. (2014). PTSD symptom cluster profiles of youth who have experienced sexual or physical abuse. *Child Abuse & Neglect*, 38(1), 84-90.
doi:10.1016/j.chiabu.2013.08.015
- Shakespeare-Finch, J. & Armstrong, D. (2010). Trauma type and posttrauma outcomes: Differences between survivors of motor vehicle accidents, sexual assault, and bereavement. *Journal of Loss & Trauma*, 15(2), 69-82. doi:10.1080/15325020903373151
- Shakespeare-Finch, J., & De Dassel, T. (2009). The impact of child sexual abuse on victims/survivors: Exploring posttraumatic outcomes as a function of childhood sexual abuse. *Journal of Child Sexual Abuse*, 18, 623-640. doi:10.1080/10538710903317224

- Simon, V. A., Smith, E., Fava, N., & Feiring, C. (2015). Positive and negative posttraumatic change following childhood sexual abuse are associated with youths' adjustment. *Child Maltreatment, 20*(4), 278-290. doi:10.1177/1077559515590872
- Şimşek, Ş., Fettahoğlu, E. Ç., & Özatalay, E. (2011). Post-Traumatic stress disorder in children who were sexually abused and in their parents. *Dicle Medical Journal / Dicle Tıp Dergisi, 38*(3), 318-324. doi:10.1578/diclemedj.0921.2011.03.0040
- Siqveland, J., Hafstad, G. S., & Tedeschi, R. G. (2012). Posttraumatic growth in parents after a natural disaster. *Journal of Loss & Trauma, 17*(6), 536-544. doi:10.1080/15325024.2012.678778
- Siqveland, J., Nygaard, E., Hussain, A., Tedeschi, R. G., & Heir, T. (2015). Posttraumatic growth, depression and posttraumatic stress in relation to quality of life in tsunami survivors: a longitudinal study. *Health & Quality of Life Outcomes, 13*(1), 1-8. doi:10.1186/s12955-014-0202-4
- Sleijpen, M., Haagen, J., Mooren, T., & Kleber, R. J. (2016). Growing from experience: an exploratory study of posttraumatic growth in adolescent refugees. *European Journal of Psychotraumatology, 7*1-10. doi:10.3402/ejpt.v7.28698
- Tedeschi, R. G. & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455-471. doi:10.1002/jts.2490090305
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1-18. doi:10.1207/s15327965pli1501_01

- Teixeira, R. J., & Pereira, M. G. (2013). Factors contributing to posttraumatic growth and its buffering effect in adult children of cancer patients undergoing treatment. *Journal of Psychosocial Oncology*, 31(3), 235-265. doi:10.1080/07347332.2013.778932
- Tsai, J., Mota, N. P., Southwick, S. M., & Pietrzak, R. H. (2016). What doesn't kill you makes you stronger: A national study of U.S. military veterans. *Journal of Affective Disorders*, 189, 269-271. doi:10.1016/j.jad.2015.08.076
- Turner-Sack, A. M., Menna, R., Setchell, S. R., Maan, C., & Cataudella, D. (2016). Psychological functioning, post-traumatic growth, and coping in parents and siblings of adolescent cancer survivors. *Oncology Nursing Forum*, 43(1), 48-56. doi:10.1188/16.ONF.48-56
- U.S. Department of Health and Human Services (2015). *Child maltreatment 2014*. Washington, DC: U.S. Government Printing Office.
- Ungar M, Barter K, McConnell S, Tutty L, Fairholm J. 2009a. Patterns of disclosure among youth. *Qualitative Social Work* 8(3): 341–356. doi:10.1177/1473325009337842
- Vloet, A., Simons, M., Vloet, T. D., Sander, M., Herpertz-Dahlmann, B., & Konrad, K. (2014). Long-term symptoms and posttraumatic growth in traumatised adolescents: Findings from a specialised outpatient clinic. *Journal of Traumatic Stress*, 27(5), 622-625. doi:10.1002/jts.21955
- Walsh, K., Koenen, K., Aiello, A., Uddin, M., & Galea, S. (2014). Prevalence of sexual violence and posttraumatic stress disorder in an urban African-American population. *Journal of Immigrant & Minority Health*, 16(6), 1307-1310. doi:10.1007/s10903-013-9840-6

- Wolfe, D. A., Sas, L., & Wekerle, C. (1994). Factors associated with the development of posttraumatic stress disorder among child victims of sexual abuse. *Child Abuse & Neglect*, 18, 37-50. doi:10.1016/0145-2134(94)90094-9.
- Wright, M. O. D., Crawford, E., & Sebastian, K. (2007). Positive resolution of childhood sexual abuse experiences: The role of coping, benefit-finding and meaning-making. *Journal of Family Violence*, 22(7), 597-608. doi:10.1007/s10896-007-9111-1
- Yonemoto, T., Kamibeppu, K., Ishii, T., Iwata, S., & Tatezaki, S. (2012). Posttraumatic stress symptom (PTSS) and posttraumatic growth (PTG) in parents of childhood, adolescent and young adult patients with high-grade osteosarcoma. *International Journal of Clinical Oncology*, 17(3), 272-275. doi:10.1007/s10147-011-0286-3
- Yoshida, H., Kobayashi, N., Honda, N., Matsuoka, H., Yamaguchi, T., Homma, H., & Tomita, H. (2016). Post-traumatic growth of children affected by the Great East Japan Earthquake and their attitudes to memorial services and media coverage. *Psychiatry & Clinical Neurosciences*, 70(5), 193-201. doi:10.1111/pcn.12379

Tables

Table 1

PTGI-C-R Item Frequencies

Item	<i>M</i>	<i>SD</i>	Range
1. I learned how nice and helpful some people can be.	2.0	1.25	0-3
2. I can now handle big problems better than I used to.	2.0	0.94	0-3
3. I know what is important to me better than I used to.	2.4	1.07	0-3
4. I understand how God works better than I used to.	1.6	1.35	0-3
5. I feel closer to other people (friends or family) than I used to.	1.9	1.45	0-3
6. I appreciated (enjoy) each day more than I used to.	2.2	0.79	1-3
7. I now have a chance to do some things I couldn't do before.	1.6	1.26	0-3
8. My faith (belief) in God is stronger than it was before.	2.0	1.25	0-3
9. I have learned that I can deal with more things than I thought I could before.	2.7	0.95	0-3
10. I have new ideas about how I want things to be when I grow up.	2.3	1.25	0-3
Total Score	20.7 0	6.20	12-28

Table 2

PTGI-SF Item Frequencies

<u>Item</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
1. I changed my priorities about what is important in life.	4.3	1.57	0-5
2. I have a greater appreciation for the value of my own life.	4.3	1.57	0-5
3. I am able to do better things with my life.	4.3	1.57	0-5
4. I have a better understanding of spiritual matters.	4.2	1.55	0-5
5. I have a greater sense of closeness with others.	4.9	0.32	4-5
6. I established a new path for my life.	4.6	0.70	3-5
7. I know better that I can handle difficulties.	4.8	0.42	4-5
8. I have a stronger religious faith.	3.6	2.01	0-5
9. I discovered that I'm stronger than I thought I was.	4.9	0.32	4-5
10. I learned a great deal about how wonderful people are.	3.9	1.73	0-5
Total Score	43.80	8.84	20-50