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ORIGINAL PAPER

Siblings of People Diagnosed with a Mental Disorder and Posttraumatic Growth

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Abstract This study examines the potential for posttraumatic growth (PTG) for siblings of persons diagnosed with a mental disorder. Using the posttraumatic growth Inventory we compared siblings (N = 33) with a comparison group of participants who did not experience trauma (N = 30). Our group of participants who had a sibling diagnosed with a mental disorder by a mental health professional (N = 33) reported higher PTG scores with mostly large effect sizes on most of the inventory subscales. Participants who took an active role in care giving experienced less PTG than participants who did not. Having a sibling diagnosed with a mental disorder presents an opportunity to experience PTG. Implications for the therapeutic milieus are discussed.

Keywords Siblings · Relatives · Mental disorder · Mental illness · Posttraumatic growth

Posttraumatic growth in siblings of people diagnosed with a mental disorder.

This study aims to explore whether the experience of having a sibling diagnosed with a mental disorder might be correlated with a positive outcome of posttraumatic growth despite the stressful nature of this experience.

Having a family member diagnosed with a mental disorder can be highly stressful and traumatic. One person describes the experience "This terrible illness colors everything—a family cannot escape" (Marsh et al. 1996, p. 1).

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Some of the negative outcomes include internalization of negative emotions or unhealthy escapes; self-censoring behaviors; self-isolation (Kinsella et al. 1996); sorrow; anger; envy; guilt; shame; grief; fears of possible mental illness heredity (Stalberg et al. 2004); premature maturity and survivor's guilt (Safer 2003).

The sorrow is so deep that some compare it to a grieving process (Marsh et al. 1996; Marsh and Johnson 1997). This grieving process is extremely painful and complicated when the "lost person" is physically present, thus creating a very lengthy grieving process (Jones 2004).

Some have suggested that due to the complexity of negative feelings, objective and subjective burden and a strong sense of shame, siblings become "secondary victims" of the mental illness and therefore require specialized professional care (Barak and Solomon 2005; Lukens et al. 2002).

Calhoun and Tedeschi (1999) defined posttraumatic growth (PTG) as "positive psychological change experienced as a result of the struggle with highly challenging life circumstances or traumatic events" (p. 1). Experiencing a traumatic event challenges one's cognitive schemas regarding important aspects of life and as a result might lead to appreciation of life, improved interpersonal relationships, a sense of personal strength, shift in priorities, and richer spiritual life (Tedeschi and Calhoun 2004). This challenge to core beliefs might result in negative beliefs, positive beliefs or both. Therefore, PTG is not always evident when dealing with stressful life events (Collins et al. 1990; Janoff-Bulman 1992; Tedeschi and Calhoun 1995).

Physical illness and even death of a family member or a close friend was found to be correlated with PTG (Davis et al. 2007; Thornton and Perez 2006; Weiss 2004).

The question arises whether mental illness also presents a similar opportunity for PTG for the well siblings? Studies

on relatives and siblings suggest that some of them might experience positive outcomes similar to PTG. For example, Marsh et al. (1996) discovered that while many relatives reported negative outcomes, they also reported personal strength that emerged as a result of this experience. Some felt that coping with the illness made them more compassionate. They learned to appreciate their lives and good health and found new perspectives and priorities. Kinsella et al. (1996) reports similar findings. Positive outcomes reported included independence or self reliance; the ability to create or to accomplish; empathy; resilience; assertiveness; spirituality and life perspective.

Based on these studies our first hypothesis is that siblings who have a brother or a sister diagnosed with a mental disorder will report more PTG compared with participants who did not experience a highly stressful event or trauma.

Previous studies teach us that not everyone who experiences trauma reports PTG. Following the model of Tedeschi and Calhoun (2004), researchers examined the predictors of PTG among relatives of those diagnosed with a serious illness and found that the level of posttraumatic symptoms, planful problem solving, positive reappraisal and accepting responsibility, all were correlated with higher levels of PTG (Loiselle et al. 2011).

Another similar construct to PTG, Stress Related Growth, was also found to be positively correlated with highly stressful events compared to moderately stressful events. (Armeli et al. 2001).

These findings support the assumption that simply learning to come to terms with mildly stressful event does not lead to as much growth as actively coping with traumatic events that are more stressful. Previous studies suggest that care giving has the potential to create a highly stressful experience for the relatives.

Interviews with families with a schizophrenic relative (Chen and Greenberg 2004) suggest that being a caregiver presents an opportunity for growth. Relatives reported increased sensitivity to persons with disabilities among other benefits. Barnable et al. (2006) found similar results. Siblings reported positive impact on relationships, compassion toward others, professional growth, and clarifying what is important in one's life. However, care giving also creates a variety of stressors for the relatives (Barak and Solomon 2005; Chen and Greenberg 2004; Marsh et al. 1996). Since care giving has the potential to create more stress for the relatives, and knowing that the more traumatic the event, the more potential for PTG, coupled with the studies that show that caring for a relative might lead to psychological growth, led us to our second hypothesis. We predict that siblings who were involved in caring for their diagnosed sibling will report higher levels of growth compared to those who were not involved in care giving.

Method

Participants

Thirty three participants, 18 years or older with a sibling diagnosed with a mental disorder by a mental health professional took part in the study. Participants younger than 18 years or participants who reported to be having a sibling with "problems" not diagnosed by a mental health professional were excluded from participating in the study. The sample consisted of 15 males and 18 females with an age range of 21–86 (M_{age} = 44, SD = 14.50). The majority of participants were Caucasian (80%). Ten percent identified as African-American and the other 10% identified as "Other". Participants on average spent 4.42 years living with the sibling after the diagnosis (SD = 6.64). For 20 participants (60%) the diagnosed sibling was older with an average age difference of 4.85 years (SD = 3.54), and for the other 13 participants (40%) it was a younger sibling who was diagnosed with a disorder with an average age difference of 5.15 years (SD = 3.07). Diagnoses included schizophrenia (60%), bipolar disorder (21%), and the other 19% included: Anorexia, mental retardation, borderline personality disorder, major depressive disorder, and generalized anxiety disorder.

Twenty seven participants (81%) were involved in caring for their sibling and six participants (19%) were not. Those who were involved in caring reported a variety of tasks which included visiting in the hospital; being a liaison with the mental health system and other family members; socializing with the siblings and helping them to socialize with others; taking care of immediate needs such as shelter, food, and finances.

Participants were asked to indicate whether they consider the experience of having a sibling diagnosed to have negative outcomes, positive outcomes, and to allocate 100 points between the positive and negative outcomes. All participants (100%) reported that the experience had negative outcomes with an average of 69 points (SD = 26.55). Only 22 participants (66%) reported that they considered the experience to have positive outcomes with an average of 31 points (SD = 26). Only seven participants (21%) considered the experience to have more positive outcomes than negative.

Procedure

The study was approved by the Institutional Review Board of Adelphi University. Recruitment and data collection started in July 2010 and ended in July 2011.

Due to the hidden nature of this population, a snowball sampling method described below was used to obtain the sample for this study.

Participants received through email a solicitation script inviting them to participate in the study. The majority of participants (84%, 28 participants) received the invitation through an email that was sent to acquaintances of one of the authors of the study who forwarded the invitation to all their acquaintances. The other 16% (5 participants) received the invitation through different mailing lists.

Comparison group participants were recruited in a similar snowball sampling method described above, and also through Adelphi University research subject pool.

Participants who expressed their interest in participating signed a consent form and completed a general questionnaire and the posttraumatic growth Inventory (see description below).

Participants did not receive monetary compensation for their participation.

Measures

Posttraumatic Growth Inventory (PTGI)

Tedeschi and Calhoun (1996) developed the PTGI, a scale that measures perceived benefits resulting from coping with traumatic events. The 21 items self-report scale requires participants to rate whether certain positive changes occurred in their lives as a result of their crisis. Each item is rated on a six-point Likert scale ranging from 0 to 5. Higher scores indicate stronger perceptions of PTG. The scale includes five factors. *Relating to others* (a range of 0–35) includes items such as "I more clearly see that I can count on people in times of trouble"; *New Possibilities* (a range of 0–25): "I developed new interests"; *Personal Strength* (a range of 0–20); *Spiritual Change*; and *Appreciation of life* (a range of 0–15). In this study we also used a PTG total score with a range of zero to 105 points.

The internal consistency of the scale is $\alpha = .90$ and for the five factors it ranges from .67 to .85. Test–retest reliability for the scale is .71 and for the factors it ranges from .65 to .74 with the exception of Personal Strength, .37, and Appreciation of Life, .47.

Discriminant validity was established by showing low correlation with social desirability scale. Concurrent validity was demonstrated through correlations with relevant traits such as optimism, extraversion, and openness among other traits. Tedeschi and Calhoun (1996) discovered that those who experienced trauma scored higher on the PTGI compared with the no trauma controls and thus established the scale's construct validity.

The participants reported whether the changes listed in the 21 items happened as a result of having a sibling diagnosed with a mental disorder. The comparison group participants who endorsed no trauma reported whether the changes listed in the scale happened as a result of what they considered to be the most traumatic experience that they had prior to the age of 18. These instructions are slightly different from the control group used to validate the PTGI. Tedeschi et al. (1996) asked participants that endorsed no trauma to respond to the 21 items based on their experiences in the last year. We asked participants in our comparison group to rate those items based on an event that they considered to be traumatic prior to the age of 18 in order to increase the likelihood of reported PTG even for the comparison group by asking to reflect on some traumatic event and allowing more time (prior to the age of 18) to experience PTG.

In the present study, internal consistency for the full scale across participants was excellent for both the group of participants who had a mentally ill sibling ($\alpha = .93$) and the comparison group ($\alpha = .94$).

General Questionnaire

The general questionnaire included items about demographics. Participants also reported if they were involved in caring for the mentally ill sibling. Those who were involved in caring were asked to elaborate on the ways in which they did so.

Data Analysis

One-way ANOVAs and bivariate Pearson correlations were used to examine whether age, gender, race, education level, income, or marital status had an impact on PTGI scores. Using a two-tailed *t* test, we compared each factor of the PTGI and the total score between the two groups. We also conducted a separate two-tailed t-test to examine whether siblings who were involved in caring reported elevated PTGI scores compared to those who were not involved in caring.

Results

There was no difference between the two groups in terms of their gender, age, and ethnicity.

Within the group of participants who had a mentally ill sibling, one-way ANOVAs did not indicate any statistically significant differences in PTGI scores based on gender, race (with the exception of African-Americans reporting more Spiritual Change than Caucasians), education level, income, or marital status. PTGI scores were also not significantly correlated with age.

Table 1 includes the scores for all five factors of the PTGI and total score. With the exception of Spiritual

Table 1 Participants with a mentally Ill sibling (N = 33) scores on PTGI total and five factors and mean difference compared to the comparison group (N = 30)

Domain	Group	*M*	SD	Mean difference
Relating to others	Mental illness	20.33	8.83	5.93*
	No mental illness	14.40	9.90	
New possibilities	Mental illness	14.55	6.45	6.04**
	No mental illness	8.50	6.97	
Personal strength	Mental illness	14.82	5.68	5.11**
	No mental illness	9.70	5.05	
Spiritual change	Mental illness	3.45	3.15	.25
	No mental illness	3.20	3.37	
Appreciation of life	Mental illness	10.45	3.63	3.78**
	No mental illness	6.67	4.63	
Total PTGI	Mental illness	63.61	23.27	21.13**
	No mental illness	42.47	24.67	

* $p < .05$; ** $p < .01$

Table 2 Participants who participated in caring (N = 27) scores on PTGI total and five factors and mean difference compared to the participants who did not participate (N = 6)

Domain	Group	*M*	SD	Mean difference
Relating to others	Caregivers	18.56	8.53	9.77**
	Not caregivers	28.33	5.24	
New possibilities	Caregivers	13.37	6.33	6.46*
	Not caregivers	19.83	4.07	
Personal strength	Caregivers	14.00	5.96	4.50
	Not caregivers	18.50	1.15	
Spiritual change	Caregivers	2.81	3.01	3.51**
	Not caregivers	6.33	2.06	
Appreciation of life	Caregivers	9.81	3.62	3.50*
	Not caregivers	13.33	1.96	
Total PTGI	Caregivers	58.56	22.51	27.77**
	Not caregivers	86.33	8.57	

* $p < .05$; ** $p < .01$

Change, t (61) = .30, $p > .05$, the group of siblings reported higher PTG scores compared with the comparison group on all factors and total score as follows: Relating to Others, t (61) = 2.51, $p < .05$, $d = .63$; New Possibilities, t (61) = 3.57, $p < .01$, $d = .90$, Personal Strength, t (61) = 3.75, $p < .01$, $d = .95$; Appreciation of Life, t (61) = 3.62, $p < .01$, $d = .90$; Total PTGI, t (61) = 3.49, $p < .01$, $d = .88$.

Table 2 includes the scores for both the group of participants who served as caregivers and the group of participants who did not perform any care giving duties on all five factors of the PTGI and their total score. With the exception of personal strength, t (31) = 1.18, $p > .05$, the participants who were *not* involved in care giving reported higher PTG scores compared with participants who acted as caregivers on all factors as follows: Relating to others, t (31) = 2.67, $p = .01$, $d = 1.20$; New possibilities, t (31) = 2.37, $p = .02$, $d = 1.07$, Spiritual change, t (31) = 2.70, $p = .01$, $d = 1.21$; Appreciation of life, t (31) = 2.28, $p = .02$, $d = 1.02$; Total PTGI, t (31) = 2.94, $p < .01$, $d = 1.32$.

Discussion

As predicted, participants who had a sibling diagnosed with a mental disorder reported higher PTG scores compared to participants in the comparison group. However, contrary to our initial hypothesis, participants who were involved in providing care to their siblings reported lower PTG scores compared with participants who did not act as caregivers.

The first finding is not surprising considering previous studies that consistently showed that PTG is the result of highly stressful and challenging events (Armeli et al. 2001; Loiselle et al. 2011). Research shows that experiencing growth facilitates adjustment and decreased distress post a traumatic event (Linley and Joseph 2004), which might serve both the well sibling and his or her diagnosed sibling, especially if the well sibling takes an active role in taking care of his diagnosed sibling.

Since our hypothesis about the relationship between PTG and care giving was not supported, we reviewed again the responses of the participants to the open-ended question about the nature of their care giving tasks. Analysis of the narratives indicates that few siblings found the task overwhelming. "He lived with me for 2 years and I had to pay for damages that he created"; "Trying desperately, and unsuccessfully, to get my parents to stop giving my sister money unless she saw a psychiatrist and stopped self-medicating"; "I was an active caretaker for my brother and since I was 12 years old I would go to visit him in the hospital. Even when my parents were mad at him and exhausted and did not want to go visit, I took it upon myself to visit him and to bring him the things that he needed and spend some time with him".

Perceiving a stressful event as a threat beyond one's coping capabilities decreases the likelihood of experiencing PTG, which might explains these findings (Cieslak et al. 2009).

If the care giving task is overwhelming, distancing oneself from this experience might help in creating new meanings and experiencing PTG.

In a study about daughters of battered women and PTG (Anderson et al. 2011), it was found that a crucial element of the growth process was distancing. In a study, surveying 746 siblings of schizophrenics (Friedrich et al. 2008) distancing was cited as an effective coping strategy.

Chen and Greenberg (2004) reported that while some families of schizophrenics reported gains from care giving, 40% of the families reported little or no gain. They found that predictors of perceived gains included receiving information about the illness and treatment from mental health professionals, and including the relatives in the therapeutic process. Our findings might indicate that these services are crucial to propel a process of PTG.

Including the siblings in the therapeutic process will not suffice if the mental health system will not acknowledge their needs. Barnable et al. (2006) suggest that acknowledging the struggle of the siblings and including them in the care plan is crucial.

Lukens et al. (2002) found that siblings report needing more information from mental health professionals that will include the relative but also their mental health needs.

Educating families might relieve the stress associated with care giving. 462 relatives of individuals with a mental disorder reported improvement in care giving satisfaction post a family-led education course (Pickett-Schenk et al. 2006). Experiencing personal gains from care giving drives siblings to assume the caregiver role when the parents are gone (Smith et al. 2007).

Limitations

Sample size, especially the size of the sample of participants who were not involved in caring (six), warrants replication with a larger sample size. Exploring the potential of caring to hinder PTG through possible mediators or moderators is also warranted. For example, experiencing a sense of mastery over the illness was found to be negatively correlated with stress (Baronet 1999). It might be positively correlated with PTG. Mastery and other variables including income, education, ethnicity, age, gender, and the type of mental illness can shed light on the nature of this observed relationship between caring and PTG. Larger samples will allow for the analysis of those variables and their impact on PTG.

Conclusions

This is the first study to date that demonstrated the potential for PTG among siblings of people diagnosed with a mental illness.

Therapists should actively help their clients to acknowledge and embrace the potential for PTG (Bannink 2008). This potential for growth seems to exist also for well siblings who are coping with mental illness in their family. Therapy can assist in making meaning out of this painful experience by facilitating cognitive processing including positive reinterpretation and planful problem solving, while allowing for some relief and emotional distance that might be needed to start acknowledging the possible psychological benefits of this important event.

Conflict of Interest None for any author.

References

Anderson, K. M., Danis, F. S., & Havig, K. (2011). Adult daughters of battered women: Recovery and posttraumatic growth following childhood adversity. *Families in Society, 92*(2), 154–160.

Armeli, S., Gunthert, K. C., & Cohen, L. H. (2001). Stressor appraisals, coping, and post-event outcomes: The dimensionality and antecedents of stress-related growth. *Journal of Social and Clinical Psychology, 20*(3), 366–395. doi:10.1521/jscp.20.3.366.22304.

Bannink, F. P. (2008). Posttraumatic success: Solution-focused brief therapy. *Brief Treatment and Crisis Intervention, 8*(3), 215–225. doi:10.1093/brief-treatment/mhn013.

Barak, D., & Solomon, Z. (2005). In the shadow of schizophrenia: A study of siblings' perceptions. *Israeli Journal of Psychiatry, 42*, 234–241.

Barnable, A., Gaudine, A., Bennett, L., & Meadus, R. (2006). Having a sibling with schizophrenia: A phenomenological study. *Research and Theory for Nursing Practice: An International Journal, 20*(3), 247–264. doi:10.1891/rtnp.20.3.247.

Baronet, A.-M. (1999). Factors associated with caregiver burden in mental illness: A critical review of the research literature. *Clinical Psychology Review, 19*(7), 819–841. doi:10.1016/S0272-7358(98)00076-2.

Calhoun, L. G., & Tedeschi, R. G. (1999). *Facilitating posttraumatic growth: A clinician's guide*. Mahwah, NJ: Erlbaum.

Chen, F. P., & Greenberg, J. S. (2004). A positive aspect of caregiving: The influence of social support on caregiving gains for family members of relatives with schizophrenia. *Community Mental Health Journal, 40*(5), 423–435. doi:10.1023/B:COMH.0000040656.89143.82.

Cieslak, R., Benight, C., Schmidt, N., Luszczynska, A., Curtin, E., Clark, R. A., et al. (2009). Predicting posttraumatic growth among Hurricane Katrina survivors living with HIV: The role of self-efficacy, social support, and PTSD symptoms. *Anxiety, Stress & Coping: An International Journal, 22*(4), 449–463. doi:10.1080/10615800802403815.

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*(3), 263–285.

Davis, C. G., Wohl, M. J. A., & Verberg, N. (2007). Profiles of posttraumatic growth following an unjust loss. *Death Studies, 31*(8), 693–712. doi:10.1080/07481180701490578.

Friedrich, R. M., Lively, S., & Rubenstein, L. M. (2008). Siblings' coping strategies and mental health services: A national study of siblings of persons with schizophrenia. *Psychiatric Services, 59*(3), 261–267. doi:10.1176/appi.ps.59.3.261.

Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York: Free Press.

Jones, D. W. (2004). Families and serious mental illness: Working with loss and ambivalence. *British Journal of Social Work, 34*(7), 961–979. doi:10.1093/bjsw/bch123.

Kinsella, K. B., Anderson, R. A., & Anderson, W. T. (1996). Coping skills, strengths, and needs as perceived by adult offspring and siblings of people with mental illness: A retrospective study. *Psychiatric Rehabilitation Journal, 20*(2), 24–32.

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress, 17*(1), 11–21. doi:10.1023/B:JOTS.0000014671.27856.7e.

Loiselle, K. A., Devine, K. A., Reed-Knight, B., & Blount, R. L. (2011). Posttraumatic growth associated with a relative's serious illness. *Families, Systems & Health, 29*(1), 64–72. doi:10.1037/a0023043.

Lukens, E. P., Thorning, H., & Lohrer, S. P. (2002). How siblings of those with severe mentalillness perceive services and support. *Journal of Psychiatric Practice, 8*(6), 354–364. doi:10.1097/00131746-200211000-00005.

Marsh, D. T., & Johnson, D. L. (1997). The family experience of mental illness: Implications for intervention. *Professional Psychology: Research and Practice, 28*(3), 229–237. doi:10.1037/0735-7028.28.3.229.

Marsh, D. T., Lefley, H. P., Evans-Rhodes, D., Ansell, V. I., & Doerzbacher, B. M. (1996). The family experience of mental illness: Evidence for resilience. *Psychiatric Rehabilitation Journal, 20*(2), 3–12.

Pickett-Schenk, S. A., Bennett, C., Cook, J. A., Steigman, P., Lippincott, R., Villagracia, I., et al. (2006). Changes in caregiving satisfaction and information needs among relatives of adults with mental illness: Results of a randomized evaluation of a family-led education intervention. *American Journal of Orthopsychiatry, 76*(4), 545–553. doi:10.1037/0002-9432.76.4.545.

Safer, J. (2003). *The normal one. Life with a difficult or damaged sibling*. New York: Bantam Dell.

Smith, M. J., Greenberg, J. S., & Mailick-Seltzer, M. (2007). Siblings of adults with schizophrenia: Expectations about future caregiving roles. *American Journal of Orthopsychiatry, 77*(1), 29–37. doi:10.1037/0002-9432.77.1.29.

Stalberg, G., Ekerwald, H., & Hultman, C. M. (2004). At Issue: Siblings of patients with schizophrenia: Sibling bond, coping patterns, and fear of possible schizophrenia heredity. *Schizophrenia Bulletin, 30*(2), 445–458.

Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma & transformation: Growing in the aftermath of suffering*. Thousand Oaks, CA: Sage Publications.

Tedeschi, R. G., & Calhoun, L. G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455–472. doi:10.1002/jts.2490090305.

Tedeschi, R. G., & Calhoun, L. G. (2004). Target article: "Posttraumatic growth: Conceptual foundations and empirical evidence". *Psychological Inquiry, 15*(1), 1–18. doi:10.1207/s15327965pli1501_01.

Thornton, A. A., & Perez, M. A. (2006). Posttraumatic growth in prostate cancer survivors and their partners. *Psycho-Oncology, 15*(4), 285–296. doi:10.1002/pon.953.

Weiss, T. (2004). Correlates of posttraumatic growth in husbands of breast cancer survivors. *Psycho-Oncology, 13*(4), 260–268. doi:10.1002/pon.735.