Coping Mediates The Relationship Between Gender and Posttraumatic Growth

Zarina Akbar\textsuperscript{a,b}, & Evelin Witruk\textsuperscript{a,}* \\
\textsuperscript{a} Department of Education and Rehabilitative Psychology, University of Leipzig, Germany  \\
\textsuperscript{b} Department of Psychology, Jakarta State University, Indonesia

Abstract

Posttraumatic growth was believed to be related with gender. Females tend to report greater levels of posttraumatic growth following the experience of traumatic event than males. Little study is known about associations between gender and posttraumatic growth. This research examined a relationship between gender and posttraumatic growth mediated by coping behaviour in disaster survivors. The samples consists of 100 survivors of affectedness natural disaster earthquake in Bantul district and volcano eruption in Cangkringan Sleman district in Yogyakarta Province Indonesia. Data were collected several years after disasters in 2013. The measurement instruments used for data collection had subscales on coping and post-traumatic growth level. The result showed that coping was significantly associated with posttraumatic growth. The relation between gender and posttraumatic growth mediated by coping behaviour. This result contributes more in literature to explain the relationship between gender and posttraumatic growth.

© 2016 The Authors. Published by Elsevier Ltd.
Peer-review under responsibility of Future Academy® Cognitive Trading

Keywords: Coping; Gender; Posttraumatic Growth; Disaster Survivors

1. Introduction

Disaster causes many destruction, affects population, and destroys infrastructure in a short time. Disaster survivors have to face not only physical injuries and economic losses, but also
need to cope with emotional reactions to the loss of livelihood, loss of loved ones, and displacement of homes. Disaster causes negative adjustment of survivors. Also positive changes following traumatic experiences (like natural disaster) are possible and typically manifest in increase appreciation of life, a sense of greater personal strength, improved relationship with others, and more integrated philosophy of life (So-kum, 2006).

Positive change is increasingly addressed within the broader trauma literature although less is known about positive change than negative sequelae following natural disasters. At least half of trauma survivors apparently may endorse some form of positive change, including survivors of natural disasters (Vazquez, Cervellon, Perez-Sales, Vidales, & Gaborit, 2001; Cryder, Kilmer, & Tedeschi, 2006). These positive changes and experiences are called posttraumatic growth (Tedeschi & Calhoun, 1995). Posttraumatic growth is the process of getting and maintaining perceived positive outcomes from a traumatic experience (Tedeschi, Park, & Calhoun, 1998).

Posttraumatic growth was believed to be related with gender in which posttraumatic growth is reported more by women than men in a number of studies (Park, Cohen, & Murch, 1996; Tedeschi et al., 1998; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003). Research from McMillen, Zuravin, & Rideout (1995) found that more than half of sexually abused women reported benefits, also reported perceptions of harm. Thus, growth and distress can be experienced by the same survivors. Females tend to report greater levels of posttraumatic growth following trauma than males. Why such an association exists remains unknown. A relationship between gender and growth following trauma have been documented in a number of studies (Park et al., 1996; Linley & Joseph, 2004; Swickert, DeRoma, & Saylor, 2004).

Coping behavior is believed to influence the development of posttraumatic growth. Coping is a process by which an individual manages the demands and emotions generated by that which is appraised as stressful (Lazarus & Folkman, 1984; McCammon, Durham, Allison, & Williamson, 1988). Strategies include appraisals of a stressful event and bestowing the situation with meaning, as opposed to the global meaning assessed when measuring levels of PTG (Folkman & Moskowitz, 2000). The process involves appraisals as to whether a situation is a threat, a challenge, or a loss, and perceptions of what can be done to alter the situation or minimise the threat. Following the initial appraisal of the situation, coping strategies are implemented (Lazarus & Folkman, 1984). As a mediating variable, coping can be considered a transactional process between individuals, the context, and post-trauma outcome. In general though, active coping tends to be associated with better long term adjustment than are strategies that involve avoidance or disengagement, a maxim that was generally confirmed by findings with respect to predictors of 9/11 related trauma symptoms, global distress, and psychological well-being (Butler, Blasey, Garlan, & McCaslin, 2005).
The post disaster environment and coping strategies of survivors (Karanci & A. carturk, 2005) are related to distress. Coping skills are also found to be related to growth. Park et al. (1996) found that there is a significant relationship between acceptance coping, positive reinterpretation and perceived growth. Moreover, studies reported that people, who use active coping strategies such as a problem-focused approach, can more easily handle stressful situations (Tedeschi et al., 1998). Posttraumatic growth was significantly correlated with the perceived severity of impact, perceived life threat, perceived social support, problem-focused coping, fatalistic coping, and helpless coping. The growth literature suggests that problem focused coping, positive reappraisal, and acceptance are positively related with growth.

Taking into consideration to explore the long-term consequences of natural disasters in Yogyakarta Province Indonesia, some questions are explored in this study. How did the people cope with the devastating disasters? What was the differences coping behavior between males and females? What was the relationship between coping behavior and posttraumatic growth? What was the relationship among gender, coping behavior, and posttraumatic growth? This study was designed to examine whether coping might mediate the relationship between gender and posttraumatic growth. The specific hypothesis of the study is that the relationship between gender and posttraumatic growth mediated by coping behavior for managing disaster traumatic experiences.

2. Methodology

2.1. Objective

This study examines the relationship between gender and posttraumatic growth mediated by coping behavior among disaster survivors in Yogyakarta Province Indonesia.

2.2. Participants and procedure

The research participant consists of 100 survivors of affectedness natural disaster earthquake in Bantul district and volcano eruption in Cangkringan Sleman district in Yogyakarta Province, Indonesia. For the period July-September 2013, a process data was collected. The participants were personally approached, given information about the purpose of the research, and invited to participate. Confidentially of information and its restricted use for research only were assured.

The participant was 35% male and 65% female. Fifty percent of study participants were survivors from the Bantul’s earthquake 2006 and 50% of the Merapi Eruption 2010. The educational background of the participants was no school 6%, elementary school 36%, junior high school 25%, senior high school 32%, and university 1%. The marital status was single 12%, married 82%, and widow/widower 6%. All participants were Muslim. Participant’s occupation
was labourer 19%, teacher 2%, housewife 31%, and others 48%.

2.3. Measures

The measurement instruments used for data collection had subscales on post-traumatic growth level and coping behavior.

Post-Traumatic Growth (PTG). Post-traumatic growth was assessed with the 21-items Post-Traumatic Growth Inventory (Tedeschi & Calhoun, 1996) that include aspects of perceptions of growth in relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. The Post-Traumatic Growth Inventory was developed to assess growth-related changes experienced by traumatized individuals. The 21-item scale yields a total score and five subscale scores: New Possibilities (5 items), Relating to Others (7 items), Personal Strength (4 items), Spiritual Change (2 items), and Appreciation of Life (3 items). For the present analyses only subscale scores were calculated. Participants read potential change items and rate them on a 6-point Likert-type scale, ranging from: “not at all” to “a very great degree.” The Post-Traumatic Growth Inventory has good internal consistency, and acceptable test-retest reliability, construct, convergent, and discriminant validity (Tedeschi & Calhoun, 1996).

Coping. Coping was assessed with a 26 items scale. These items were derived from 28 items of the Brief COPE Scale (Carver, 1997) and were selected based on their high factor loadings. Brief COPE includes subscales that assess different types of coping: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, emotional venting, positive reframing, planning, humour, acceptance, religion, and self-blame. Research participants were instructed to rate each item (1 = “I haven’t been doing this at all” to 4 = “I’ve been doing this a lot”) in relation to how they had “been coping with the stress in (their) life, including related to the disaster. Substance use were not examined in this research because of low factor loading analysis and related to culture bias. The Brief COPE has adequate internal reliability (Carver, 1997). Finally, coping aspects divided into approach and avoidance coping.

2.4. Results

Prior to addressing the hypothesis of the study, preliminary analyses was conducted. All variables for this research fulfilled the normality distribution criteria. To address the hypothesis of the study, multiple regression was conducted. The analyses showed that coping behavior positively predicts posttraumatic growth. Coping behaviour was divided into approach and avoidance coping. Approach coping positively predicts posttraumatic growth (standardized beta = 0.79; p = 0.00 < 0.05). Moreover, Avoidance coping positively predicts posttraumatic growth (standardized beta = 0.20; p = 0.00 < 0.05). For overall model (in table 1) gender and coping behavior accounted 89 percent of the variance in posttraumatic growth (R² = 0.89; F = 255.97; p
Result of these analyses showed that for all three variables, coping behaviors mediated the association between gender and posttraumatic growth.

Table 1. Multiple Regression Model with Posttraumatic Growth as Dependent Variable

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.658</td>
<td>3</td>
<td>3.553</td>
<td>255.971</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>1.332</td>
<td>96</td>
<td>.014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.991</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: PTG
b. Predictors: (Constant), APP, AVO, Gender

It was found also that there is a significant difference of posttraumatic growth in gender groups with \( p < 0.05 \). Female gender (means score = 3.98) has higher values in posttraumatic growth than male gender (means score = 3.78). Moreover, it was found that there is significant differences of coping behavior in gender group with \( p < 0.05 \). Approach coping was higher in female gender (mean score = 3.59) than males (mean score = 3.34). Avoidance coping was higher in female gender (mean score = 2.55) than males (mean score = 1.96). Based on this result, it was found that approach coping is significantly effective in females groups than males group.

Discussion/Conclusion

Based on the statistical multiple regression analysis, it showed that the relationship between gender and posttraumatic growth mediated by coping behavior. Gender differences have been reported in natural disaster traumatic experiences. Some evidence suggests gender patterns in the degree of reporting posttraumatic growth. Based on result in this research, it was found that women show higher levels of posttraumatic growth than men. Some explanation will be described about this result. A meta-analysis study of Vishnevsky, Cann, Calhoun, Tedeschi, and Demakis (2010) provides some explanation why women tend to have higher levels of posttraumatic growth than men. One possible factor is the tendency for women to engage in deeper thought than men. Negative deep thought has also linked to higher reports of depression in women. However, a recent study found that women are engaged in significantly more deliberate (productive and contemplative) and negative deep thought. The tendency to think deeply on constructive issues, such as an increased awareness of personal strengths or an appreciation of the importance of social connections, has been suggested as a mechanism leading
to greater reports of posttraumatic growth. Several studies provide evidence to this association. Thus, to the extent that women may engage in deeper thought of any type traumatic experience, they may recognize more benefits through their efforts to cope with traumatic experiences and report greater levels of posttraumatic growth, particularly if they carry more reflective/deliberate thought.

It has highlighted the importance of coping in facilitating posttraumatic growth. Researchers have speculated that both biology and socialization processes help to explain the differential use of coping strategy by females and males. Taylor, Klein, Lewis, Gruenwald, Gurung, & Updegraff (2000) identify a physiological pathway that apparently influences females’ support seeking behaviour during times of stress. They point to the hormone of oxytocine combined with other female reproductive hormones as the contributing factor of females’ need to “tend-and-befriend” as a response to environmental stressors. This tendency toward relationship is believed to have an adaptive advantage for females as well as their young indicating that there is a network of support available to them during the times of stress. The socialization processes also are believed to play a role in explaining the differential use of social support to females and males. Females are expected and encouraged to turn to others for help and support when coping with problems. However, support-seeking behaviour on some males is often discouraged because it is perceived to signify weakness. Based on these socialization expectations, females are more likely to seek out others when dealing with stressful or traumatic experiences than males. There is an association between seeking help as a coping strategy and positive outcomes (Swickert & Hittner, 2009).

Some research also reported that women are mostly higher in posttraumatic growth levels than men (Curbow, Legro, Baker, Wingard, & Somerfield, 1993; Park et al., 1996; Widows, Jacobsen, Booth-Jones, & Fields, 2005). These findings are in accordance with research on gender and coping. It appears that women tend to use more positive reappraisal and positive self-talk compared to men (Tamres, Janicki, & Helgeson, 2002; Park et al., 1996), despite their experience of greater stress in response to difficulty (Anderson & Manuel, 1994; Rausch, Auerbach, & Gramling, 2008). In addition, Tamres et al (2002) highlight a gender differences in coping between males and females with females are predominantly engaged in more adaptive or “expressive” types of coping strategies. This concept was explored by examining the association between adaptive and maladaptive coping strategies with post-trauma adjustment, and testing for potential gender differences within the sample. Implications for this research offer further highlight the needs for addressing posttraumatic growth. Finally this result contributes more in literature to explain the relationship between gender and posttraumatic growth.
Acknowledgements

The first author wishes to acknowledge to Prof. Dr. Evelin Witruk Department of Education and Rehabilitative Psychology University of Leipzig Germany for her kindly supervision in this study and The Higher Education Ministry of Education Indonesia for providing author the scholarship to pursue a Ph.D degree. The author gratefully acknowledge to all those who participated in this study, all members of Department of Education and Rehabilitative Psychology University of Leipzig, and colleagues in Department of Psychology Jakarta State University Indonesia.

References


