Association between benefit-finding and identity development in adolescence: are there benefit-finding domains related to high identity achievement?

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ABSTRACT
In this study, the association between extracting benefits from negative experiences and identity development was explored by focusing on differences in benefit-finding domains. Participants (508 undergraduates) recalled a past event they considered to be the most influential in terms of creating their current identity, regardless of whether the event was negative or positive, and then completed the Centrality of Event Scale, Identity Scale, and items regarding benefit-finding. Consequently, the benefit-finding domain of 'personal growth' and the pattern of extracting sufficient benefits in various different domains were determined to be associated with high identity achievement. Furthermore, it was also suggested that negative experiences result in higher identity achievement than positive experiences, provided sufficient benefits are successfully extracted from various different domains.

Introduction

Benefit-finding, a meaning-focused form of conducting cognitive coping in regard to negative, stressful events (Folkman, 2008), refers to individuals’ perceiving personal growth and positive life changes by performing re-evaluations and deriving positive meanings from negative events (Gao et al., 2014). Research has reported such benefit-finding in individuals with various adversities, such as a breast cancer (e.g. Antoni et al., 2001), colorectal cancer (Rinaldis, Pakenham, & Lynch, 2010), and bereavement (e.g. Cadell, Regehr, & Hemsworth, 2003). Although it generally takes approximately two years for individuals to attach positive meanings to negative, stressful events (Helgeson, Reynolds, & Tomich, 2006), successful benefit-finding eventually leads to positive physical and psychological consequences, whereas failure to derive benefits is associated with symptomatology.

It seems that when a negative event becomes central to one's life story and identity, benefit-finding becomes likely, as it creates a buffer against the adverse effect of the event in question and helps the individual to maintain a healthy identity. In recent years, it has become possible to measure the concept of event centrality, which describes the degree to which life events become a central part of one's life story and identity; this can be conducted using the Centrality of Event Scale (CES) developed by Berntsen and Rubin (2006). The centrality of such negative events is considered an indicator of the magnitude...
of the impetus a person experiences to find meaning in the distressing life event’ (Bellet, Neimeyer, & Berman, 2016, p. 14), and high CES scores for negative events have been found to predict adverse effects on individuals’ health (Berntsen & Rubin, 2007; Boals, Hayslip, Knowles, & Banks, 2012). For example, in a study of young adults who experienced a breakup or major conflicts in regard to romantic relationships, it was found that, not just the experience of the romantic conflict and/or breakup, but the high levels of event centrality associated with these experiences predict later depressive and posttraumatic stress disorder (PTSD) symptoms (Boals, 2014). However, adaptively attaching new meaning to the event mediates the relationship between negative-event centrality and PTSD; that is, reconstructing the meaning of and finding benefits from negative events that are central to identity can mitigate or nullify the adverse effects of these events (Bellet et al., 2016). In line with previous research, a recent study on adolescents found that the more central to identity past negative events are, the more benefits are drawn from the events, which in turn leads to higher identity achievement (Watanabe, 2017).

Although several benefit-finding domains have been identified thus far in existing research, mainly through quantitative and qualitative clinical studies, the differences in these domains have rarely been considered when examining the relationship between event centrality, benefit-finding, and identity achievement. Tedeschi and Calhoun (1996) developed a general measure for perceived growth and the benefits caused by various traumatic events; this contains five dimensions of benefit: relating to others, new possibility, personal strength, spiritual change, and appreciation of life. Moreover, Rinaldis et al. (2010) who, using both questionnaire and telephone interviews, investigated the types of benefits derived by individuals with colorectal cancer, identified the three benefit-finding domains: personal growth, interpersonal growth, and acceptance. Additionally, benefit-finding in the domains of acceptance of life’s imperfections, recognition of other people’s roles in one’s life, and development of a sense of purpose have been examined in relation to the effect of cognitive-behavioral stress management technique (Antoni et al., 2001), and Chiba, Kawakami, and Miyamoto (2011) investigated the relationship between the recovery process of Japanese people with chronic mental illness and benefit-finding in the domains of perceived changes in self, a changed sense of relationships with others, and a changed philosophy of life.

Despite the above identification of benefit-finding domains, only the recent study of Watanabe (2017) has attempted to compare them; the researcher consequently found that benefit-finding in the domain of ‘attaching positive meaning to personal growth,’ but not in ‘recognizing warmth in others,’ buffers against adverse influences of negative events and promotes identity achievement in late adolescents. This result suggests that the mere recognition of warmth in others is not enough to bring about identity development, because changes in self-schema through the process of seriously thinking how the previous negative events in question have affected an individual’s sense of self are necessary to self-development. However, Watanabe’s study only addressed the two above-mentioned domains and, therefore, it is not yet clear whether benefit-finding relevant to personal growth is the only promoter of identity achievement. Furthermore, although it is possible that several different benefits can be obtained from the same event, it also remains unknown whether there is a particular benefit-finding domain combination that is associated with high identity achievement.

In addition to the lack of exploration of the role of each benefit-finding domain in the relationship between event centrality and identity achievement, the question of how strongly benefit-finding is associated with identity achievement (specifically, the question of whether the identity achievement level of individuals who both experienced a negative event and subsequent sufficient benefit-finding is comparable to that of counterparts who have high positive-event centrality) has also not been investigated to date. It is not only negative events that can be triggers for personal development and become central to identity, positive events can also perform this function, provided the positive experiences in question challenge one’s existing schemas (Tedeschi & Calhoun, 2004). As a matter of fact, there are studies reporting that, regardless of cultural differences, positive events are equally, or even more central, to an individual’s identity than negative events (e.g. Scherman, Salgado, Shao, & Berntsen, 2015). The identity achievement level of individuals who place positive events most central to identity has not been virtually studied and discussed; this is because CES scores for positive events are generally related
to adaptive variables such as life satisfaction but not symptomatology (Boals, 2010), and also because the CES was originally developed to measure stressful or traumatic event centrality (Berntsen & Rubin, 2006). Nevertheless, besides being associated with adaptive variables, high positive-event centrality has been observed to be a result of performing self-reflective cognitive activities that promote identity development and, therefore, placing positive events most central to identity can be predicted to be linked to high levels of identity achievement. Thus, conducting a comparison of the identity achievement level of individuals who put negative events most central to identity (with/without subsequent sufficient benefit-finding) and that of those with positive-event centrality would provide us with some suggestions that can further our understanding of the meanings of benefit-finding in terms of healthy identity development in adolescence.

Considering the above, the present study examines the relationship between event centrality, benefit-finding, and identity achievement by focusing on differences in the benefit-finding domain and also by including individuals with high positive-event centrality as a comparative group. Establishing identity requires the development of the ability to conduct self-reflection (Tatum, 2000), and identity achievement level represents the degree of one’s understanding of the meaning of the self, which is obtained through active exploration (Ghavami, Fingerhut, Peplau, Grant, & Wittig, 2011). Therefore, with regard to the benefit-finding domain, it is predicted that individuals who derive benefits mainly related to internal or personal changes and growth will show a higher identity achievement level than those who find benefits in other domains. Moreover, in the present study, exploratory examinations are performed in cases where certain combinations of benefit-finding domains appear to be associated with high identity achievement. Further, regarding the level of identity achievement of individuals who experienced a negative event and then attached positive meanings to it, based on the aforementioned buffering effect of benefit-finding (e.g. Bellet et al., 2016), it is hypothesized that individuals who derive sufficient benefits from negative events most central to their identity will show a higher level of identity achievement than those who are unable to attach any positive meanings to their previous negative experience, and that the former will show a comparatively lower level of identity achievement than those with high positive-event centrality.

Finally, according to McFarland and Alvaro (2000), negative events do not necessarily need to be traumatic for individuals to derive some benefits related to personal growth; thus, general negative events will also be included in this study.

**Method**

First, this study was approved by Doshisha University Ethics Committee for Scientific Research Involving Human Subjects. A letter of informed consent regarding participation in the study was completed by each participant after they had read a description of the study and the data-processing procedure.

**Participants**

A total of 508 Japanese undergraduates (259 men, 247 women, and two participants who did not disclose their sex, $M = 20.20 \pm 1.07$ years, range = 18–24 years) voluntarily participated in the study, receiving extra course credit in a psychology class.

**Measures**

Level of identity achievement was initially assessed using the Japanese Identity Scale (Shimoyama, 1992), which features 10 items (e.g. ‘I can trust myself completely,’ ‘I can decide my own future,’ and ‘I have a coherent sense of self’). Participants were asked to indicate their level of agreement with each item using a four-point scale (1 = *strongly disagree*; 4 = *totally agree*). The overall identity achievement score was based on the sum total of all item scores, meaning the possible range of scores was 10–40 ($\alpha = .87$).
Participants were then asked to recall and write down the past event or series of events, regardless of whether the events were negative or positive, that most influenced their current identity. It should be noted that the same event can vary in meaning between individuals (e.g. ‘parents’ divorce’ is not always considered a negative event). Therefore, participants were asked to provide precise descriptions (as far as they were comfortable discussing) of the events they mentioned, and also to indicate the age they were when the event was experienced.

Then, the short Japanese version of the CES (Berntsen & Rubin, 2006; Rubin & Berntsen, 2008) was used to measure the event centrality. Although the CES was originally developed to assess the centrality of negative events, in recent studies the CES has been used to measure positive-event centrality (e.g. Berntsen, Rubin, & Siegler, 2011; Boals, 2010; Scherman et al., 2015). This scale is composed of seven items, such as, ‘I feel that this event has become part of my identity,’ ‘This event has become a reference point for the way I understand myself and the world,’ and ‘This event was a turning point in my life.’ Keeping in mind the past event(s) they noted, participants rated each item using a five-point scale (1 = totally disagree; 5 = totally agree). CES scores were then calculated by summing the seven item scores (α = .82); thus, the possible range of scores was 7–35.

In terms of benefit-finding, in order to cover various benefit-finding domains that are commonly and frequently indicated in prior studies, previous scales were reviewed and 28 items relating to six domains (developing a sense of purpose in life, awareness of the role of other people in one’s life, personal growth, interpersonal growth, acceptance, and recognizing warmth in others) were chosen. This selection was made by ensuring that the items could be applied to both traumatic and general negative events, and also that overlapping items were avoided (Antoni et al., 2001; Phipps, Long, & Ogden, 2007; Rinaldis et al., 2010; Takeuchi & Fujii, 2015). The original English items were translated into Japanese and then back-translated into English by two bilingual psychologists; when there were conceptual discrepancies between the original and translated items, the psychologists held careful discussions until they reached a consensus. Considering the benefits derived from the recalled past events, participants indicated their degree of agreement with each item using a seven-point scale (1 = totally disagree; 4 = neither; 7 = totally agree). The mean scores for the items within each benefit-finding domain were then determined, with the possible ranges of scores being 1–7.

Results

First, 15 individuals who provided incomplete data were excluded from the analysis, leaving a final sample of 493 individuals. Then, two psychologists coded each indicated event into two categories: positive or negative. The overall kappa coefficient for agreement between the two coders was .96 (.88 for positive events and .97 for negative events). When the two coders classified an event into different categories, they held carefully discussions until they reached consensus. As a result, 145 (29.41%) items were classified as positive events (e.g. having a wonderful encounter with friends, passing a dance audition, winning a national meet) and 348 (70.59%) as negative events (e.g. breakup of romantic relationship, father’s death, being bullied).

Regarding the 28 items concerning benefit-finding, because, in the present study, the definition of benefit-finding is meaning-focused coping with negative events (Folkman, 2008), exploratory factor analysis was performed on the data of individuals who recalled negative events. One benefit-finding item (‘this event has made me have greater appreciation for life and my family’) was excluded from analysis due to a spelling error in the questionnaire; therefore, 27 benefit-finding items advanced to factor analysis, which was conducted using the principal components method and promax rotation. The results consequently revealed five factors with eigenvalues above 1: (a) personal growth, (b) greater insight into an intimate relationship, (c) enhanced sensitivity toward family, (d) increased awareness of other people’s perspectives, and (e) importance of loving others. These five extracted factors accounted for 59.32% of the total variance. Items with factor loadings above .40 were determined to load on a particular factor. Cronbach’s alphas, which were calculated to examine the internal consistency, were all above .70. Table 1 shows the analyzed 27 benefit-finding items and the factor loadings of each.
mentioned, the items used in this study were selected from several scales targeting individuals with various adversities; thus, the extracted benefit-finding domains were not completely consistent with the predicted domains, but similar to those found in previous studies.

The result of a meta-analytic review by Helgeson et al. (2006) suggested that relationships between benefit-finding and psychological outcomes are influenced by the period of time that has elapsed since the event, with the two-year mark representing a notable threshold; this is because it is not easy for individuals to attach positive meanings and show personal growth soon after experiencing a negative
event. To examine if there are differences in benefit-finding in terms of the amount of time since the event, $t$-tests were performed between participants who had experienced their event within the previous two years ($n = 181, M = 1.27 \pm 0.75$ years) and those who had experienced their event more than two years ago ($n = 312, M = 5.65 \pm 2.63$ years). As a result, no significant differences in all mean factor scores concerning benefit-finding in regard to the amount of time since the event were found, and, therefore, this variable was not considered in the subsequent analyses.

Pearson correlations concerning the study variables are presented in Table 2. Identity achievement scores were found to be more than moderately correlated with the factor scores for benefit-finding for all domains, except the enhanced sensitivity toward the family domain. In particular, factor scores for the benefit-finding domain of personal growth were determined to be strongly correlated with identity achievement. Further, a moderate positive correlation between CES and identity achievement was found in participants who recalled a positive event, whereas participants who recalled a negative event showed weak correlation between CES and identity achievement.

Next, to explore whether there is a combination of benefit-finding domains associated with high identity achievement, hierarchical cluster analysis using Ward’s method was performed, based on the factor scores concerning benefit-finding; this was in order to determine the patterns of the extracted benefits. As a result, five clusters emerged in the dendrogram generated for estimating the number of likely clusters. Table 3 shows the means and standard deviations of the factor scores for the benefit-finding domains in terms of each cluster.

To clarify the characteristics of each cluster, the differences in the factor scores for each benefit-finding domain were analyzed using a one-factor analysis of variance (ANOVA), with the effect of cluster as the between-participants factor; the results consequently showed significant cluster differences in the domain of personal growth, $F(4, 343) = 63.54, p < .001, \eta^2_p = .43$. Further, through Bonferroni-corrected post hoc paired comparisons, scores for the 1st and 4th clusters were found to be lower than those of the other three clusters, while the score for the 5th cluster was higher than those of the other four clusters ($ps < .001$); there were no other differences between the clusters. Regarding the domain of greater insight into an intimate relationship, the main effect of cluster was determined to be significant, $F(4, 343) = 104.12, p < .001, \eta^2_p = .55$. Participants in the 5th cluster had the highest score, and those

Table 2. Intercorrelations between the Study Variables.

| Variables                      | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|--------------------------------|------|------|------|------|------|------|------|
| 1. Personal growth             |      |      |      |      |      |      |      |
| 2. Greater insight into an intimate relationship | .57** |      |      |      |      |      |      |
| 3. Enhanced sensitivity toward family | .32** | .36** |      |      |      |      |      |
| 4. Increased awareness of other people’s perspectives | .60** | .47** | .38** |      |      |      |      |
| 5. Importance of loving others | .59** | .61** | .44** | .56** |      |      |      |
| 6. Event centrality            | .47** | .23** | .35** | .29** | .24** |      | .38** |
| 7. Identity achievement        | .47** | .30** | .11* | .37** | .33** | .18* |      |

Notes: The upper five variables, from ‘personal growth’ to ‘importance of loving others,’ represent benefit-finding domains. Intercorrelations for the participants who recalled negative events are presented in the columns, and those for the participants who recalled positive events are presented in the rows. *$p < .05$; **$p < .01$.

Table 3. Means (SDs) of the Factor Scores of the Benefit-Finding Domains, Categorized in Terms of Cluster.

| Benefit-finding domains                              | 1 (n = 25) | 2 (n = 137) | 3 (n = 79) | 4 (n = 70) | 5 (n = 37) |
|-----------------------------------------------------|------------|-------------|------------|------------|------------|
| Personal growth                                     | 4.21 (0.84) | 5.22 (0.72) | 5.24 (0.72) | 3.92 (1.10) | 6.21 (0.50) |
| Greater insight into an intimate relationship       | 3.66 (1.41) | 4.66 (1.10) | 4.90 (0.89) | 2.46 (0.90) | 6.19 (0.73) |
| Enhanced sensitivity toward family                   | 5.28 (1.30) | 4.80 (1.02) | 2.54 (0.90) | 2.03 (1.01) | 6.04 (0.82) |
| Increased awareness of other people’s perspectives  | 1.77 (0.64) | 4.30 (1.07) | 3.33 (1.06) | 2.39 (1.01) | 5.80 (0.65) |
| Importance of loving others                         | 2.11 (1.05) | 4.43 (1.11) | 3.95 (1.26) | 2.06 (0.94) | 5.62 (0.91) |
in the 4th cluster had the lowest (ps < .001); furthermore, the scores for the 2nd and 3rd clusters were higher than that of the 1st cluster (ps < .001). There was also a significant main effect of cluster in the domain of enhanced sensitivity toward family, $F(4, 343) = 181.61$, $p < .001$, $\eta_p^2 = .68$. Here, the score for the 4th cluster was lowest and the score for the 5th cluster was the highest; additionally, the scores for the 1st and 2nd clusters were higher than that of the 3rd cluster (ps < .001). Finally, in the two domains of increased awareness of other people’s perspectives and importance of loving others, the same significant cluster differences were observed, $F(4, 343) = 109.92$, $p < .001$, $\eta_p^2 = .56$, and $F(4, 343) = 96.89$, $p < .001$, $\eta_p^2 = .53$, respectively. Participants in the 1st and 4th clusters had the lowest scores and those in the 5th cluster had the highest scores. Furthermore, individuals in the 2nd cluster had higher scores than those in the 3rd cluster (ps < .001).

Considering the characteristics of each cluster, the 1st cluster was named the ‘moderate in the family domain’ group, since factor scores in the domain of increased sensitivity toward family were relatively higher than in the other clusters. The 2nd cluster was named the ‘moderate in all domains’ group, since all scores were neither too high nor too low relative to those of the other clusters. The 3rd cluster was named the ‘moderate in certain domains’ group, since scores for the three domains of enhanced sensitivity toward family, increased awareness of other people’s perspectives, and importance of loving others were lower than the absolute value of 4, indicating that benefits were not sufficiently found in these three domains. Compared with the other clusters, the overall benefit-finding domain scores of the 4th cluster were lower and did not reach the absolute value of 4; therefore, this cluster was described as the ‘no benefits’ group. Finally, since the 5th cluster was characterized by the highest benefit-finding scores across domains, this cluster was identified as the ‘high in all domains’ group.

Table 4 shows the means and standard deviations of the event centrality and identity achievement scores of each group, which were obtained through cluster analysis, and the comparative group with positive-event centrality.

| Variables          | Groups based on extracted benefits | Positive-event centrality |
|--------------------|-----------------------------------|--------------------------|
|                    | Moderate in the family domain     | Moderate in all domains  |
| Event centrality   | 25.36 (5.26)                      | 26.64 (4.32)             |
| Identity achievement | 25.16 (5.30)                      | 28.34 (5.23)             |
|                    | Moderate in certain domains       | 24.46 (4.49)             |
| Identity achievement | 28.09 (4.62)                      | 25.43 (5.91)             |
| No benefits        | 23.20 (5.93)                      | 25.35 (4.04)             |
| Identity achievement | 28.08 (4.68)                      | 28.09 (4.74)             |
| High in all domains | 29.35 (4.04)                      | 27.56 (4.47)             |

Differences in event centrality and identity achievement were explored using a one-way ANOVA, with the effect of group (6: moderate in the family domain, moderate in all domains, moderate in certain domains, no benefits, high in all domains, and comparative group with positive-event centrality) set as the between-participants factor. Regarding the CES scores, there was a significant main effect of group, $F(5, 487) = 14.15$, $p < .001$, $\eta_p^2 = .13$. Further, Bonferroni-corrected post hoc paired comparisons showed that scores for the moderate in certain domains group and the no benefits group were lower than those for the moderate in all domains group, high in all domains group, and the comparative group (ps < .05). Furthermore, scores for the moderate in the family domain group and moderate in all domains group were lower than those for the high benefits in all domains group (ps < .05). With regard to identity achievement, significant group differences were found, $F(5, 487) = 10.52$, $p < .001$, $\eta_p^2 = .10$. The individuals in the high in all domains group showed the highest identity achievement scores (ps < .001). In addition, the scores of the comparative group with positive-event centrality were higher than those of the moderate in the family domain group and no benefits group (ps < .05). Finally, the moderate in all domains group and the moderate in certain domains group showed higher identity achievement scores than the no benefits group (ps < .05).
Discussion

The purpose of this article is to investigate the relationship between event centrality, benefit-finding, and identity achievement, mainly in terms of differences in benefit-finding domain, in order to gain a further understanding of healthy self-development processes.

As a whole, in this study the only factor scores of benefit-finding to reach the absolute value of 4 were those in the domains of personal growth and greater insight into an intimate relationship, which means that, for the participants, the other three domains (enhanced sensitivity toward family, increased awareness of other people’s perspectives, and importance of loving others) are less likely to present benefits. This may be in part due to the inclusion in the latter three domains of items relevant to the concept of generativity: a sense of caring for others and the next generation and contributing to the world (Erikson, 1963). In middle adulthood, issues of generativity are emphasized as developmental tasks (Erikson, 1963), and this may have contributed to adolescents’ insufficient extracting of benefits in these three domains. However, of course, this result does not directly mean that benefits relating to these three domains will never be derived from the indicated event in the future; it merely suggests the possibility that, when individuals try to attach some positive meanings to a past negative event, benefits in different domains are not necessarily extracted equally and simultaneously. The attachment of positive meanings might depend on various subjective and objective variables, such as the content of the negative event and the individual’s present situation and their characteristics and resources; therefore, only finding benefits in event-specific or self-related domains seems to be reasonable in a sense. In fact, although negative experiences are normally associated with lower identity development (e.g. Scott et al., 2014), such a negative relationship between negative-event centrality and identity achievement was not observed in the present study, indicating that deriving benefits in a certain number of domains might be enough to experience the buffering effects of benefit-finding.

Benefits related to personal growth and identity development

It was hypothesized that identity achievement is more strongly correlated with benefit-finding relating to internal or personal changes and growth than benefits in other domains. When considering the results of the correlation analysis, identity achievement level was found to be more than moderately correlated with benefit-finding in all extracted domains, except the enhanced sensitivity toward family domain. Specifically, identity achievement showed a strong positive correlation with benefit-finding in the personal growth domain, which is consistent with the hypothesis and the result of a previous related study (Watanabe, 2017).

From the perspective of narrative identity, identity has been conceptualized as a collection of autobiographical memories (Berntsen & Rubin, 2002), and is believed to be established or changed when individuals engage in autobiographical reasoning (McAdams, 2008). Autobiographical reasoning is a reflective-thinking process associated with rethinking personal past events and connecting the present self with one’s past and future (e.g. McLean & Pasupathi, 2012); in short, identity development itself generally relates to a process of creating meanings for past experiences and the self (Gillies & Neimeyer, 2006; McLean & Pasupathi, 2012). Given that benefit-finding, besides the practice of autobiographical reasoning, includes attaching positive meanings or extracting useful lessons from past negative experiences, it is easy to assume that extracting benefits, especially those related to personal growth, help to promote identity achievement.

Unexpectedly, it was also found that becoming more sensitive to family members or issues was almost nothing to identity achievement, which does not conform with the view that late adolescents’ reconsidering and reconstructing of their relationships with family members is a key promoting factor of identity formation (Kroger, 2000). This result might be related to differences in the trigger for reconsidering family relationships. During late adolescence and emerging adulthood, the developmental tasks are identity formation and intimacy (Erikson, 1963), with the identity development during these periods being associated with establishing intimate romantic relationships or close friendships (e.g.
Barry, Madsen, Nelson, Carroll, & Badger, 2009). That is, reconsidering relationships with family members as a result of shifting priority to intimate romantic relationships leads to adolescents’ identity development. As benefit-finding in the domain of enhanced sensitivity toward the family was found to be instigated as part of coping behaviors and not to originate in changes in the priority of interpersonal relationships, this study’s findings do not support the view of Kroger (2000). However, why only family-related benefit-finding was not associated with identity achievement remains unexplained; thus, further research is obviously needed.

**Combination of benefit-finding domains and identity achievement**

The present study also explored whether there is a certain combination of benefit-finding domains that is closely linked with high identity achievement. As mentioned earlier, in the two domains of personal growth and greater insight into an intimate relationship, benefits are likely to be derived from past negative events as a whole; however, several combinations patterns were observed with a common pattern of deriving moderate benefits from all domains. In general, individuals who experience highly emotional negative events and consider them to be central to their identity are more likely to find benefits that can help them cope with and adjust to the situations caused by these experiences (Bellet et al., 2016); however, this study also included general negative experiences because traumatic events are not a prerequisite for identity development (McFarland & Alvaro, 2000). It is probable that not being limited to traumatic or extremely stressful events contributes to this common pattern of ‘moderate’ benefit-finding.

It was also found that individuals with high benefits in all five extracted domains showed the highest identity achievement, and that those with no benefits showed the lowest level. This supports the study hypothesis, and is quite logical when considering the functions of benefit-finding. In terms of identity development, the current data suggests that best practice is to find substantial benefits in various different domains. Then, how can some adolescents extract benefits from all domains? Are there any variables that make it easier to extract benefits from various different domains? In studies on the self-memory system (Conway & Pleydell-Pearce, 2000; Conway, 2005), the relationship between the working self and autobiographical memory has been suggested to be reciprocal. According to Conway (2005), in the functions of the working self, which is composed of current active goals and conceptual self-knowledge, specific autobiographical information related to both goals and self-images is likely to be activated and retrieved. In other words, autobiographical memories influence identity, but it is also true that current identity influences memories. Identity achievement has consistently been found to be associated with psychological well-being and adaptation (e.g. Waterman, 2007); thus, the participants who showed a high level of identity achievement could have been more likely to focus on positive aspects of their past negative experiences and to extract benefits from them.

However, the findings also demonstrated that there were no identity differences between individuals with moderate benefits in all domains and those with moderate benefits in certain domains, implying that if benefits related to personal and interpersonal growth are found, extracting benefits in other domains has little relation to identity achievement. This may contradict the above-suggested desirability of extracting various types of benefits in order to achieve identity development; however, it remains unclear whether this result can be obtained only when moderate benefits related to personal and interpersonal growth are found, or if it can also be observed in people who extract substantial benefits from these two domains. Therefore, considering this gap in information, it seems to be premature to make conclusions based on this somewhat vague result. By focusing on the question of whether the same result can be consistently observed between other combinations of benefit-finding domains, future research should investigate if the special importance of conducting benefit-finding associated with both personal growth and greater insight into an intimate relationship can be verified.
Comparison of identity achievement level between the sufficient benefits-finders and individuals with positive-event centrality

Finally, because positive-event centrality is not a mere reflection of one’s good experiences, but rather the outcomes of having engaged in self-reflective activities concerning these experiences (Tedeschi & Calhoun, 2004), this study hypothesized that individuals with positive-event centrality show higher identity achievement levels than those who derived sufficient benefits from a negative event they considered to be central to their identity. Unexpectedly, although there was no difference in CES scores concerning the indicated event between the high in all domains group and the comparative group, the result regarding identity achievement was quite the opposite of the hypothesis. This indicates that transforming past experiences from negative to positive by seriously considering the self and creating positive meanings might be more deeply associated with identity development than deliberating on the meanings or consequences of the positive experiences. As a huge amount of research has demonstrated, negative experiences that are central to identity, especially traumatic or extremely stressful ones, have adverse effects on physical and psychological health (e.g. Boals, 2014). However, this study provides further evidence that negative experiences do not necessarily result in maladjustment, symptomatology, or identity diffusion, but actually facilitate higher identity achievement than positive experiences do, provided sufficient benefits in various different domains can be successfully extracted from these events. No comparative study of identity achievement in people with negative-event centrality, following benefit-finding, and that in people with positive-event centrality had been conducted prior to this research; thus, this article is meaningful and valuable in that it further empirically demonstrates the positive functional aspects of benefit-finding in relation to identity development in adolescence.

Limitations and directions for future study

This study is not without limitations. One limitation relates to the non-longitudinal characteristics of the study. As mentioned above, due to the reciprocal relationship between the present self and memories, this study could not discuss the clear causal relationship between benefit-finding and identity achievement. Furthermore, it appears that benefits in different domains are not equally nor simultaneously extracted, thus, a longitudinal study design could explore both the extracting processes and whether there is a specific order of benefit-finding.

Another limitation is the inclusion of general negative experiences. The current study did not limit negative events to traumatic or extremely stressful events when examining the relationship between benefit-finding and general identity development in adolescents; thus, more research is obviously needed before the generalization or application of the findings to identity studies on adolescents who require clinical interventions. Exploring factors and effective interventions that promote benefit-finding could greatly contribute to research in developmental, clinical, educational, and other adjacent fields of psychology, and could also provide a better understanding of healthy identity development processes that occur as a result of negative experiences.

Disclosure statement

The author declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

Funding

The author received no financial support for the research.

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