The Association Between Sense of Humor and Trauma-Related Mental Health Outcomes: Two Exploratory Studies

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ABSTRACT
Two studies (n = 73, n = 132) explored the association between sense of humor and trauma-related well-being outcomes. It was found that sense of humor was not associated with reports of posttraumatic growth as measured by the Posttraumatic Growth Inventory (PTGI). Self-enhancing humor was positively associated with positive changes as measured by the CiOQ-P. Benign humor styles were associated negatively with emotion regulation difficulties and negative changes (CiOQ-N). Self-defeating humor was associated positively with negative changes, avoidant states, and emotion regulation difficulties. The results suggest that self-enhancing humor could be helpful in order to cope with trauma.

Trauma may lead people to develop psychological problems such as posttraumatic stress and to experience difficulties in regulating emotions (e.g., Horowitz, Markman, Stinson, Fridhandler, & Grannan, 1995; Janoff-Bulman, 1992; Joseph, Murphy, & Regel, 2012; Rachman, 2001; van der Kolk, 2007; van der Kolk & McFarlane, 2007). At the same time, many trauma survivors report that they have changed positively as a result of their struggle with the consequences of a traumatic experience (e.g., Janoff-Bulman, 2006; Joseph & Butler, 2010; Tedeschi & Calhoun, 2004). Thus, the report of positive change does not exclude the possibility that the same people are often highly challenged by the event (Joseph, 2011; Tedeschi & Calhoun, 2004). This phenomenon is widely acknowledged under the term posttraumatic growth (Tedeschi & Calhoun, 2004).

According to Calhoun and Tedeschi (2006), posttraumatic growth may be experienced in three areas: how one sees oneself, how one relates to others, and how one sees the world. Knowing about the risk of trauma and the salutogenic potential of people, psychiatrists and mental health professionals (among others) have attempted to identify factors that could buffer the potential negative impact of trauma and that could be helpful to facilitate...
well-being. Humour could be such a factor. Freud (2009) suggested that humor allows us to look at a painful reality with a defiant attitude, such that we are able to transcend and transform pain and stress, perhaps into something even pleasurable. Lazarus and Folkman (1984) suggested that cognitive primary appraisal might be an important factor for considering a situation as threatening, challenging, or benign. Martin, Kuiper, Olinger, and Dance (1993) suggested that humor may facilitate rather benign appraisals of a situation.

Within the last decades, empirical research has started to investigate humor and its potential to buffer the effects of stress. Although some studies have supported the assumption that a sense of humor (trait humor) could have a protective value (e.g., Sliter, Kale, & Yuan, 2013; Vaillant, 1995), in general the results are somewhat mixed and no clear conclusion can be drawn about the benefits of humor. The mixed results may perhaps be explained by the multidimensionality of a sense of humor (Cann, Stilwell, & Taku, 2010). Martin (2003) pointed out that not all forms of humor could have the potential to protect against stress. Sense of humor may include also injurious components. Martin (2003) suggested four components of humor or humor styles. An affiliative humor style and a self-enhancing humor style are both considered to be benign (Martin, 2003). In contrast, aggressive humor and self-defeating humor are both considered to be injurious (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). Previous research has so far mainly supported these four humor styles. The benign humor styles were in various studies correlated negatively with psychological difficulties such as depression (e.g., Besser, Weinberg, Zeigler-Hill, Ataria, & Neria, 2015; Edwards & Martin, 2010; Erickson & Feldstein, 2007; Martin et al., 2003), PTSD (e.g., Besser et al., 2015), anxiety (e.g., Besser et al., 2015; Edwards & Martin, 2010; Martin et al., 2003) and stress (e.g., Edwards & Martin, 2010). Furthermore, several studies found a positive correlation between self-enhancing humor and satisfaction with life (e.g., Edwards & Martin, 2010; Jovanovic, 2011), self-esteem (e.g., Edwards & Martin, 2010; Martin et al., 2003), optimism (e.g., Edwards & Martin, 2010; Martin et al., 2003), happiness (e.g., Jovanovic, 2011; Páez, Seguel, & Martinez-Sánchez, 2013) and psychological well-being (e.g., Erickson & Feldstein, 2007; Martin et al., 2003; Páez et al., 2013). In a similar vein, affiliative humor was found to be correlated positively with life satisfaction (e.g., Jovanovic, 2011), self-esteem (e.g., Martin et al., 2003), happiness (e.g., Jovanovic, 2011; Páez et al., 2013) and psychological well-being (e.g., Erickson & Feldstein, 2007; Martin et al., 2003; Páez et al., 2013).

In contrast, injurious humor styles were in some studies associated positively with psychological difficulties (e.g., Edwards & Martin, 2010; Erickson & Feldstein, 2007). However, Besser et al. (2015) did not find such an association. Furthermore, injurious humor styles were in various studies either not correlated significantly or correlated negatively with well-being outcomes.
For example, Edwards and Martin (2010) and Jovanovic (2011) found no significant association between injurious humor styles and satisfaction with life. Several studies found a negative correlation between self-defeating humor, self-esteem (e.g., Edwards & Martin, 2010; Martin et al., 2003) and psychological well-being (e.g., Erickson & Feldstein, 2007; Martin et al., 2003; Páez et al., 2013). Edwards and Martin (2010) found a negative association between self-defeating humor and optimism while Martin and colleagues did not observe such an association. Aggressive humor was found to be correlated negatively with happiness (e.g., Jovanovic, 2011; Martin et al., 2003) and not to be correlated with psychological well-being (e.g., Erickson & Feldstein, 2007; Martin et al., 2003; Páez et al., 2013).

Although humor and its correlates have been increasingly studied, it is still not entirely clear whether a sense of humor could be a protective factor against the negative psychological impact of trauma. It is, furthermore, not well-known whether sense of humor is associated with posttraumatic growth. Several studies investigated the association between humor and posttraumatic growth (Cofini et al., 2014; Park, Cohen, & Murch, 1996; Peterson, Park, Pole, Andrea, & Seligman, 2008; Schroeters & Teo, 2008; Scrignaro, Barni, & Magrin, 2010). However, the results are somewhat mixed and none of the authors have used a standardized measure of humor, all assessing humor as part of a higher construct such as cognitive coping in “Coping Orientation to Problems Experienced” (COPE) and character strength in the “Values in Action–Inventory of Strength” (VIA-IS). To the best of our knowledge, the association between posttraumatic growth and sense of humor has never been investigated with a measurement that is only constructed to measure humor. The following studies will investigate the association between humor styles, posttraumatic growth, negative change following adversity, posttraumatic stress, and problems with regulating emotions.

**Study one**

Our first study examined the association among four humor styles, posttraumatic growth, and negative change following adversity. We hypothesized that benign humor is associated positively with posttraumatic growth and that injurious humor is associated negatively with posttraumatic growth. Two posttraumatic growth measurements were used. Although the Posttraumatic Growth Inventory (PTGI) is widely used and acknowledged, it could be prone to positive bias since it only measures positive change following adversity (Park & Lechner, 2006). Therefore, a second questionnaire that also accounts for negative change following trauma has been used. Furthermore, we expected a negative relationship between benign humor styles and negative changes following adversity. We assumed the reverse relationship for injurious humor.
Method

Procedures and participants
Participants were recruited via a closed Internet survey. An Internet link was posted to six departments at a large English University. To increase the number of respondents, flyers were distributed and the survey link was sent to students who received feedback for another study conducted earlier. In total, around 2,900 students and members of the university received the survey invitation. Of those, 73 participants were included into the data analysis. Given the sample size and an alpha of 0.05, the power to find a medium effect \( r = 0.30 \) and \( \rho = 0.30 \); see Cohen, 1992) was 0.74 and 0.73 respectively. The response rate was around 2.51%. The study got ethical approval by the Ethics Board at the university.

Measures

Trauma
The study used an adapted form of the Traumatic Events Questionnaire by Vrana and Lauterbach (1994). The nature of the traumatic event was assessed by 12 items instead of 11 items. One item was included to enable the participants to negate the experience of a trauma. By adding this item, it was attempted to reduce a positive bias. Moreover, the added item served as a kind of filter to include only participants who had experienced a trauma. Three questions of the TEQ were used to evaluate on a 7-point Likert scale how traumatic the event has been (trauma severity). The average of all items was used to gain a total score. One item measured on a 7-point Likert scale how the trauma still affects the respective person (current distress). One variable measured how much time has been elapsed since the traumatic event.

Humor
The Humor Style Questionnaire (HSQ) by Martin et al. (2003) was used to measure sense of humor. The HSQ is a 32 item self-report measurement assessing sense of humor as a personality trait by a 7-point Likert Scale. The HSQ consists of four dimensions. Two factors are considered as rather psychologically benign while two factors are considered as rather psychologically injurious. The two adaptive factors are affiliative humor and self-enhancing humor. Affiliative humor is a social form of humor used in order to delight everyone (Martin, 2003). Self-enhancing humor does not necessarily fulfill a social function but may be better described as an internal process (Martin, 2003). This form of humor is based on the ability to change perspective and to gain pleasure out of absurdities when under stress (Martin, 2003). The two rather psychologically injurious humor styles are aggressive humor and self-defeating humor. Aggressive humor is directed toward the
social environment in order to put other people down and to show one’s own superiority (Martin et al., 2003). Self-defeating humor, in contrast, aims against oneself in order to gain acceptance from others or to avoid unpleasant feelings (Martin et al., 2003). Each humor style scale consists of 8 items. The range of each factor lies between 8 and 56.

**Posttraumatic growth**

Two measurements were used to measure posttraumatic growth. The first measurement used was the Posttraumatic Growth Inventory (PTGI) developed by Tedeschi and Calhoun (1996). The PTGI consists of 21 items, each of which is answered on a 6-point Likert scale. The PTGI can be used to assess five dimensions: new possibilities, personal strength, spiritual change, relating to others, and appreciation of life. In the current study, as we had no specific predictions regarding these subscales, only the total scale of the PTGI was be used. The second measurement used to measure posttraumatic growth was the positive scale of the “Changes in Outlook Questionnaire” (CiOQ-P) developed by Joseph, Williams, and Yule (1993). The CiOQ-P consists of 11 positive change items, each of which is answered on a 6-point Likert scale. The range of the positive change scale lies between 11 and 66 (Linley, Joseph, Cooper, Harris, & Meyer, 2003).

**Negative change following adversity or trauma**

The negative scale (CiOQ-N) of the CiOQ was used to measure negative change following adversity. The CiOQ-N consists of 15 negative change items, each of which is answered on a 6-point Likert scale. The range of the scale lies between 15 and 90 (Linley et al., 2003). The negative change scale and the positive change scale as well cover questions about future perspectives, finding meaning, acceptance of what has happened, valuing of life and relationships, and changes in attitudes.

**Results and discussion**

The sample consisted of 73 participants; the most frequently reported trauma was receiving news about the death or injury of a friend or relative (see Table 1). Except for the aggressive humor subscale, all scales were found to possess at least satisfactory internal consistency reliability (see Table 2).

All variables used were z-transformed. The variable negative change following adversity was not normally distributed. Hence, a nonparametric test was used for this variable. The correlations are shown in Table 3. Because the nature of the trauma varied to a significant degree, it could not be excluded that the results were influenced by the impact of the trauma. Therefore, we conducted partial correlations controlling for trauma severity and current
distress. Generally, both variables did not affect the observed associations and they influenced no significant correlations.

Humor was not associated with posttraumatic growth measured by the PTGI. With the CiOQ, self-enhancing humor was associated positively with

Table 1. Description of the sample.

| Description                              | N  | %  | Mean (SD) | Range |
|------------------------------------------|----|----|-----------|-------|
| Participants                             | 73 |    |           |       |
| Age                                      | 73 |    | 31.93 (11.89) | 18–62 |
| Female                                   | 58 | 79.5 |       |       |
| Male                                     | 15 | 20.5 |       |       |
| Nature of trauma                         | 73 |    |           |       |
| News of serious injury or death of someone close | 20 | 27.4 |       |       |
| Other event                              | 10 | 13.7 |       |       |
| Physical or sexual abuse in childhood    | 9  | 12.3 |       |       |
| Serious injury or danger of losing life   | 8  | 11  |       |       |
| In abusive relationship as an adult      | 7  | 9.6  |       |       |
| Serious accident, large fire, or explosion | 6  | 8.2  |       |       |
| Experience of a trauma they cannot tell about | 4  | 5.5  |       |       |
| Experience of crime                      | 4  | 5.5  |       |       |
| Other (below the 5% hurdle)              | 5  | 6.8  |       |       |
| Years elapsed since trauma               | 72 | 98.63 | 8.76 (8.32) | 0–35 |

Table 2. Means, standard deviations, and interitem consistencies for all scales.

| Variable                              | Alpha (x) | Mean (SD) | Range |
|---------------------------------------|-----------|-----------|-------|
| CiOQ (Positive Change Scale)         | .83       | 44.12 (8.62) | 13–61 |
| CiOQ (Negative Change Scale)         | .89       | 33.17 (12.60) | 15–66 |
| PTGI (Total Scale)                   | .93       | 51.64 (24.01) | 1–100 |
| HSQ (Affiliative Humor)              | .78       | 46.80 (6.39) | 22–56 |
| HSQ (Self Enhancing Humor)           | .82       | 38.27 (8.62) | 15–55 |
| HSQ (Aggressive Humor)               | .67       | 26.49 (7.28) | 12–45 |
| HSQ (Self Defeating Humor)           | .80       | 29.93 (9.32) | 9–49  |

Note. CiOQ = Changes in Outlook Questionnaire; PTGI = Posttraumatic Growth Inventory; HSQ = Humor Style Questionnaire.

Table 3. Correlates among humor styles, PTGI, and the CiOQ.

| Scale                          | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|
| PTGI                           |       |       |       |       |       |       |       |
| 1. PTGI_Total                  |       |       |       |       |       |       |       |
| CiOQ                           |       |       |       |       |       |       |       |
| 2. CiOQ-P                      | .61** |       |       |       |       |       |       |
| 3. CiOQ-N                      | −.17  | −.25* |       |       |       |       |       |
| HSQ                           |       |       |       |       |       |       |       |
| 4. Affiliative                 | .08   | .14   | −.17  |       |       |       |       |
| 5. Self Enhancing              | .17   | .38** | −.40**| .39** |       |       |       |
| 6. Aggressive                  | −.18  | −.17  | −.15  | −.03  | −.03  |       |       |
| 7. Self Defeating              | −.02  | .03   | .23*  | .07   | −.05  | .26*  |       |

Note. N = 73. Correlations in bold are Spearman’s rho. All other correlations are Pearson’s r coefficients. PTGI = Posttraumatic Growth Inventory; CiOQ-P = Changes in Outlook Questionnaire Positive Scale; CiOQ-N = Changes in Outlook Questionnaire Negative Scale; HSQ = Humor Style Questionnaire; *p < .05; **p > .01 (two-tailed, list-wise).
positive changes. Self-enhancing humor was correlated negatively with negative changes, while self-defeating humor was positively associated with negative changes.

The results show that self-enhancing humor was associated with higher scores on positive changes, and lower scores on negative changes as measured by the CiOQ, but not with the PTGI. It may be that these different measurement tools assess different aspects of posttraumatic growth (Joseph & Linley, 2008; Park & Lechner, 2006). In summary, the results indicate that especially intrapsychic forms of humor may be associated with well-being outcomes (Cann et al., 2010). Whether this could also be the case for other trauma-related well-being outcomes will be tested within the next study.

**Study two**

We extended the perspective to other negative well-being measurements, namely, posttraumatic stress and problems regulating emotions. The latter outcome is not necessarily trauma-related. However, the regulation of emotions may often be problematic following a traumatic event (Wild & Paivio, 2003). Including such a measurement was thought to be helpful in order to account for such problems. We hypothesized that benign humor is associated positively with posttraumatic growth and that injurious humor is associated negatively with posttraumatic growth. We expected a negative relationship among benign humor styles, posttraumatic stress, and problems regulating emotions. We assumed the reverse relationship for injurious humor.

**Method**

**Procedures and participants**

Participants were recruited conveniently via a pen-and-paper survey and through snowball sampling on the Internet. Around 482 subjects were approached. Of those, 132 participants experienced a trauma, were willing to fill in the survey, and gave their informed consent. Hence, the response rate was around 27%. The study got ethical approval by the Ethics Board at the University.

**Measures**

The questionnaires assessing humor, posttraumatic growth, and trauma were essentially the same as in study 1. However, because this study was part of a wider research project on reports of posttraumatic growth, the CiOQ has not been used. In addition, the trauma questionnaire allowed participants to indicate more than one trauma.
Posttraumatic stress. The Impact of Event Scale (IES) (Horowitz, Wilner, & Alvarez, 1979) measured posttraumatic stress. This self-report measurement consists of 15 items, each of which is answered on a 4-point Likert scale (0 = not at all, 1 = rarely, 3 = sometimes, and 5 = often). The IES consists of two subscales: intrusion and avoidance. The intrusion subscale consists of seven items and scores can range from 0 to 35. The avoidance subscale consists of eight items and scores can range from 0 to 40.

Emotion regulation difficulties. The Difficulties in Emotion Regulation Scale (DERS; Gratz and Roemer, 2004) was used to assess problems in regulating emotions. This 36-item scale was used because it builds on the theory that emotional regulation requires the awareness of emotions (Gratz & Roemer, 2004; Neumann, van Lier, Gratz & Koot, 2010; Wild & Paivio, 2003). The DERS can be used to assess six dimensions; however, in the current study only the total scale of emotion regulation difficulties was used. The score of the total scale of emotion-regulating difficulties ranges from 36 to 180.

Results and discussion

The sample consisted of 132 participants; the most frequently reported trauma was receiving news about the death or injury of a friend or relative (see Table 4). Except for the aggressive humor subscale, all scales were found to possess at least satisfactory internal consistency reliability (see Table 5).

All variables used were z-transformed. The correlations between variables are shown in Table 6. Given the sample size of the analyses (n = 109) and an alpha of 0.05, the power to find a medium effect (r = 0.30; see Cohen, 1992) was 0.89. We conducted partial correlations controlling for number

| Table 4. Description of the sample. |
|-------------------------------------|
| **N** | **%** | **Mean (SD)** | **Range** |
| Participants | 132 | | |
| Age | 132 | 24.69 (6.87) | 18–56 |
| Female | 79 | 59.8 | |
| Male | 53 | 40.2 | |
| Number of traumas | 132 | 100 | 1.91 (1.11) | 1–5 |
| Nature of trauma | | | |
| News of serious injury or death of someone close | 62 | 47 | |
| Witnessing or involvement in an accident | 43 | 32.6 | |
| Serious injury or danger of losing life | 30 | 22.7 | |
| Witnessing of mutilation, serious injury, violent death | 28 | 21.2 | |
| Crime | 17 | 12.9 | |
| Natural disaster | 16 | 12.1 | |
| Other event | 15 | 11.4 | |
| Not able to talk about it | 15 | 11.4 | |
| Abusive relationship (adult) | 14 | 10.6 | |
| Child abuse | 9 | 6.8 | |
| Unwanted sexual contact (adult) | 4 | 3 | |
| Years elapsed since trauma | 112 | 84.84 | 6.63 (6.89) | 0–33 |
of traumas, trauma severity, and current distress. Number of traumas and trauma severity did not significantly affect the observed associations. Some potential spurious effects were discovered for the association between affiliative humor, self-enhancing humor, intrusion, and avoidance when controlling for current distress.

Humor was not associated with posttraumatic growth as measured by the PTGI. However, benign humor was associated negatively with problems regulating emotions. Self-defeating humor was correlated positively with the avoidance subscale of the IES and problems regulating emotions.

General discussion

The primary aim of the paper was to test how sense of humor relates to several trauma-related well-being outcomes. Contrary to our hypotheses, the results of study 1 and study 2 found no significant association between any humor style and posttraumatic growth as measured by the PTGI. However, self-enhancing humor was associated positively with positive changes when measured by the CiOQ-P. These results support the assumption that different measurement tools may assess different aspects of posttraumatic growth (Joseph & Linley, 2008; Park & Lechner, 2006).

Table 5. Means, standard deviations, and interitem consistencies for all scales.

| Variable                        | Alpha (α) | Mean (SD)       | Range   |
|--------------------------------|-----------|-----------------|---------|
| Intrusion Scale (IES)          | .88       | 10.52 (9.51)    | 0–35    |
| Avoidance Scale (IES)          | .86       | 11.23 (10.08)   | 0–40    |
| DERS                           | .91       | 83.00 (20.21)   | 42–143  |
| PTGI (Total Scale)             | .95       | 45.54 (25.64)   | 0–102   |
| HSQ (Affiliative Humor)        | .78       | 40.91 (8.75)    | 15–56   |
| HSQ (Self-Enhancing Humor)     | .75       | 37.58 (7.82)    | 14–53   |
| HSQ (Aggressive Humor)         | .54       | 29.72 (6.94)    | 9–46    |
| HSQ (Self-Defeating Humor)     | .77       | 30.35 (8.65)    | 11–50   |

Note. IES = Impact of Event Scale; DERS = Difficulties in Emotion Regulation Scale; PTGI = Posttraumatic Growth Inventory; HSQ = Humor Style Questionnaire.

Table 6. Correlates between humor styles, PTGI, IES, and DERS.

| Scale                      | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------------------------|------|------|------|------|------|------|------|------|
| HSQ                        |      |      |      |      |      |      |      |      |
| 1. Affiliative             | –    |      |      |      |      |      |      |      |
| 2. Self-Enhancing         | –    | .39**|      |      |      |      |      |      |
| 3. Aggressive              | .09  | .03  | –    |      |      |      |      |      |
| 4. Self-Defeating          | .14  | –.04 | .40**|      |      |      |      |      |
| 5. PTGI                    | –.04 | .04  | –.12 | –.06 | –    |      |      |      |
| IES                        |      |      |      |      |      |      |      |      |
| 6. Intrusive               | –.12 | –.13 | .01  | .12  | .23* | –    |      |      |
| 7. Avoidance              | –.14 | –.14 | .01  | .19* | .26**| .79**| –    |      |
| 8. DERS                    | –.27**| –.32**| .11  | .20* | .01  | .30**| .33**| –    |

Note. N = 109. PTGI = Posttraumatic Growth Inventory; HSQ = Humor Style Questionnaire; IES = Impact of Event Scale; DERS = Difficulties in Emotion Regulation Strategies; *p < .05; **p > .01 (two-tailed, list-wise).
Self-enhancing humor may be linked to those dimensions of posttraumatic growth that are measured by the CiOQ-P, which may be tapping into more existential concerns than those of the PTGI.

The findings of the studies support our initial expectation that benign humor styles are correlated negatively with psychological difficulties. These results are in line with previous research that suggest a negative association between sense of humor and psychological problems (e.g., Besser et al., 2015; Edwards & Martin, 2010; Erickson & Feldstein, 2007; Sliter et al., 2013). Therefore, benign humor could potentially be an important factor that facilitates coping. However, it could also be the case that people who are less troubled by their traumatic experience are more likely to use humor. In our studies, especially self-enhancing humor was negatively associated with psychological problems. In line with Cann et al. (2010), this result could indicate that self-enhancing humor in particular could be useful in order to cope with adversity. While affiliative humor improves social interactions, self-enhancing humor may be an internal resource to approach and process adversity (Martin, 2003). However, a prospective study design would be needed to investigate this possibility in more detail.

As expected, self-defeating humor was correlated positively with negative changes in outlook following adversity, avoidant states, and problems regulating emotions. These results are in line with research conducted by Edwards and Martin (2010) and Erickson and Feldstein (2007), who found a positive association between self-defeating humor and depressive symptoms. In contrast to self-defeating humor that may be a way to escape or deny uncomfortable feelings, aggressive humor may be rather an instrument to gain power within a social context (Martin et al., 2003). Hence, aggressive humor may not be directly associated with well-being outcomes. In line with this theoretical assumption, aggressive humor was not significantly associated with any trauma-related well-being outcome.

The studies have several limitations. First, the sample size of study 1 was rather low. Therefore, associations below a value of \( r = .23 \) could not become statistically significant. Second, it was not possible to indicate multiple traumas. Within study 2, participants were initially asked to state only the most traumatic event they have experienced. However, several participants stated more than one event and were unable to decide which of those was most traumatic. These circumstances led to the decision to allow for multiple answers. Because of this procedure, it is likely that the true number of experienced traumas has been underestimated. However, the number of traumas had no significant influence on the observed associations. The sample was not representative for both studies. Moreover, both studies could have been prone to sampling bias. This may be especially the case for study 2, where two different survey modes were used. However, correlations are less prone to selection bias (Heiervang & Goodman, 2011; Loewenthal, 1996).
In addition, both studies were correlational and, therefore, causal inferences cannot be drawn. Finally, the response rate for both studies was low. In conclusion, the results suggest that especially intrapsychic forms of humor may be related to negative as well as positive well-being outcomes. Therefore, these results indicate the need for prospective studies investigating the potential buffering role of humor following trauma. This may especially hold true for intrapsychic forms of humor.

Notes on contributors

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