

## Break-Up Kummerspeck? No Evidence for Weight Gain After Romantic Relationship Dissolution

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### ABSTRACT

Overeating tied to negative emotions is a well-documented phenomenon. In fact, *Kummerspeck* is a German word for excessive weight gained by emotional eating. Its English translation is “grief bacon” or “sorrow fat.” Excessive eating after committed relationship dissolution may have been evolutionarily adaptive, particularly for women, as an increase in fat stores might help compensate for a loss of provisioning. Thus, we attempted to examine this issue through an evolutionary lens. Evidence from two studies, however, did not support *Kummerspeck* after the break-up of a long-term, romantic relationship, even when considering variables such as sex, age, time since break-up, current relationship status, break-up initiator, and attitudes towards partner at break-up. Only women with an existing proclivity to eat emotionally reported post-relationship weight gain, but this was not true for men. We discuss results and future research considerations.

### KEYWORDS

Relationship Dissolution, Weight Gain, Clinical Evolutionary, *Kummerspeck*

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There is a wealth of literature that documents patterns of emotional eating, particularly in connection to negative emotions and deficits in emotional regulation (Bourdier et al., 2018a; Evers, Stok, & de Ridder, 2010; Leehr, Krohmer, Schag, Dresler, Zipfel, & Giel, 2015). Bourdier and colleagues (2018b) noted that people may consume food for “down-regulating negative mood” (p. 536). Researchers have emphasized that emotional eating can lead to unhealthy food choices and weight gain for both men and women (Konttinen, Männistö, Sarlio-Lähteenkorva, Silventoinen, & Haukkala, 2010; Leehr et al., 2015). Given that the break-up of a long-term, romantic relationship can be stressful and traumatic (Boelen, 2008; Davis, Shaver, & Vernon, 2003; Rhoades, Kamp Dush, Atkins, Stanley, & Markman, 2011), it is interesting to explore whether emotional eating and weight gain typically occur after relationship dissolution.

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*EvoS Journal: The Journal of the Evolutionary Studies Consortium*

ISSN: 1944-1932 - <http://evostudies.org/evos-journal/about-the-journal/>

2019, Vol 8(1), pp. 80-96.

There is an epiphenomenal argument for a consistent observation of weight gained due to emotional eating by virtue of the existence of the word *Kummerspeck* in the German language. *Kummerspeck* refers to excessive weight gained by emotional eating. Its English translation is “grief bacon,” but can also be interpreted as “sorrow fat” (Transparent Language, 2015; Van Strien, Donker, & Ouwens, 2016). Only one scientific study known to the authors has used the term. Van Strien and colleagues (2016) showed that an increased desire to eat when experiencing negative emotions was associated with women’s higher body mass index (BMI). They asserted their findings supported the existence of *Kummerspeck*.

As noted by Van Strien and colleagues (2015, 2016), eating in response to stress is biologically/evolutionarily paradoxical. Stress is associated with hypothalamic-pituitary adrenal axis (HPA) activation, preparing the body for fight or flight and typically decreasing appetite (Papadimitriou & Priftis, 2009). However, in a period of food shortage in the ancestral environment, humans might have faced selective pressure to overeat (Van Strien, Herman, & Verheijden, 2009). Prentice, Rayco-Solon, and Moore (2005) posited that the presence of “thrifty genes” would predict the propensity to gain fat rapidly and to binge/gorge on available food. Excess fat deposits could prevent starvation during famine (Higginson, McNamara, & Houston, 2016; Neel, 1962; Speakman, 2008).

Evidence suggests that people’s eating habits change along with their emotional states (e.g., depression, joy, anxiety) (Canetti, Bachar, & Berry, 2002). For example, chronic stress is related to increased intake of energy-dense foods and therefore with the development of obesity (Epel, Lapidus, McEwen, & Brownell, 2001; Torres & Nowson, 2007). Levine and Marcus (1997) showed that women with and without a disordered eating diagnosis increased their consumption of snack foods (i.e., increased carbohydrate intake) following participation in a stressful task. Additionally, increased stress is related to *less* weight loss in those attempting weight management (Elder et al., 2012). Gluck (2006) underscored the relation between stress and binge eating (i.e., consuming objectively large portions of food while unable to control one’s overeating). Binge eating has been consistently associated with negative mood (Eldredge & Agras, 1996; Gluck, 2006; Masheb & Grilo, 2006; Smyth et al., 2007; Telch & Agras, 1996). Studies have indeed documented that people use binge eating behaviors to reduce negative emotions (Fairburn, Cooper, & Shafran, 2003; Mehak, Friedman, & Cassin, 2018).

### Relationship Dissolution

One can infer emotional and behavioral consequences for the dissolution of a committed, romantic relationship, because humans are hard-wired to pair-bond (Symons, 1979; Morris & Reiber, 2011; Morris, Reiber, & Roman, 2015). Negative emotions and cognitions accompanying relationship break-up have been well-documented (Agnew, 2000), including grief, anger, depression, anxiety, stress, perseveration, and intrusive rumination (Boelen, 2008; Boelen & Reijntjes, 2009; Davis et al., 2003; Monroe, Rohde, Seeley, & Lewinsohn, 1999; Morris & Reiber, 2011; O’Connor & Canevello, 2019). These emotions are typically reflective of trauma and loss (Boelen & van der Hout, 2010; Studley & Chung, 2015). Separating from a romantic partner can even affect one’s sense of self, as one’s

identity may be entwined with one's partner's friends and interests (Slotter, Gardner, & Finkel, 2009). In addition, in people reporting sadness after a romantic break-up, brain imaging corroborates neural activity consistent with acute grief (Najib, Lorberbaum, Kose, Bohning, & George, 2004). It is possible that this emotional state, (i.e., post-relationship grief; Morris et al., 2015), translates to "grief bacon" weight gain.

A person's fat reserves may vary because of environmental events (Higginson, et al., 2016; Prentice et al., 2005). In ancestral times, an environmental event affecting food consumption may have been relationship dissolution. As noted above, relationship dissolution can cause marked stress (Frazier & Cook, 1993; Rhoades et al., 2011; Simpson, 1987), and the absence or departure of a partner may signal fewer provisions (Buss, 1994; Buss & Schmitt, 1993), thereby triggering the expression of thrifty genes and triggering disinhibition of mechanisms that regulate balanced food intake.

Women in particular may have faced selective pressures to overeat when experiencing relationship break-up. Due to fundamental differences in fitness maximization strategies and the argued need for women to have acquired partner resources for support in the ancestral environment (Trivers, 1972), it makes sense that women would be more impacted by relationship dissolution than would men (Morris et al., 2015). Women have limited reproductive capability and would have needed provisioning in the ancestral environment for self and offspring survival (Trivers, 1972; Buss & Shackelford, 2008). The loss of a mate would have meant withdrawal of resources. Further, food shortage and resulting malnutrition may adversely affect fertility (Chapin, Gulati, Barnes, & Teague, 1993; Higginson et al., 2016), as reproduction requires considerable energy (Canale, Huchard, Perret, & Henry, 2012). Malnourishment could cause progesterone deficiency, a hormone critical for pregnancy (Wynn & Wynn, 1993). Food shortage has also been consistently associated with fetal development issues, such as neural tube deficits, cardiac issues, low birthweight, and miscarriage (Carmichael, Yang, Herring, Abrams, & Shaw, 2007; Wynn & Wynn, 1993). Because women need nutrition to sustain pregnancy and give birth, i.e., be a viable mate, it may be the case that women experience increased Kummerspeck upon break-up than men. In one study of post-relationship grief, Morris and colleagues (2015) documented that women's emotional and physical responses to a break-up were more severe than were men's emotional responses.

In addition, depression has been a noted consequence of relationship dissolution (Boelen & Reijntjes, 2009; Morris et al., 2015) and documented as a causal factor in weight gain (Kivimäki et al., 2009). Blaine (2008) conducted a meta-analysis of 16 studies that revealed people who were depressed had a higher risk of developing obesity than people who were not depressed. Blaine underscored that adult women who were depressed had a markedly increased risk of obesity.

In the present study we aimed to assess whether Kummerspeck was associated with a recent romantic relationship break-up. We undertook two investigations examining self-reports of weight gain after relationship dissolution. We considered demographics, attitudes towards one's partner, relationship experiences, and general patterns of emotional eating in our analyses. We

hypothesized that participants would exhibit Kummerspeck in response to relationship dissolution, and that we would see this effect more in women.

### STUDY 1

#### Method

All procedures were approved by the local IRB board. Items from this study were included within a larger questionnaire on relationships and sexual behavior. We recruited participants through Amazon's Mechanical Turk (mTurk) marketplace website, by postings on social media, and by snowball email sampling across the United States. Respondents from mTurk were remunerated with a small cash stipend for taking part in the Qualtrics online study. The respondents recruited from social media and snowball email sampling were not remunerated. A total of 848 people began the survey, but responses were excluded from those who did not answer two control questions correctly. The final sample consisted of a total of 581 participants (261 men and 320 women) with a mean age of 30.8 years ( $SD = 11.4$ , age range = 18 to 72) who reported ethnicity as 72.4% White; 8.8% Hispanic; 8.3% Black; 7.9% Asian; and 2.6% Other.

**Sociosexuality.** Any effects of relationship dissolution would likely be a function of one's attitudes towards relationships. Those with a nonmonogamous orientation are less committed to relationships (Penke & Asendorpf, 2008; Simpson and Gangestad, 1991) and might be affected less by a romantic relationship break-up. As part of a larger study on relationships, our participants also completed the Revised Sociosexuality Inventory (SOI-R, Penke & Asendorpf, 2008). This instrument measures orientation towards monogamy versus casual sex (Penke & Asendorpf, 2008), with higher scores indicating a greater preference for casual sex. As a post-hoc consideration, we thus sought to determine if Kummerspeck might be mitigated by a low commitment tendency.

#### Results

We asked participants, "Have you recently had a committed, romantic relationship end (broken up with someone/they broke up with you)?" We considered participants to have experienced a recent break-up if their relationship ended a year ago or sooner. Response options were: No (62.1%); Yes, less than 3 months ago (5.8%); Yes, 3 to 6 months ago (6.2%); Yes, 7 months to a year ago (6.7%); and Yes, over a year ago (19.2%). If they did experience a break-up, we asked them to report who broke off the relationship. We further asked, "Have you gained or lost noticeable weight within the past year?" Response options were: No; Yes, I gained weight; Yes, I lost weight.

Considering the entire sample, most participants (62.7%) reported no recent weight change. Overall, there was no relationship between sex of respondent and having recently lost weight, gained weight, or no weight change,  $X^2(1, N = 507) = 4.02, p = .134$ . There was also no relationship between having experienced a recent

break-up (yes, no) and having gained weight for men,  $X^2(1, N = 233) = .043, p = .836$ , or for women,  $X^2(1, N = 274) = 1.53, p = .216$ . There was no relationship between having experienced a recent break-up (yes, no) and having lost weight, gained weight, or no weight change for men,  $X^2(1, N = 233) = 3.11, p = .077$ , or for women,  $X^2(1, N = 274) = 1.62, p = .446$ .

We then examined only responses from participants who experienced a recent break-up. Weight gain (yes, no) was unrelated to break-up initiator (self, partner, or mutual) for men,  $X^2(1, N = 42) = 2.42, p = .298$ , and for women,  $X^2(1, N = 48) = .967, p = .616$ .

We attempted to determine what other factors might predict weight gain for those who experienced a recent break-up. A binomial logistic regression yielded a nonsignificant model,  $X^2(df = 7) = 7.43, p = .386$ , wherein sex, age, relationship status (currently in committed relationship or not), time since break-up, who broke up with whom (self, partner, or mutual), and SOI-R score predicted only 9.1% of weight-gain cases (yes, no). Similarly, using these variables to predict weight loss (yes, no), we found a nonsignificant model,  $X^2(df = 7) = 4.23, p = .754$ , as only 8.3% of weight loss cases were predicted.

### Discussion

Data did not evidence Kummerspeck for those who experienced relationship dissolution. Further, our data did not predict weight loss. This latter concept is also captured in German language by the word *Abspecken*, which translates to “de-baconing” (translation by De Boinod, 2010). We considered several variables that might influence weight, including age (Walston, 2016), current relationship status, and time since break-up, but none predicted weight gain. To substantiate this evidence of absence, we created a second study to examine further self-reports of weight gain after relationship break-up and considered other factors that may contribute to weight change after a romantic relationship is terminated.

## STUDY 2

We aimed to replicate and extend our first study by assessing for weight gain after relationship dissolution and identifying variables that might contribute to the phenomenon. We examined factors of sex/gender, attitudes towards the partner at the time of break-up, and general tendency to eat emotionally.

### Method

Participants were recruited online via Reddit, a social media discussion platform, in a forum dedicated to social science research. Respondents were not remunerated for their participation. A total of 430 people began participation. Four people provided no information beyond login or basic demographics. In this study, we asked participants to report their biological sex, and in a separate question, their gender (we did not do this in the first study). Six people identified as agender, and two people identified as transgender. Because we sought to examine sex

differences via an evolutionary lens presupposing genetic sex differences, we included only participants whose biological sex was congruent with their gender (i.e., people who are cisgender) in our analyses. A total of 155 people did not respond appropriately to both our quality control questions we posed in the instrument. In addition, two people did not answer our question about whether they had ever experienced committed, romantic relationship dissolution. These data were also excluded. Our final sample consisted of 261 cisgender participants (193 women and 68 men) with a mean age of 28.76 years ( $SD = 10.0$ , age range = 18 to 63). Participants reported race/ethnicity as 78.0% White (Caucasian); 8.5% Asian or Pacific Islander; 6.2% Hispanic or Latinx; 1.9% Black or African American; .4% Native American or American Indian; and 5% Other.

We asked participants whether they had experienced relationship dissolution and to report time since their last break-up from a long-term committed relationship as well as their attitudes towards their ex-partner. We also asked who initiated the dissolution of the relationship, as Perilloux and Buss (2008) documented that those who were rejected in a long-term relationship showed more negative emotional consequences. Items and responses are detailed below in the context of analyses. We further asked level of commitment when in that previous relationship, and responses were coded as 1 = exclusive, 2 = living together but not married or engaged, 3 = engaged, 4 = married.

To tap into the concept of Kummerspeck resulting from relationship dissolution, we asked, “Would you say that you GAINED weight after your break-up directly as a result of the sadness and stress you felt because of your relationship breaking up?” To further our understanding of any weight change, we also asked, “Would you say that you LOST weight after your break-up directly as a result of the sadness and stress you felt because of your relationship breaking up?” Participants answered Yes or No to these questions.

In addition, we assessed food enjoyment using six items from the pleasure/importance subscale of Attitudes to Food Scale (Rozin, Fischler, Imada, Sarubin, & Wrzesniewski, 1999). Items were: “Enjoying food is one of the most important pleasures in my life,” “I would rather eat my favorite meal than watch my favorite television show,” “I think about food in a positive, anticipatory way,” “Money spent on food is money well spent,” “I have fond memories of family food occasions,” and “I would rather stay at an average hotel with excellent food than a luxury hotel with average food.” Participants indicated agreement with each item using a Likert scale where 1 = “strongly disagree” and 5 = “strongly agree.” Answers showed acceptable reliability (Cronbach’s  $\alpha = .78$ ) and were summed to form a food importance score, with a possible range from 6 to 30.

To test an existing proclivity for emotional eating, we used two items from the Eating and Appraisal Due to Emotions and Stress (EADES; Ozier et al., 2007) Questionnaire, “I eat when I am sad,” and “I eat when I am angry.” We added two items generated by the research team: “I eat when I am bored,” and “I eat when I am lonely.” Participants indicated their agreement with each statement on a Likert scale where 1 = “strongly disagree” and 5 = “strongly agree.” Answers to these four items were summed to form an emotional eating score. Responses showed acceptable reliability (Cronbach’s  $\alpha = .78$ ) with a possible range from 4 to 20.

### Results

All participants (100%) reported experiencing relationship dissolution. The majority of participants (56.7%) reported that their relationship broke up over 2 years ago, while others reported that their relationship broke up 1 to 2 years ago (17.2%), between 6 months and 1 year ago (12.6%), between 3 and 6 months ago (8.0%), and less than 3 months ago (5.5%),  $X^2 (N = 261, df = 4) = 230.48, p < .001, w = .94$ .

The majority of participants (65.13%) experienced no weight change after the dissolution of their relationship,  $X^2 (N = 261, df = 2) = 123.61, p < .001, w = .69$ . This was also unrelated to sex,  $X^2 (N = 260, df = 2) = 3.95, p = .139$ . Specifically, most participants (86.2%) reported that they did not gain weight after their relationship broke up,  $X^2 (N = 261, df = 1) = 136.86, p < .001, w = .72$ , with a large effect size. There was no relationship between sex and reports of gaining weight, with 84.4% of women and 91.3% of men indicating they had not gained weight,  $X^2 (N = 261, df = 1) = 1.91, p = .167$ . Similarly, most participants (76.9%) reported that they did not lose weight after relationship break-up,  $X^2 (N = 260, df = 1) = 75.39, p < .001, w = .54$ . There was no relationship between this the weight loss response and sex, with 74.5% of women and 83.8% of men reporting no weight loss,  $X^2 (N = 260, df = 1) = 2.47, p = .116$ .

We analyzed responses to the questions, “Would you say that you GAINED weight...” and “Would you say that you LOST weight after your break-up directly as a result of the sadness and stress you felt because of your relationship breaking up?” Women who answered “Yes” ( $M = 13.76, SD = 3.50$ ) to gaining weight had higher emotional eating scores than women who answered “No” ( $M = 11.66, SD = 3.70$ ),  $t(182) = 2.83, p = .005, d = .58$ , with a medium to large effect size. This difference was not seen between men who answered “Yes” ( $M = 13.20, SD = 3.03$ ) and men who answered “No” to gaining weight ( $M = 11.38, SD = 3.61$ ),  $t(59) = 1.10, p = .278$ . There was no difference in emotional eating scores between women who answered “Yes” ( $M = 11.98, SD = 3.96$ ) and “No” to losing weight ( $M = 11.99, SD = 3.69$ ),  $t(181) = .021, p = .983$ , and there was no difference in emotional eating scores between men who answered “Yes” ( $M = 10.13, SD = 4.45$ ) and “No” to losing weight ( $M = 11.74, SD = 3.43$ ),  $t(59) = 1.19, p = .238$ .

We asked participants to report who dissolved the relationship, and 54.1% reported they broke up with their partner, 44.3% reported their partner broke up with them, and 1.6% said it was mutual. This was unrelated to weight gain upon break-up for women,  $X^2 (N = 145, df = 2) = 1.54, p = .463$ , or for men,  $X^2 (N = 49, df = 2) = .567, p = .451$ .

We tested if attitudes towards the former partner were related to weight gain after relationship dissolution. Participants were asked, “Which of the following statements best described your attitude about your most recent partner (ex-boyfriend, girlfriend, husband, wife, significant other) at the time your relationship broke up?” Multiple-choice responses were, “I didn’t care enough to think about it” (men: 9.0%, women: 3.6%); “They were an OK person. It just didn’t work out” (men: 52.2%, women: 42.7%); “They just have a lot of character and personality issues” (men: 28.4%, women: 33.9%), and “They are a horrible human being” (men: 10.4%, women: 19.8%). Responses did not relate to gender,  $X^2 (N = 259, df = 3) = 6.75, p = .080$ . These responses were unrelated to reported weight gain following a break-up

for both women,  $X^2 (N = 192, df = 3) = 3.98, p = .263$ , and men,  $X^2 (N = 67, df = 3) = 1.19, p = .755$ .

We tested other relationship factors for associations with reported weight gain after break-up (Yes/No). Point-biserial correlations showed no relation to level of commitment to the relationship while it was intact,  $r_{pb}(253) = .082, p = .193$ ; length of time since the relationship was over,  $r_{pb}(259) = .025, p = .689$ ; or duration of the relationship in months/years,  $r_{pb}(259) = .040, p = .521$ .

There was no difference in importance placed on food for women who reported gaining weight after relationship dissolution ( $M = 21.31, SD = 5.06$ ) and women who reported no weight gain after relationship dissolution ( $M = 21.13, SD = 4.74$ ),  $t(176) = .188, p = .851$ . Further, there was no such difference for men who reported gaining weight after relationship dissolution ( $M = 22.60, SD = 5.55$ ) and those who did not ( $M = 22.37, SD = 4.78$ ),  $t(57) = .101, p = .920$ .

Finally, we asked participants whether they thought people gained weight, lost weight, or experienced no weight change after a relationship breaks up. People most commonly believed (48.3%) that men would experience no change,  $X^2 (N = 234, df = 2) = 23.62, p < .001, w = .32$ . However, people most commonly believed (45.3%) that women would gain weight after relationship dissolution,  $X^2 (N = 234, df = 2) = 16.72, p < .001, w = .27$ .

## GENERAL DISCUSSION

We applied evolutionary psychological concepts to document and understand a potential trigger of emotional eating—romantic relationship dissolution. Across two studies, our results showed no evidence of Kummerspeck after relationship break-up, even when accounting for several factors, including sex, who terminated the relationship, attitudes towards their most recent partner, level of relationship commitment, monogamous orientation, amount of time since break-up, duration of the relationship, and importance of food to the participant. This lack of evidence for break-up Kummerspeck is noteworthy in light of the wealth of research that has documented overeating in negative emotional situations as a compensatory mechanism (Frayn, Livshits, & Knäuper, 2018; Geliebter & Aversa, 2003).

Evolutionarily speaking, separation from a partner in the ancestral environment posed a threat of diminished resources, including food. Overeating in preparation for depleted food resources might have been adaptive in the ancestral environment, particularly for females who likely depended on support and provisioning for offspring and personal survival (Trivers, 1972). However, data across these two studies revealed that weight gain did not take place via emotional eating after relationship break-up. Although we did not measure grief after break-up per se, most participants reported an arguably healthy attitude post break-up, with the most common attitude towards the ex-partner reflected by the statement, “They were an OK person. It just didn’t work out.” That being said, even those who reported their ex-partner was “a horrible human being” did not commonly report weight change post relationship dissolution.

Given that during our ancestral past we were dependent upon successful hunting and foraging practices, we may have had less control over what food

resources were available in order to partake in overeating. Only in modern times do we have a surplus of food availability (especially those with a high fat/caloric value) that would allow us to overindulge/engage in food consumption to satisfy emotional needs.

It is worth noting that our participants did not report weight loss after break-up. Mixed evidence suggests that stress may lead to weight loss (Dallman et al., 2003). There is also limited evidence to suggest that relationship dissolution leads to weight loss. Hanson, Sobal, and Vermeylen (2014) found that participants experienced a temporary weight loss after marital exit, but then regained the weight. Morris and Reiber (2011) also notably documented negative consequences of relationship dissolution and found that twice as many women as men reported weight loss after relationship dissolution. However, the number of women (1.9%) and men (0.7%) who mentioned weight loss in their large sample was very low. In addition, they titled their questionnaire a *heartbreak survey*, which may have led to an overrepresentation of those who experienced extreme effects after relationship dissolution.

Moreover, an individual who wanted to date others after break-up might engage in appearance investment. For instance, Perrilloux and Buss (2008) found that women whose partners initiated relationship termination engaged in more shopping behaviors than male rejectees. The authors posited this behavior functioned as an appearance enhancement strategy to improve their mate value on the dating market. Likewise, the desire to lose weight after a break-up may be particularly true for women, who tend to be more concerned and dissatisfied with their body weight than are men (Tiggemann, 2011). Research has indeed evinced that men typically place a premium on women's thinness. Asendorpf, Penke, and Back (2011) showed that women with lower body mass index are more likely to have success finding dating and long-term marriage partners. Nonetheless, although women may have faced selective pressures for body type, it is important to emphasize that women have agency over their own bodies and engage in appearance management for their own benefit (Rudd & Lennon, 2000).

Interestingly, our participants believed that women would gain weight after break-up. This perception is in line with previous research evincing that women are typically viewed as more emotional than men and are negatively criticized when they do not fit into the thin feminine ideal (Thompson & Romeo, 2015). Women face discrimination and criticism about their bodies even when they gain less percentages of weight compared to men (Rothblum, 1994; McKinley, 2006). This can be particularly challenging for women as such weight gain conflicts with the ideal feminine body society presents (Heatherston et al., 1997; McKinley, 2006). Indeed, the term *Kummerspeck* often appears in popular media arguably as a form of body shaming. For example, the German newspaper *Hamburger Abendblatt* (2015) featured an article entitled, "Kummerspeck nach Ehe-Aus: Heidi Klum hat zugenommen," which presented in English by Transparent Language as "Sorrow Fat following marriage break-up: Heidi Klum has put on weight." Klum is a popular fashion and beauty model, and the *Abendblatt* found it newsworthy to report that she claimed to gain about five pounds because of the emotional turmoil of separating from her husband.

Despite public opinion tying weight gain to relationship dissolution for women, results from our two studies provide absence of evidence of this phenomenon. It may be the case that “modern” thinking and lifestyle are overriding evolutionary tendencies. Contemporary women are typically employed, at least in the United States (United States Department of Labor, 2018), and thus today’s women are not like ancient, vulnerable gracile female hominids distraught without someone else’s resources. Along these lines, Morris and colleagues (2015) documented that although more emotionally distraught, women recover more fully than do men from a break-up, and similarly, Tashiro and Frazier (2003) documented that women experience more personal growth after relationship dissolution than do men.

It may be the case that no general adaptation exists to facilitate overeating following relationship dissolution. Instead, it may simply be the case that there is an increased risk of overeating to cope with negative break-up emotions in women who already use eating as a coping mechanism. While the authors note the general absence of Kummerspeck in the study, women with a tendency to eat emotionally did experience weight change after relationship break-up. Clinicians and counselors may consider relationship dissolution as a trigger for emotional eating in clients with unhealthy eating histories. Taking into account that the only post-relationship weight gain the participants reported occurred in women with an existing proclivity towards emotional eating, it would be prudent to study this phenomenon in clinical samples. For example, individuals who possess higher levels of attachment anxiety often struggle with reduced emotional regulation skills (Shakory et al., 2015; Wilkinson, Rowe, Robinson, & Hardman, 2018). It makes sense, then, to test state anxiety post-relationship dissolution, or even trait anxiety, as factors in Kummerspeck after relationship break-up. A clinician can help the client mitigate negative coping strategies through the development of cognitive behavioral techniques (Thompson & Romeo, 2015).

It is important to research this and other potential causes and correlates of disordered eating further, as in the modern environment overeating when there is no famine can result in obesity and other health dangers (Speakman, 2008). As noted by Bourdier and colleagues (2018b), a better understanding of the mechanisms of unhealthy eating will allow the development of strategies to intervene and promote healthier coping mechanisms. Managing stress overall is imperative, as excess glucocorticoids (stress hormones) are linked with obesity, hypertension, and insulin resistance (Wang, 2005).

This study had several strengths. The mean age in both samples was around 30. The large community samples were therefore a good representation of peak reproductive years, (see Dunson, Baird, & Colombo, 2004), and most participants reported relationship and break-up experience. These data therefore allow us to argue evidence of absence of Kummerspeck as a result of relationship dissolution. Nonetheless, there are limitations to this research. Data collected from participants were self-reported, and responses are susceptible to social acceptability bias. For example, the personal nature of the questions asked, combined with social stigma surrounding weight gain, could influence responses. In addition, participants were asked questions regarding a period spanning the past two years and may not have been able to accurately recall and report the information. Another limitation is

the ability to recall immediate post-relationship details. Many may feel so distraught by the experience of the break-up that they are unaware of their overeating and weight gain or may be in a state of denial that weight gain is occurring. In other words, the negative emotions that result from relationship termination may not allow the person to perceive accurately their behavioral and physical changes at that time, and consequently, they are unable to recollect on those experiences accurately. On the other hand, participants may not have cared enough about the relationship ending to encode post-dissolution details. Similarly, participants might not have noticed weight change or ascribed any change to the break-up. Further, since *Kummerspeck* is a German term with no such equivalent noun found in English, this concept may be a culture bound phenomenon. To wit, it should be stressed that evolutionary adaptations can be altered by culture (Crawford & Anderson, 1989; Buss, 1995). That is, as pointed out by Crawford and Anderson (1989), a genetic predisposition does not make a behavior “inevitable” (p. 1449). The presence of a “thin ideal” found cross-culturally (Swami, 2015) may mitigate evolved weight gain mechanisms.

There are several avenues to explore with respect to future directions. Researchers can investigate the relation between break-up causes and blame for weight gain. For example, one might experience extreme emotional consequences in the aftermath of partner infidelity, leading to weight change. In addition, it is worth exploring in more detail the level of commitment someone had to the relationship, (e.g., enthusiastic or other) (Lydon, Pierce, & O'Regan, 1997). Likewise, researchers might thoroughly examine the perceived satisfaction and quality of the now-dissolved relationship (Frank & Brandstätter, 2002) and the relation to weight gain after relationship dissolution. Moreover, researchers can explore parental status or the desire to reproduce as related to weight-gain consequences of the break-up.

In conclusion, we found little evidence to support *Kummerspeck*, or weight gained from emotional eating, as a response to relationship dissolution. The participants in our study evinced an arguably healthy attitude post-break-up. It may be the case that overeating in response to relationship termination was adaptive in the ancestral environment, although contemporary culture and cognitions override this mechanism. Notably, most participants in our study reported currently being involved in a long-term, committed, romantic relationship. It seems, therefore, we modern humans exhibit resiliency.

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