Published in final edited form as:

Psychol Sci. 2014 December ; 25(12): 2277–2280. doi:10.1177/0956797614543802.

Just How Bad Negative Affect is for Your Health Depends on Culture

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Abstract

Pressman, Lopez and Gallagher (2013) conclude that across the globe negative emotions are bad for one's health. Yet, just how bad negative emotions are for health depends on culture. In U.S. American contexts, negative feelings are construed as the individual's responsibility and as harmful. In Japanese contexts, negative feelings are construed as rooted in relationships and as natural. Using six clinically-relevant measures and two representative samples, we tested the hypothesis that negative affect is more strongly associated with poor health in the U.S. ($n = 1,741$) than in Japan ($n = 988$). Negative affect more strongly predicted poor health in the U.S. than in Japan for multi-item assessments of physical health (chronic conditions, physical functioning) and mental health (psychological well-being, self-esteem). There were no differences for single-item

health assessments (life satisfaction, global health). These findings underscore the need for further theoretically-driven investigations of how cultural construals shape the emotion-health link.

Keywords

negative affect; health; culture; Japan; emotion

In a recent issue of this journal, Pressman, Lopez & Gallagher (2013) report that across the globe in both industrialized and developing nations, negative emotions are associated with worse subjective health. This generalization is consistent with a growing literature from diverse samples highlighting the physiological and psychological perils of negative affect (for review, see Consedine & Moskowitz, 2007; Mayne 1999; Kubzansky & Kawachi, 2000). One inference from these findings is that negative emotions are universally and equally bad for one's health.

This strong inference, however, is at odds with two decades of ethnographic and experimental research on culture and emotion revealing considerable global variation in how people interpret and respond to negative feelings (e.g., Boiger, Mesquita, Uchida, & Barrett, 2013; Diener & Suh, 2000; Mesquita & Leu, 2007; Matsumoto, 1993). Such culture-specific understandings of the nature and source of emotion can have powerful implications for mental and physical well-being. Indeed, multiple studies show considerable divergence across cultures in the degree to which negative affect influences physiological and psychological functioning (e.g., Consedine, Magai, Cohen, & Gillespie, 2002; Diener et al., 2000; Mauss & Butler, 2010; Miyamoto et al., 2013; Soto, Perez, Kim, Lee, & Minnic, 2011).

The theoretical case for expecting cultural variation in the health consequences of negative emotions is particularly strong for the comparison between European American and East Asian cultural contexts. The concept of negative feelings in the U.S. is grounded in Western philosophical assumptions as well as in a set of historically derived and selected ideas and practices such as the Protestant Ethic and the American Dream. Negative feelings in the U.S. are construed as internal entities that are the individual's responsibility (Chentsova-Dutton & Tsai, 2010; Kitayama, Mesquita, & Karasawa, 2006; Uchida, Townsend, Markus, & Bergsieker, 2009). Because individuals should assume responsibility for their negative affective experiences, when they feel bad, they may also fear or experience social sanctions (Bastian et al., 2012). As a result, negative feelings can signal a moral failing and are construed as harmful (e.g., Wierzbicka, 1994). In sharp contrast, in East Asian contexts, the concept of negative feelings is rooted in Buddhist, Taoist, and Confucian traditions. Negative feelings in these contexts are construed as situationally-based and grounded in specific relationships (Chentsova-Dutton et al., 2010; Kitayama et al. 2006; Uchida, et al., 2009). Consequently, individuals do not bear the weight of negative affective experiences alone; rather, experiencing negative affect may even *foster* social ties. Arising from such external sources, negative emotions are seen as inevitable and transient elements of a natural cycle in this context (e.g., Peng & Nisbett, 1999). We would predict then that Americans

who experience frequent negative affect are more likely to suffer adverse health consequences than Japanese.

At this point, the limited amount of empirical evidence is mixed; some evidence supports cross-cultural continuity (e.g., Pressman, et al., 2013), while other evidence is consistent with cross-cultural variation in the association between negative affect and health (e.g., Miyamoto et al., 2013). One reason for these conflicting findings may be the lack of consensus in how emotion and health are measured. Some studies measure state affect (e.g., how people feel now or the previous day) and others trait affect (e.g., how people typically feel). Additionally, the measures of health outcomes used in these studies varied widely in terms of relative subjectivity/objectivity as well as in their clinical relevance. Finally, basing conclusions on significance testing rather than comparing effect sizes increases the possibility of inferring cross-cultural similarity when examining large samples.

Addressing this issue, we compared the magnitude of the effect of negative affect on health between the U.S. and Japan using a stable index of negative affectivity and six clinically relevant, well-known self-report health metrics. The U.S./ Japan comparison is a relatively ideal one because both nations are modernized, democratized, industrialized societies with well-developed systems of health care. Yet these two societies are markedly different in their historically derived ideas about negative affect and also in the everyday social practices that lend form and organization to affective experience (Markus & Kitayama, 1994; Mesquita, et al., 2007).

To examine this possibility, we compared survey data from two large samples of Japanese ($n=988$) and American adults ($n=1741$) participating in the MIDUS (Midlife in the U.S.) and MIDJA (Midlife in Japan) survey studies. To measure negative affect, participants reported how often ($1=$ *None of the time* to $5=$ *All of the time*) they experienced negative emotions (i.e., nervous, hopeless, lonely, afraid, jittery, irritable, ashamed, upset, angry, frustrated) over the past 30 days. We indexed physical health using two relatively objective measures: number of chronic conditions and degree of functional limitations; and we administered a single item subjective global health rating. We indexed mental health using two multi-item scales: level of psychological well-being and self-esteem; and we administered a one-item life satisfaction rating. We included positive affect¹ and demographic variables as covariates in our analyses. See supplemental materials for details. Japanese reported higher mean levels of and variance in negative affect ($M=1.80$, $SD=0.62$) than Americans ($M=1.57$, $SD=0.53$), $t(1806.31)=9.52$, $p<.001$, Levene's $F=65.53$, $p<.001$. Overall, we found negative affect significantly predicted poor health in both the U.S. and Japan for each measure. However, comparing the magnitude of the effect reveals that negative affect is indeed worse for one's health in the U.S. than in Japan (see Figure 1). Differences in negative affect-health associations between the U.S. and Japan (calculated as critical ratios of the differences) indicated negative affect more strongly predicted more chronic conditions in the U.S. than Japan, $z=6.47$, worse physical function in the U.S. than Japan, $z=2.45$, worse psychological

¹We have similar theoretical predictions for positive affect but did not examine this construct as a primary predictor because the measure oversampled high arousal positive emotions, which may be less indicative of well-being in Japan (see supplemental methods).

well-being in the U.S. than Japan, $z=6.59$, and lower self-esteem in the U.S. than Japan, $z=5.65$. Across cultures, negative affect similarly predicted poor global health, $z=0.62$, and lower life satisfaction, $z=-0.62$. Multigroup structural equation modeling confirmed findings even when controlling for cultural differences in variances (see supplemental analyses).

Our findings are consistent with Pressman et al.'s generalization that negative emotions matter for health around the globe. However, the magnitudes of the effects vary considerably between cultures, particularly for objective and multi-item assessments. The negative affect-health link may be stronger in U.S. contexts because negative affect is commonly conceptualized as harmful and the individual's responsibility in opposition to East Asian contexts where negative affect is construed as natural and rooted in relationships. Further research is needed to explicitly test cultural construals of negative affect as an explanatory mechanism. Unfortunately to this point, no large scale representative surveys have assessed this type of information.

We found no cultural variation for single-item ratings of life satisfaction and global health possibly because they are more holistic indices of well-being that reflect more than individuals' physical and mental health status. For instance, people may base global health ratings not only on existing health problems but also on their health behaviors (Krause & Jay, 1994), and people may judge life satisfaction according to how well close others are doing in addition to themselves (e.g., Diener et al., 2000). Further, finding no variation in the single-item global measures also suggests that negative feelings are not more predictive of negative self-assessments overall in the U.S. than Japan.

This study had the advantage of assessing six physical and mental health outcomes. While all were self-report, two were relatively objective reports of diagnosed or observable health conditions (e.g., diabetes, ability to carry groceries). Further, self-reports of physical and mental health have been reliably established as useful predictors of long-term health and mortality outcomes (e.g., Lee, 2000). Consistent with our findings, negative emotions also predict physiological outcomes (i.e., elevated pro-inflammatory markers) in the U.S. but not in Japan (Miyamoto et al., 2013). Moreover, studies inducing negative affect states in the laboratory find that East Asians show less intense reactivity than European Americans across self-reported experience, expressive behavior, and physiological function (e.g., Mauss et al., 2010). Nevertheless, it is possible these effects are bidirectional such that poorer health may lead to feeling bad more in cultures that have come to expect good health. Our study was also limited in that we were unable to compare our findings to those in less "developed" societies. Future studies may also reveal, as Pressman and colleagues originally speculated, that the link between negative emotions and compromised health may be of particular salience in "first world" countries when using more specific, multi-item measures of physical and mental health and especially in contexts where emotions are construed as relatively internal, individualized entities (e.g., Uchida et al., 2009).

Findings that reveal the significance of how negative affect is construed have important implications for health care among diverse populations. Interventions-chemical or behavioral-aimed at reducing or relieving negative affect, while essential in some contexts, may not be universally desired or helpful. The words of a Japanese psychiatrist underscore

the cultural distinction observed here: "Melancholia, sensitivity, fragility -- these are not negative things in a Japanese context. It never occurred to us that we should try to remove them, because it never occurred to us that they were bad" (Tooru Takahashi, Japan National Institute of Mental Health, as cited in Schulz, 2004, p.39).

Acknowledgement

This research was supported by the National Institute on Aging (5R37AG027343) to conduct a study of Midlife in Japan (MIDJA) for comparative analysis with MIDUS (Midlife in the U.S., P01-AG020166).

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Figure 1.

Higher frequency of negative affect predicts worse health in the U.S. ($n = 1,741$) than in Japan ($n = 988$). Note. Degree of association between negative affect and health is represented by standardized beta coefficients. *** $p < .001$; ** $p < .01$.