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Emotional Experience Across Adulthood: The Theoretical Model of Strength and Vulnerability Integration

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Abstract

Strength and vulnerability integration (SAVI) is a theoretical model that predicts changes in emotional experience across adulthood. A growing number of studies find that as people age, they become more adept at using thoughts and behaviors to avoid or mitigate exposure to negative experiences. People gradually acquire this expertise over a lifetime of experiences and are more motivated to regulate their emotions because of perceptions of time left to live. SAVI further posits that aging is associated with physiological vulnerabilities that make regulating high levels of emotional arousal more difficult. In situations in which people experience high levels of distress, age differences that normally favor older adults in the use of emotion-regulation strategies will be attenuated (and may even be nullified or reversed), and the physiological consequences of sustained emotional arousal will be more costly for older adults. In this article, we describe SAVI and discuss recent studies supporting its predictions.

Keywords

aging, emotion regulation, emotional well-being, affective reactivity, stress reactivity

Emotional well-being in later life presents a conundrum. In the American culture, the “golden years” call to mind images of calm, sweet, and loving grandparents. This positive stereotype is countered, however, by another, in which older adults are characterized as depressed, lonely, and “grumpy old men.” How do we make sense of these opposing views of emotional well-being in later life? The theoretical model of strength and vulnerability integration (SAVI) was formed to explain seeming inconsistencies in the empirical literature regarding age differences in various aspects of emotional experience (Charles, 2010; Charles & Piazza, 2009). For example, affective well-being (i.e., reports of relatively high levels of positive and low levels of negative emotions or emotion states) increases across adulthood, but sometimes these increases in well-being level off in old age and even reverse in direction (e.g., Teachman, 2006). Below, we describe SAVI and present new findings underscoring hypothesized strengths and vulnerabilities of aging that influence emotional well-being. Although negative emotions are necessary for identifying danger and motivating escape and survival, when distressing feelings continue

long after the threat is over, they can become dysfunctional. Better emotion-regulation abilities, therefore, are generally associated with higher levels of affective well-being. By understanding the conditions under which age-related strengths or vulnerabilities in regulating emotional experiences predominate, we can predict patterns of emotional well-being across adulthood.

Affective Well-Being Across Adulthood

Researchers have long been interested in addressing why levels of affective well-being often increase with age. For example, one study of more than 340,000 people ranging from 18 to 85 years old found a U-shaped pattern for reported enjoyment and happiness, with rates highest among people in their 70s (Stone, Schwartz, Broderick, &

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Deaton, 2010). Reports of worry and anger decreased with each successively older age group, although sadness stayed essentially at the same level. Given pervasive declines in cognitive and physical functioning, the general increase in well-being observed in a number of longitudinal and cross-sectional studies is often referred to as “the paradox of aging.”

Theorists have offered various explanations for this paradox. For example, dynamic integration theory (Labouvie-Vief, 2003) posits that declines in cognitive resources make older adults more vulnerable to highly arousing situations. In response, older adults compensate by prioritizing the dampening of negative affect. Another explanation comes from socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999), which predicts that motivational goals shift as people grow older, such that emotional goals become increasingly important. As a result, older adults strive to maintain and maximize emotional well-being to a greater extent than do younger adults. Other researchers have discussed the importance of life experience in providing older adults with the knowledge to effectively regulate their emotions (e.g., Blanchard-Fields, 2007), and still others have focused on the changing environmental demands that free older adults from distressing job-related or child-rearing responsibilities (e.g., Lawton, 2001).

Questions remain, however, as to why we sometimes see leveling off of negative affect and decreases in positive affect with age (see review by Charles & Carstensen, 2010). What happens during late life—beginning around 65 to 80+ years old (e.g., Teachman, 2006)—for a subset of people that changes the trajectory of their well-being? SAVI addresses this question, as described hereafter.

Older Age Is Related to Strengths in Cognitive-Behavioral Emotion-Regulation Skills

The process model of emotion regulation describes how different types of strategies aimed to regulate one’s emotions are used before, during, and after exposure to a negative event (Gross, 1998). Anticipatory strategies that allow people to avoid the experience of negative affect altogether are the most effective, but response-focused attention/reappraisal strategies also reduce distress that is experienced during or after the stressor (e.g., Gross, 1998). A growing number of studies indicate that older adults’ strengths lie in their use of “cognitive-behavioral” strategies (a term taken from the field of clinical psychology to refer to thoughts and behaviors people use to regulate their emotional states) to avoid exposure to negative experiences in their daily lives. Specifically, older adults have a greater likelihood of (and are arguably better at) engaging in cognitive-behavioral strategies aimed

at (a) avoiding or removing oneself from aversive events, (b) attending to more positive and less negative aspects in the environment, and (c) appraising current situations and reappraising/recalling past events as less threatening or more positive. For example, with regard to the first strategy, when describing conflict situations, older adults more often report letting the situation pass and avoiding further confrontation than do younger adults (Birditt & Fingerman, 2005). These preemptive strategies often lead to more favorable outcomes for older adults: When people ranging from 25 to 74 years old report having been in a situation in which they avoided interpersonal conflict, successively older adults exhibit less negative emotional reactivity (i.e., smaller increases in negative affect) than relatively younger adults (Charles, Piazza, Luong, & Almeida, 2009). In addition, when faced with negative information, older age is related to a greater tendency to direct attention away from negative and toward more positive stimuli (Knight et al., 2007), to construct more benign appraisals (Hart & Charles, 2013), and to remember the past more positively (see review by Reed & Carstensen, 2012).

The Basis of the Strengths Is Time: Time Lived and Time Left to Live

More frequent and effective use of cognitive-behavioral strategies is hypothesized to relate to the concept of time, both time lived and perceptions of time left to live. Whereas experience from time lived provides people with expertise in emotion regulation (e.g., Blanchard-Fields, 2007), perceptions of time left to live, posited by socioemotional selectivity theory, motivate older adults to engage in these strategies more often than younger adults (Carstensen et al., 1999). An indirect example in which life experience is greater with age and may aid in emotion regulation lies in social expertise—an area where older adults often out-perform younger adults (Hess & Kotter-Grühn, 2011). When evaluating potential social partners, people high in social expertise weight information about moral character more heavily than other traits (Hess & Kotter-Grühn, 2011). Moral traits play important roles in predicting emotional outcomes of the interaction. For example, a dishonest person usually presents a bigger threat to one’s emotional well-being than one who is lazy. Most older adults make socioemotional judgments consistent with high levels of social expertise, but among younger adults, only those with high levels of social activity (and thus more social experiences) make similar judgments (Hess, Osowski, & Leclerc, 2005).

SAVI incorporates socioemotional selectivity theory to explain why older age is related to increased motivation to maintain and enhance one’s well-being. According to socioemotional selectivity theory, emotion-related goals,

such as maintaining high levels of well-being and engaging in meaningful emotional experiences, assume priority in later life when perceptions of time left to live are shortened (Carstensen et al., 1999). These shifts occur gradually throughout adulthood and explain age-related increases in the motivation to use cognitive-behavioral strategies to optimize well-being (for a review, see Reed & Carstensen, 2012).

Age-related advantages are observed in situations in which people can use cognitive-behavioral strategies to avoid or mitigate negative experiences

SAVI predicts that older adults are most likely to exhibit greater levels of emotional well-being, compared with younger people, when they are asked to report their overall affective well-being (vs. reactivity to stressors) and in situations in which they are able to avoid or reduce their exposure to a negative situation. In situations in which people are experiencing distress and must regulate these emotion states, SAVI predicts that age differences in emotional responses will be attenuated and may even disappear or reverse in direction. Likewise, age differences in emotional well-being are larger for evaluations of emotional states across longer time intervals (e.g., “How happy have you been in the last month?”) as opposed to reactions to current situations (“How happy are you right now?”).

We mentioned that older adults exhibit less negative affective reactivity when they report having avoided a conflict than do relatively younger adults (Charles et al., 2009). We interpret this situation as one in which people proactively reduce their exposure to a negative event (in this case an interpersonal conflict), and older age is related to a better outcome. When people cannot effectively use strategies to avoid high levels of distress, however, SAVI posits that age-related benefits in emotional functioning are attenuated. This is exactly what we found. Successively older adults exhibit lower emotional reactivity to avoided arguments (i.e., when the stressor is primarily avoided) but similar emotional reactivity when interpersonal conflict actually occurs (i.e., when the stressor cannot be avoided).

Circumstances that hinder the accessibility and use of cognitive-behavioral strategies

Both internal and external factors create circumstances in which people are unable to either preemptively avoid stressors or successfully use cognitive-behavioral strategies to reduce exposure to caustic events. These circumstances include social isolation, neurological dysregulation, and

exposure to chronic and unpredictable stressors and stressor overloads. Unfortunately, some of these circumstances become more common in later life. Social isolation or a lack of social belonging—which may arise from bereavement and loss of close friends and family members—is a circumstance related to greater difficulty regulating high levels of distress in later life. For example, in older adults, loneliness is related more strongly to greater systolic blood pressure reactivity to, and less pronounced recovery from, a laboratory stressor, compared with younger adults (Ong, Rothstein, & Uchino, 2012).

In addition, SAVI predicts that neurological dysregulation decreases one’s ability to avoid or regulate negative experiences. The model of cognitive control states that older adults need sufficient cognitive resources to use effective emotion-regulation strategies; even temporarily decreasing cognitive resources through divided-attention paradigms can eliminate age-related benefits in emotion regulation (see review by Kryla-Lighthall & Mather, 2009). On the basis of this model, SAVI hypothesizes that cognitive declines impair older adults’ abilities to use emotion-regulation strategies and subsumes cognitive decline under the term “neurological dysregulation” on the basis of its biological pathogenesis.

Finally, unremitting chronic stressors or stressor overloads make it more difficult for older adults to use strategies recognized as age-related strengths in emotion regulation. For example, in one study of 14- to 86-year-olds, older age was related to greater affective reactivity to stressor overloads—a situation that taxes older adults’ abilities to use cognitive-behavioral strategies effectively (Wrzus, Müller, Wagner, Lindenberger, & Riediger, 2013). In addition, terminal decline—a 3- to 5-year period of declining physical and cognitive states preceding death (e.g., Gerstorf et al., 2010)—is a time during which chronic stressors, in addition to possible cognitive decline, make the use of effective emotion regulation more difficult if not impossible, resulting in increased levels of distress. Overloads do not provide the time necessary to recover from the stressful events, to reappraise the situation more benignly, and to construct memories that are more positive. When faced with unpredictable chronic stressors, people are in a state of continual emotional arousal—a state hypothesized to be more costly for older, more physiologically vulnerable systems.

Age-Related Physical Vulnerabilities Make Regulating High Levels of Sustained Physiological Arousal More Costly

As described in the preceding section, SAVI posits that life experience and shifts in motivational goals are not always sufficient to maintain high levels of affective

well-being. Sometimes, older adults experience high levels of distress. The empirical literature has established age-related declines in two systems implicated in the physiological response to distress: the cardiovascular system and the neuroendocrine system. Cardiovascular changes are common, such that vasculature thickens and becomes less pliable in the cardiac lining, valves, and arterial walls (see review by North & Sinclair, 2012). Reductions in pliability may contribute to greater blood pressure reactivity and slower recovery to baseline levels among older adults relative to younger adults after an emotional stressor (e.g., Ong et al., 2012).

In the neuroendocrine system, researchers have documented age-related changes in the hypothalamic-pituitary-adrenal (HPA) axis, a cascading response system activated when people feel threatened, which begins in the hypothalamus and ends with the release of cortisol into the bloodstream (e.g., Giordano et al., 2005). Older age is related to less efficient modulation of HPA activity, and researchers hypothesize that once people experience high levels of activation, cortisol levels remain elevated for longer periods of time (Giordano et al.). SAVI posits that reducing high, sustained levels of physiological arousal will be more difficult for older adults than younger adults and more costly to their less robust physical systems. Prolonged arousal is related to a variety of negative outcomes, including poorer memory, decreases in immune functioning, and greater physical morbidity and mortality (e.g., McEwen, 1998).

Several recent studies have shown that when older adults cannot avoid or effectively regulate their emotions in highly distressing situations, they exhibit greater physical consequences than younger people. For example, in a study reviewed previously, compared with younger people, older adults showed reduced heart rate variability (i.e., poorer physiological regulation) only when they encountered stressor overloads (Wrzus et al., 2013). In another study of participants ranging from 34 to 85 years old, when adults older than 50 years experienced more distress than usual, they also had greater levels of daily cortisol output (Piazza, Charles, Stawski, & Almeida, 2013). People under 50 years old did not show this elevated pattern, suggesting that high levels of distress have greater physiological consequences for older adults. Together, these studies suggest that when older adults cannot capitalize on cognitive-behavioral strategies, age-related vulnerabilities lead to greater physiological reactivity and poorer recovery, which make it more difficult for older adults to mitigate these experiences.

Summary

The literature reviewed in this article suggests that across adulthood, people acquire expertise and motivation to

regulate their emotions effectively. Some situations that increase in prevalence with age (e.g., social isolation, neurological dysregulation, chronic stressors) preclude the use of these strategies on a daily level. In these situations, older adults will exhibit equal to lower levels of emotional well-being and greater physical consequences as a result of their physiological vulnerabilities compared with younger people.

Future Directions

SAVI has garnered initial support, but more studies are needed to test and refine these predictions. For example, stronger ties need to be forged between cognitive-behavioral strategies and actual affective outcomes (Charles & Carstensen, 2010). Although these strategies seem to be effective for older adults, studies need to examine age differences in their frequency and use and the effect of each strategy on emotional states. A second contention is that emotion regulatory strengths are developed with greater life experience, yet difficulties in assessing life experience limit this current prediction. Examining groups of people who vary in specific emotion-regulation strategies through their occupational or social histories may illuminate the role of life experience on emotion regulation. In addition, although time perspective has been studied and supported empirically in many studies, terminal decline and imminent death may change its association with affective experience. It would be difficult to believe, for example, that a person told she has 6 months to live has higher levels of well-being than a person told she has 2 years to live because her temporal horizon is relatively shorter.

We discussed how age-related advantages are strongest in situations in which older adults can use strategies to avoid or mitigate negative experiences. Studies that measure the use of these strategies, the extent of their use, and the boundary conditions defining them are needed. SAVI also posits that neurological dysregulation reduces the ability to use cognitive-behavioral strategies. Questions remain, however, regarding what constitutes dysregulation. The cognitive-control model suggests that executive functioning underlies older adults' successful emotion regulation (Mather & Knight, 2005), but it is unclear at what point normative age-related declines in executive functioning might influence emotion regulation. It is possible that with a rich lifetime of experiences, a relatively low threshold for executive functioning is required to use these strategies and that older adults require less cognitive effort for their successful employment than younger adults (Scheibe & Blanchard-Fields, 2009). Or it could be that even subclinical cognitive declines hinder emotion-regulation abilities (Mather & Knight, 2005).

We reviewed studies showing that age-related declines in the ability to regulate physiological arousal lead to greater physiological costs for older adults. Studies of emotion and aging have focused predominantly on cardiovascular and neuroendocrine (i.e., HPA) processes; it is unclear whether these predictions should refer only to these two areas of functioning or other systems are implicated in this phenomenon. Further examination of how age-related declines specifically influence emotion regulation is also necessary, as well as how physiological reactivity and recovery correlate with affective experience. Physiological and subjective emotional responses may become decoupled with age, which may explain why some studies find that older adults report reduced subjective affect reactivity but greater blood pressure reactivity (Uchino, Berg, Smith, Pearce, & Skinner, 2006). In addition, studies of brain activation in response to emotional stimuli have found that older adults may activate areas related to emotion control more than younger adults, who instead have higher activation in areas related to perceptual processing and memory (see review by St. Jacques, Bessette-Symons, & Cabeza, 2009). Thus, some age-related changes in physiological processes may actually facilitate age-related strengths in emotion regulation.

Finally, we have made predictions on the basis of hypothesized developmental changes, but the literature on emotion and aging is still composed predominantly of cross-sectional research. Only longitudinal investigations can test whether these differences are truly developmental or are the result of cohort effects.

Conclusion

We review findings supporting the contention that cognitive-behavioral emotion regulatory strengths of aging allow older adults to avoid or mitigate their exposure to negative events in their daily lives. In contrast, age-related vulnerabilities lead to greater costs when confronted with high, sustained levels of emotional distress. Integrating the strengths and vulnerabilities of aging allows us to predict when we will expect to see age-related differences in emotional well-being and when we will not. Successful aging is a story of the artful dodger, and only by pushing people to their limits are the lessons and wisdom of age overshadowed by age-related declines.

Recommended Reading

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- Charles, S. T. (2010). Strength and vulnerability integration: A model of emotional well-being across adulthood.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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