



Published in final edited form as:

Child Dev. 2015 July ; 86(4): 1272–1281. doi:10.1111/cdev.12370.

Spontaneous Self-Distancing and Adaptive Self-Reflection Across Adolescence

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Abstract

Experiments performed primarily with adults show that self-distancing facilitates adaptive self-reflection. However, no research has investigated whether adolescents *spontaneously* engage in this process or whether doing so is linked to adaptive outcomes. In this study, 226 African American adolescents, aged 11 to 20, reflected on an anger-related interpersonal experience. As expected, spontaneous self-distancing during reflection predicted lower levels of emotional reactivity by leading adolescents to reconstrue (rather than recount) their experience and blame their partner less. Moreover, the inverse relation between self-distancing and emotional reactivity strengthened with age. These findings highlight the role that self-distancing plays in fostering adaptive self-reflection in adolescence, and begin to elucidate the role that development plays in enhancing the benefits of engaging in this process.

When children and adults experience strong negative emotions, they often try to make sense of them (e.g., Heider, 1958; Kelly, 1955; Park, 2010). Although this meaning-making process works well at times (e.g., Pennebaker & Chung, 2007; Wilson & Gilbert, 2008), it can also break down, leading people to ruminate and feel worse (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008), which raises the question: Why do attempts to understand feelings sometimes succeed and other times fail?

According to one line of work performed primarily with adults, the ability to self-distance or “take a step back” when reflecting on emotional experiences plays a critical role in allowing people to work through negative experiences in ways that promote meaning making rather than emotional reactivity (Kross & Ayduk, 2011). This process could be especially useful in regulating emotions during adolescence, a period characterized by more powerful and frequent negative emotional experiences than any other (Larson, Csikszentmihalyi, & Graef, 1980; Larson & Lampman-Petratis 1989; Larson, Moneta, Richards, & Wilson, 2002). Yet, no research that we are aware of has examined whether the spontaneous activation of self-distancing explains normative differences in adaptive versus maladaptive self-reflection among adolescents.

In the current study, we addressed this question using a developmental framework that allowed us to examine (a) whether spontaneous self-distancing is related to adaptive

emotional responses in adolescence, and (b) whether the use or efficacy of spontaneous self-distancing strategies varies with age.

Self-Distancing and Emotion Regulation

Psychological distancing—from the self, the here, the now, or reality—allows us to mentally transcend the immediate, egocentric experience of a situation (Carlson & Zelazo, 2008; Cocking & Renninger, 1993; Sigel, 1970; Trope & Liberman, 2010), a necessary step in exerting conscious control (Carlson & Zelazo, 2008; Fujita, Trope, Liberman, & Levin-Sagi, 2006; Liberman & Trope, 2008; Mischel & Rodriguez, 1993; Zelazo, 2004). Experiments have demonstrated the benefits of psychological distancing on a variety of self-control tasks in both adults (e.g., Fujita et al., 2006; Kross et al., 2014) and children (e.g., Mischel & Baker, 1975; Prencipe & Zelazo, 2005; White & Carlson, in press). Applied to emotion regulation, psychological distancing attenuates negative emotion by shifting attention away from the concrete details of one's experience, thereby allowing for adaptive self-reflection (Davis, Gross, & Ochsner, 2011; Gruber, Harvey, & Johnson, 2009; Katzir & Eyal, 2013; Kross & Ayduk, 2011; Ochsner & Gross, 2008; Wisco & Nolen-Hoeksema, 2011).

One type of psychological distancing that has proven particularly effective at increasing adaptive self-reflection in experimental contexts is self-distancing, defined as taking an outsider's perspective on the self. For example, in one study, adults were randomly assigned to recall a recent angry experience (Kross, Ayduk, & Mischel, 2005) through a self-immersed perspective (i.e., through their own eyes) or a self-distanced perspective (i.e., through the eyes of an observer or “fly on the wall”). Analyzing negative experiences from a self-distanced perspective led participants to focus less on recounting the emotional details of the event and more on reconstructing it in ways that promoted insight and closure. In turn, this shift in thought content led to lower levels of emotional reactivity. (See also Kross & Ayduk, 2008 for similar results with sad experiences.)

To date, only one experiment has investigated the role that self-distanced reflection plays in allowing children to work through negative past experiences (Kross, Duckworth, Ayduk, Tsukayama, & Mischel, 2011). Consistent with research on adults, fifth graders who were randomly assigned to reflect on a painful autobiographical experience from a self-distanced perspective, compared to a self-immersed perspective, were less upset after reflecting on it. This decrease in negative emotion was mediated by a shift in thought content (i.e., more reconstrual and less recounting) as well as a decrease in interpersonal blame. Importantly, despite some research in the clinical domain that equates distancing with emotional detachment (e.g., Foa, Huppert, & Cahill, 2006; Roecker, Dubow, & Donaldson, 1996), self-distancing did not lead to avoidance in any of these studies. Rather, it led participants to approach the event with greater objectivity.

But how does self-distancing play out in “real life”? While experiments are instrumental in establishing causality, they cannot illuminate how individuals manage their emotions in vivo. Only recently have researchers begun to address this issue (Ayduk & Kross, 2010; Grossman & Kross, 2010; Verduyn, Van Mechelen, Kross, Chezzi, & Van Bever, 2012). One recent series of studies (Ayduk & Kross, 2010) revealed that spontaneous self-distancing, like

experimentally manipulated self-distancing, was related to adaptive shifts in the content of adults' thoughts about upsetting situations (i.e., more reconstrual and less recounting) and in turn, to lower emotional reactivity.

Virtually nothing is known, however, about the development of spontaneous self-distancing. By adulthood, spontaneous self-distancing is an established process (Ayduk & Kross, 2010; Verduyn et al., 2012), but we do not know when it first makes its way into children's or adolescent's regulatory playbook. If self-distancing follows a similar developmental trajectory to other regulatory strategies, such as distraction or reappraisal, its use should increase from childhood through adolescence (Campos, Frankel, & Camras, 2004; Garnefski & Kraaij, 2006; Hodgins & Lander, 1997; Mischel & Mischel, 1983; Riediger & Klipker, 2014; Williams & McGillicuddy-De Lisi, 1999).

Moreover, we do not know whether the effects of spontaneous self-distancing change with age. Continued maturation of the prefrontal cortex, an area critical to self-regulation (e.g., Casey et al., 2010; Ochsner & Gross, 2008; Spear, 2000), as well as practice using these strategies (Riediger & Klipker, 2014) could contribute to increased efficacy of spontaneous self-distancing across adolescence. Consistent with this hypothesis, experiments show that emotion regulation strategies grow in efficacy across adolescence (e.g., McRae et al., 2012). Notably, one recent study showed that increasing perceived spatial distance (a form of psychological distancing) from aversive images attenuated negative affect more in older adolescents than in younger adolescents (Silvers et al., 2012). Together, these data suggest that spontaneous self-distancing could be widely implemented across adolescence, but that its efficacy might increase with age.

The Current Study

Adolescents were prompted to reflect on a recent anger-inducing experience. They were then asked to indicate the extent to which they spontaneously self-distanced while reflecting on their experience and to report on emotional and interpersonal outcomes related to the experience. We expected greater levels of spontaneous self-distancing during reflection to relate to lower emotional reactivity. We further hypothesized that this relation would be mediated by increases in reconstrual (rather than recounting) of the situation and decreases in interpersonal blame, mirroring the mechanisms revealed by previous experimental work (Kross & Ayduk, 2008; Kross et al., 2005, 2011). Finally, we explored whether the use of self-distancing strategies and their relation to emotional reactivity varied as a function of age across the adolescent period.

Method

Participants

Participants were 236 adolescents from a public middle and high school in Washington D.C. in the spring of 2013. The sample was entirely African American, reflecting the demographics of the area. Opt-out parental consent and active child assent were obtained for all participants. At the time of testing, 4% of participants reported that they were unable to

recall an anger-inducing event and were therefore excluded from final analyses (Final $N=226$; 56% female; $M_{\text{age}} = 14.43$, $SD_{\text{age}} = 2.06$; range = 11- to 20-years-old).

Procedure and Measures

Adolescents were tested in a large conference room at their school under the supervision of research staff. Child assent and surveys were administered on laptop computers to groups of approximately 15–20 adolescents using Qualtrics survey software.

Memory Prompt—Following a brief introduction, adolescents were prompted to think of a recent event that made them angry. They received the following series of instructions via audio recording (adapted for adolescents from Kross et al., 2011).

No matter how well two people get along, sometimes there are times when they get very mad at each other, so mad that they feel like they are going to explode. They might get annoyed about something the other person does, get into fights because they are in bad moods, or argue with each other.

Take a few minutes right now to think about a time when you got very mad at someone. Try to remember a specific fight or argument that happened not too long ago and that still makes you upset when you think about it.

Once participants thought of an event that made them angry (recall time: $M = 49.50$ seconds, $SD = 15.86$), they were cued to close their eyes and recall the experience in their imagination. Finally, when they indicated that they were ready to proceed, they were prompted to reflect on their feelings about the situation for at least 30 seconds.

Take some time to try to understand the causes and reasons for the thoughts and feelings you experienced. Why did you feel the way you did? What were the causes and reasons for your feelings? Take your time to really understand why you felt the way you did.

Spontaneous Self-distancing—Following prior research (Ayduk & Kross, 2010; Kross et al., 2011), we assessed self-distancing by asking adolescents to rate the following two items immediately after they reflected on their memory: “When you saw the fight again in your imagination a few moments ago, how much did you feel like you were seeing it through your own eyes versus watching the fight happen from a distance (like watching yourself in a movie)?” (1 = *completely through my own eyes*, 7 = *completely from a distance*), and “When you saw the fight again in your imagination a few moments ago, how far away from the fight did you feel?” (1 = *very close*, 7 = *very far*). (For analyses using only these two self-distancing items, see Appendix S1).

Given recent research suggesting that various dimensions of distance share the same underlying meaning (Maglio, Trope, & Liberman, 2013; Trope & Liberman, 2010), we also collected information on two additional forms of psychological distance in an effort to increase the precision of our measurement. Hypothetical distance was assessed by asking adolescents “When you thought about the fight a few moments ago, how much did it feel real or imagined?” (1 = *very real*, 7 = *very imagined*). Temporal distance was measured by asking “When you thought about the fight a few moments ago, how long ago did it feel like

the fight happened?” (1 = *right now*, 7 = *a long time ago*). We averaged ratings on these four questions to compute a spontaneous distancing composite score ($\alpha = .60$, $M = 3.58$, $SD = 1.24$.)

Emotional Reactivity—After the recall exercise, adolescents rated their current emotional state using three items: “Thinking about the event still makes me feel upset (for example, angry, sad, hurt, rejected),” “When I think about the fight now, my feelings are still pretty strong,” and “When I think about the fight now, I feel the same way I did when the fight really happened” (1 = *completely disagree*, 7 = *completely agree*). Ratings were averaged to create an emotional reactivity index ($\alpha = .73$, $M = 4.14$, $SD = 1.74$).

Thought Content: Recounting Versus Reconstruct—Next, adolescents rated the degree to which they recounted (i.e., thought about the specific chain of events that unfolded during their fight) and reconstructed (i.e., realized something that made them think differently or experienced insight regarding the fight) the event. Adolescents rated their agreement (1 = *completely agree*, 7 = *completely disagree*) with the statement “When I thought about this fight, I saw it happening step-by-step, from beginning to end” to operationalize recounting ($M = 4.88$, $SD = 1.89$). Additionally, adolescents rated three reconstruct items: “When I thought about the fight, I realized something that makes me think differently about why I felt the way I did,” “When I thought about the fight, I realized something that made the fight bother me less,” and “When I thought about the fight, I understood why I reacted the way I did better than when it first happened.” Post hoc inspection of adolescents’ ratings on the third reconstruct item, regarding understanding, revealed that it was unexpectedly related to greater emotional reactivity ($r = .19$, $p < .01$), a pattern opposite to the first two reconstruct items ($r_s = -.06$ and $-.09$, respectively) as well as previous research (e.g., Ayduk & Kross, 2010). Therefore, this item was dropped from further analyses (analyses including this item are provided in Appendix S2) and a reconstruct composite was calculated by averaging the two remaining items ($r = .20$, $p < .01$, $M = 4.01$, $SD = 1.55$). Finally, following prior research (Ayduk & Kross, 2010; Kross & Ayduk, 2008; Kross et al., 2005, 2011), we assessed the balance of adaptive versus maladaptive reflection by subtracting reconstruct from recounting such that higher scores reflected the predominance of recounting relative to reconstructing ($M = 0.86$, $SD = 2.36$).

Blame—Blame was measured through ratings (1 = *completely disagree*, 7 = *completely agree*) on the item, “When I thought about this fight, I still blamed the other person” ($M = 5.04$, $SD = 2.07$).

Forgiveness—Forgiveness was measured through ratings (1 = *completely disagree*, 7 = *completely agree*) on the item, “When I thought about this fight, I realized something that makes me forgive the person I fought with” ($M = 3.59$, $SD = 2.25$).

Avoidance—Avoidance was measured through ratings (1 = *completely disagree*, 7 = *completely agree*) on the item, “When I was first asked to remember this fight, I tried not to think about it” ($M = 3.55$, $SD = 2.29$).

Covariates—Because older memories are inherently more distanced from the here and now than newer memories (Ayduk & Kross, 2010), we asked adolescents to specify how long ago the incident they described took place (i.e., memory age; 1 = *a few days ago*, 2 = *a few weeks ago*, 3 = *a month ago*, 4 = *a few months ago*, 5 = *a year ago or more*; $M = 3.52$, $SD = 1.39$, $median = 4$). Likewise, adolescents were also asked to rate (1 = *completely disagree*, 7 = *completely agree*) the accessibility of an angry memory using the item, “It was very hard for me to remember a specific fight when I got very mad at someone” ($M = 3.61$, $SD = 2.30$).

Results

Emotional Reactivity

As predicted, adolescents who engaged in greater levels of spontaneous self-distancing experienced less emotional distress when recalling an anger-inducing experience, $r = -.43$, $p < .001$. This relation held after controlling for memory age and accessibility, $pr = -.40$, $p < .001$. (See Table 1.)

Thought Content (Recounting – Reconstruct)

Thought content was negatively related to self-distancing, $r = -.26$, $p < .001$, and remained so after controlling for memory age and accessibility, $pr = -.23$, $p < .001$, indicating that greater spontaneous self-distancing was associated with decreased predominance of recounting over reconstructing.

Blame and Forgiveness

Adolescents who distanced themselves more from the experience were less likely to place blame on their partner in the recalled fight, $r = -.21$, $p < .001$. This relation held after controlling for age and accessibility of the memory, $pr = -.19$, $p < .01$. Self-distancing was not, however, related to forgiving their partner, $r = .10$, $p = .13$.

Avoidance

Self-distancing was not related to attempts to avoid thinking about the experience, $r = -.02$, $p = .79$.

Statistical Mediation

Several previous experiments have established a causal pathway in which thought content (Kross & Ayduk, 2008; Kross et al., 2005, 2011) and blame (Kross et al., 2005, 2011) mediate the relation between self-distancing and emotional reactivity. In order to determine whether the current data are consistent with this model we conducted bootstrapping tests (Hayes, 2013) with 10,000 replications (See Figure 1). Indirect effects were significant through thought content (indirect effect = -0.05 , bootstrapped 95% CI [-0.11 to -0.01]) and blame (indirect effect = -0.05 , bootstrapped 95% CI [-0.11 to -0.01]), thus lending support to the possibility that spontaneous self-distancing relates to lower emotional reactivity in adolescents, at least in part, through its relation to the content of one’s thoughts about and interpersonal reactions to a negative experience.

Age Effects

Age was examined as a moderator of the relation between self-distancing and emotional reactivity in a regression model controlling for memory age and accessibility (see Table 2). The strength of the inverse relation between spontaneous self-distancing and emotional reactivity increased significantly across adolescence, $B = -0.14$, $p < .001$ (see Figure 2). A follow-up Johnson-Neyman analysis (Hayes, 2013; Johnson & Neyman, 1936) revealed that greater spontaneous self-distancing was significantly related to lower levels of emotional reactivity in all but the youngest participants (> 11.72 years).

Discussion

This research is the first to demonstrate that adolescents spontaneously self-distance when reflecting over negative memories and that this process is linked to adaptive emotion regulation. In line with previous research with adults (Ayduk & Kross, 2010), we found that the more adolescents spontaneously self-distanced when reflecting on an anger-inducing event, the less they upset they became. Moreover, the way adolescents thought about the event mediated this relation. Specifically, adolescents who self-distanced experienced less emotional reactivity, at least in part, because they blamed others less and focused on reconstruing their fight in meaningful ways (rather than recounting the details). Overall, the current results provide external validity to previous experimental work outlining the causal effects of self-distancing on negative emotion (Kross et al., 2005, 2011) and show that these findings generalize to adolescents and under-studied minority populations. They further suggest that spontaneous self-distancing could play an important role in “real life” adolescent emotion regulation.

Although all adolescents in our sample reported comparable levels of spontaneous self-distancing, associated decreases in emotional reactivity began around age 11 and grew stronger across adolescence. These findings are consistent with experimental work showing that with age adolescents become more adept at regulating emotion by imagining physical distance from a disturbing image (Silvers et al., 2012). While the cross-sectional design of this study limits conclusions about developmental change, the current results are consistent with the possibility that older adolescents are better equipped to capitalize on self-distancing processes than younger adolescents. We can only speculate as to the mechanisms underlying these trends. One possibility is that with age comes experience. Older adolescents, who have encountered more stressful life events (Larson & Ham, 1993), are likely to have had more opportunities to practice regulatory strategies (Riediger & Klipker, 2014), including self-distancing. Another possibility is that older adolescents' efforts could be bolstered by maturation of late developing brain regions such as the prefrontal cortex, which is implicated in numerous regulatory processes (e.g., Casey et al., 2010; Ochsner & Gross, 2008; Spear, 2000). It is also possible that age-related differences in the efficacy of self-distancing could be attributable to the increasing diversity, frequency and intensity of emotional experiences across adolescence; the transition toward adulthood brings about increasing potential for conflict as adolescents seek independence from parents, become more invested in peer relationships, and navigate romantic relationships (Riediger & Klipker, 2014). Our hope is

that longitudinal research will further elucidate the role that development plays in this process.

Adolescents who spontaneously self-distanced tried to understand their problems, not avoid them (Ayduk & Kross, 2010; Kross & Ayduk, 2008, 2009; Kross et al., 2011, 2012). In this vein, it is important to highlight that we studied spontaneous self-distancing in the context of meaning-making in the current work—i.e., as adolescents were trying to make sense of their negative past experience. Numerous studies (e.g., Kross & Ayduk, 2011; Kross et al., 2005) have underscored the importance of this combination—self-distancing *and* “asking why”—for achieving adaptive outcomes. Contrariwise, self-distancing without attempts to make meaning can induce further rumination (Kross et al., 2005) and negative emotion (Rood, Roelofs, Bogels, & Arntz, 2012), and lead to avoidance (e.g., Kenny & Bryant, 2007). Thus, the success of self-distancing might hinge on how adolescents approach their emotional challenges when spontaneously self-distancing.

Notably, self-distancing was associated with decreased blame, but not increased forgiveness. Although this may seem counterintuitive, reductions in blame need not lead to forgiveness. On average, even spontaneous self-distancers in our study indicated that they still placed some blame on others. Thus, it is possible that they were not yet ready to forgive or that their transgressors did not deserve forgiveness. Importantly, our data suggest that even without forgiveness, placing less blame on others can be adaptive.

Limitations and Future Directions

Future research is needed to explore the association between self-distancing and other negative emotions in adolescence. Self-distancing can have positive effects on anxiety (Kross et al., 2014) and depression (Kross & Ayduk, 2009) in adults, but whether adolescents could benefit in the same way is unknown. Given the increasing prevalence of psychopathology across adolescence (e.g., Hankin et al., 1998; Kessler et al., 2005), it will be important to evaluate the role of psychological distancing on emotion regulation in clinical populations. In fact, the benefits of self-distancing have been shown to increase with greater emotional severity (Kross & Ayduk, 2009; Kross et al., 2012), suggesting that adolescents who suffer from emotional psychopathologies might have the most to gain by using this strategy.

Due to the correlational design of this study, we cannot make causal claims on the effect of spontaneous self-distancing on emotional reactivity or the mediation model. However, it is important to note that the present analyses were based on previous experiments (Kross et al., 2005, 2011, 2012; Kross & Ayduk, 2008), which have demonstrated causality by manipulating self-distancing. The current results bear a remarkable resemblance to those findings.

Finally, there appear to have been systematic errors in the interpretation of one item meant to assess reconstrual. The positive relation between adolescents' reported understanding of the event and emotional reactivity stands in contrast to the negative relation found between emotional reactivity and other reconstrual items in this and previous studies (e.g., Ayduk & Kross, 2010). Given the current data, we cannot be sure what, if anything, might have been

amiss with this item (e.g., comprehension, order effects), and this result should be interpreted with caution pending replication. Future research should include a more comprehensive measurement of the constructs studied here in order to establish more reliable composites.

Conclusion

Spontaneous self-distancing appears to be a natural response to negative emotion in adolescence, which with age is increasingly related to adaptive self-regulation of emotion. The present study provides a valuable glimpse into the inner workings of emotion regulation during a crucial period of social and emotional development and suggests that self-distancing could be an important component of adaptive self-reflection in adolescence.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

This research was funded by the John F. Templeton Foundation [21564] to EK and ALD, and Grant K01-AG033182 from the National Institute on Aging to ALD.

We thank Sarah Patrick, David Meketon and Benjamin Plummer for assistance with data collection.

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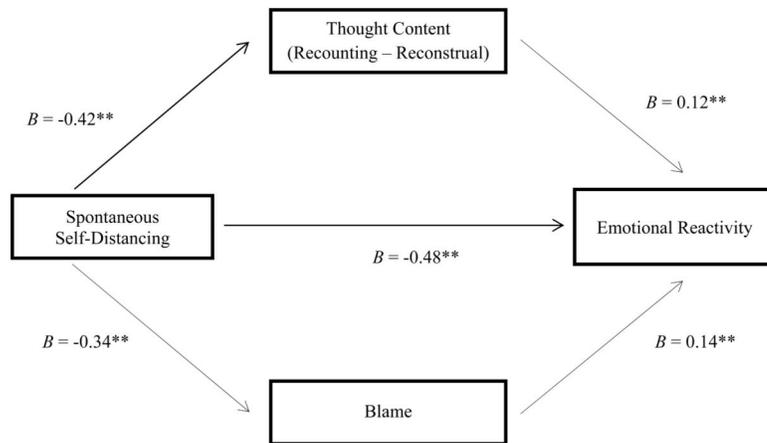


Figure 1. Thought content and blame mediate the relation between spontaneous self-distancing and emotional reactivity ($n = 225$). Analyses controlled for memory age and accessibility. Values represent unstandardized regression coefficients. ** $p < .01$.

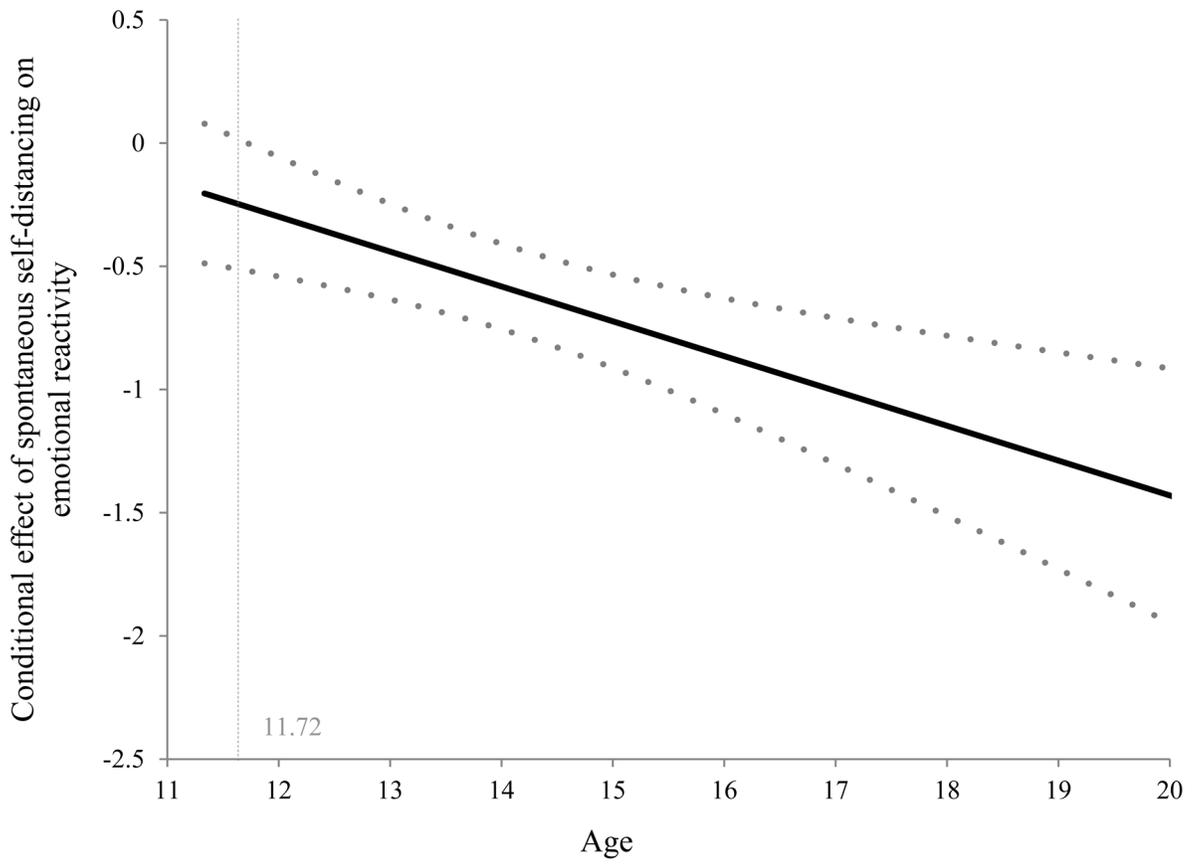


Figure 2. Conditional effect of spontaneous self-distancing on emotional reactivity as a function of age ($n = 221$). Dotted lines depict 95% confidence intervals. Dashed line marks the age at which the conditional effect reaches significance ($\alpha = .05$).

Table 1

Bivariate and Partial Correlations

	Age	Distancing	Emotional Reactivity	Thought Content	Blame	Forgive	Avoidance	Memory Age	Memory Access
Age									
Distancing	-.11								
Emotional Reactivity	-.10	-.43**							
Thought Content	-.03	-.40**	.28**						
Blame	-.10	-.23**	.27**	.13 [‡]					
Forgive	.07	-.19**	.25**	-.16*	-.28**				
Avoidance	.03	.06	-.09	-.13 [‡]	-.03	.08			
Memory Age	-.14*	-.04	.26**	-.07	-.02	.07	.01		
								.10	
									.09

Note. N = 226. Bivariate correlations are placed above the diagonal. Partial correlations, controlling for memory age and accessibility, are placed below the diagonal.

[‡] p < .10;

* p < .05;

** p < .01

Table 2

Regression Predicting Emotional Reactivity

	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Constant	4.42	0.33	13.35	<.001
Memory Age	-0.12	0.08	-1.56	.12
Memory Accessibility	0.02	0.05	0.51	.61
Age	-0.08	0.05	-1.49	.14
Spontaneous Self-Distancing	-0.64	0.09	-7.22	<.001
Spontaneous Self-Distancing x Age	-0.14	0.04	-3.40	<.001

Note. $n = 221$. $R = .49$, $F(5, 215) = 13.33$, $p < .001$. Product terms were mean centered prior to analysis.