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NARRATIVE AGENCY AND DISTRESS REGULATION IN YOUTH

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NARRATIVE AGENCY AND DISTRESS REGULATION IN YOUTH

by

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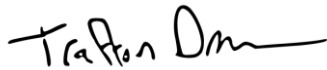
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Abstract

Autobiographical narratives can reveal how individuals make sense of their experiences and integrate them into their sense of self. Research into autobiographical narrative has sought to identify key narrative themes and their roles in psychological health and well-being. Across studies, researchers have repeatedly identified agency as a major narrative theme. Agency is an individual's ability to initiate change in their lives and exert some degree of control over their experiences. As it pertains to autobiographical narrative, agency is a measure of the extent to which a narrator depicts their self as an autonomous actor or passive recipient of the events narrated. Higher levels of narrative agency have been strongly associated with psychological well-being in adults; however, this is not necessarily the case for children. In fact, prior research has found that some of the same narrative features linked to favorable emotional outcomes in adults may be associated with worse emotional outcomes in children. The nature of the association between narrative agency and well-being in children remains unknown.

The objective of this study is to test whether narrative agency, as manifested in the autobiographical narratives of children between 8 and 17 years old, is associated with their ability to cope with distressing memories, as measured by reductions in distress. To test this hypothesis, I will analyze transcribed narratives collected from a subgroup of participants in Wainryb et. al. 's 2018 study: *Stories for All Ages: Narrating Anger Reduces Distress Across Childhood and Adolescence*. In Wainryb et. al. 's study, participants were asked to recall a recent specific event in their lives when they felt really angry at someone.

Participants were asked to rate their emotions (anger, sadness, fear, guilt, and shame) prior to elicitation of the anger experience and then at three additional times: after first recalling the anger experience, after narrating their angry memory to a trained research assistant, and immediately upon recalling the event.

To determine if an association exists between participants' degree of agency and any changes in their distress after narration, I will code for agency using an adaptation of the coding system for narrative agency developed by Adler et al. (2008). I will measure changes in distress by calculating differences between participants' emotion ratings before and after the narrative intervention.

Results of this study could greatly impact methodologies to improve youths' coping capacities. Do youths benefit from portraying themselves as "in control" of events in their negative memories as do adults? Youths who have a feeling of greater agency may use their negative experiences constructively and move on. However, my study results may suggest otherwise: it may be that youths who feel that they have greater agency will more often incorrectly blame themselves for events that were in reality out of their control such as, for example, a parental divorce. Compared to adults, children are not as able to meaningfully exert control over their lives. Consequently, a greater sense of control may be maladaptive. Results from this study will yield valuable insights for developing strategies to help youths struggling with negative experiences in their past.

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Introduction

Autobiographical narratives can reveal how individuals make sense of their experiences and integrate them into their sense of self (Adler, 2012; McLean et al., 2010). Moreover, because the act of narration itself requires a reappraisal of events and re-encoding of memories, it can have substantial effects on the narrator's feelings surrounding the recalled memory (Wainryb et al., 2018). Research into autobiographical narrative has sought to identify key narrative themes and how these may play a role in psychological health and well-being (Adler et al., 2016; McAdams & McLean, 2013; McLean et al., 2010; McLean et al., 2020). One of these key narrative themes is agency (Adler, 2012; Adler et al., 2008, 2016; de Silveira & Habermas, 2011; Gibson & Cartwright, 2013; McAdams & McLean, 2013; McLean et al., 2020; Schofield et al., 2017; van Doeselaar et al., 2020).

Existing literature in the field of psychology offers two competing conceptions of agency. Whereas some researchers place emphasis on control and autonomy (e.g., Adler, 2012), others envision agency as the sense that one's actions are rooted in and related to desires, beliefs, and emotions (Pasupathi & Wainryb, 2010). This study will use the former characterization of agency, which emphasizes control. Here, agency is defined as an individual's ability to initiate change in their lives and to exert control over the course of their experiences (Adler, 2012). In a narrative context, agency (hereafter "narrative

agency”) concerns the degree to which a narrator plays the role of an autonomous actor or passive recipient of the action the narrator is re-telling.

One way to assess the narrative agency spectrum is to view agency as a composite of External Agency (EA) and Internal Agency (IA) (Evans, 2007; Skinner et al., 1988). External Agency (EA) measures the degree to which a narrative conveys a personal sense of control over how events unfold in the physical world. Internal Agency (IA) assesses the degree to which a narrative conveys a sense of control over the narrator’s feelings and interpretations surrounding the narrative. Presence of IA and/or EA indicates higher levels of narrative agency.

Higher levels of narrative agency are strongly associated with psychological well-being in adults (Adler, 2012; Adler et al., 2016; Booker et al., 2021). One possible explanation for this association may be that agency and control beliefs of the individual influence how they cope with distressing emotions associated with challenging life experiences (Compas et al., 2017; Eschenbeck et al., 2018). An individual’s coping response depends largely upon two factors: their ability to eliminate or modify the source of their distress (EA), and their ability to adapt to the environment using cognitive and emotional tools (IA) (Heckhausen & Schulz, 1995). Along these lines, Compas et al. (1991) distinguish between two types of coping: problem-focused coping, and emotion-focused coping¹. Problem-focused coping refers to efforts to remove or modify a stressful situation. As such, problem-focused coping is related to EA. On the other hand, emotion-

¹ These concepts are also known as primary and secondary coping, respectively.

focused coping refers to efforts to manage or regulate the negative emotions associated with a stressful situation. Correspondingly, emotion-focused coping is related to IA.

The efficacy of either problem-focused coping or emotion-focused coping strategies depends upon the proximity between an individual's perceived and actual agency/control. Problem-focused coping is effective when an individual can modify the external conditions causing distress. However, when conditions are beyond an individual's control, this coping strategy can instead be detrimental. In such a situation, an individual faces not only the frustration of being unable to address the root cause of suffering, but also must address the threat to their perceived self-efficacy (Heckhausen & Schulz, 1995). Under these conditions, problem-focused coping can be a source of further distress. In some extreme circumstances, inability to change the situation could shatter an individual's assumptions about the general controllability of external events, leading to passivity and depression, as described by the literature on learned helplessness (Heckhausen & Schulz, 1995).

Problem-focused coping has primacy over emotion-focused coping. In other words, people usually prefer to solve the problem rather than learn to live with it. Accordingly, emotion-focused coping is largely used when problem-focused coping fails or cannot be used. Critically, emotion-focused coping can help mitigate the negative effects of lacking control over external factors. Emotion-focused coping involves turning inward and choosing how to feel about a stressful situation (Heckhausen & Schulz, 1995). The compensatory function of emotion-focused coping not only protects the

individual's motivational resources for future maintenance and improvement of agency, but also supports emotional well-being and self-efficacy (Heckhausen & Schulz, 1995). For instance, a child who feels hurt after discovering that they have not been invited to a party with the “cool kids” may alleviate their distress by concluding something like: “Actually, I don’t even like those kids, so I don’t really care if they like me back. I wouldn’t have wanted to go to that party anyway”. As illustrated by this example, emotion-focused coping serves as a bridge between sensing lack of control and the restoration of agency (Heckhausen & Schulz, 1995; Skinner & Zimmer-Gembeck, 2010). In sum, emotion-focused coping plays an essential role in mitigating stress from uncontrollable circumstances and in recuperating a sense of agency despite a lack of control over external circumstances.

The degree to which an individual attempts to change external stressors (problem-focused coping), as opposed to attempting to tolerate them (emotion-focused coping) largely depends on their beliefs about the controllability of the situation (Compas et al., 1991; Weisz, 1986). Individuals are more likely to attempt to change external stressors when their perceived control is greater (Weisz, 1986). The adaptiveness of either problem-focused coping or emotion-focused coping depends on its applicability to the particular situation. A mismatch between perceived and actual control, such as when problem-focused coping efforts are used but external control is low, results in increased levels of distress. Increased distress from control mismatch occurs in children, adolescents, and young adults (Compas 1991). While control mismatches are associated

with increased distress at all ages (Compas, 1991), developmental factors influence the likelihood and nature of those mismatches (Eccles et al., 1991)

Age affects an individual's ability to eliminate or modify the source of their distress (EA) and their ability to apply mature cognitive-emotional skills which enable them to manage distress internally (IA). Problem-focused coping develops in early childhood (around preschool age), but emotion-focused coping does not begin to develop until preadolescence (around age 12), when youths begin to reason about their own competence in relatively adultlike ways (Compas et al., 1991; Weisz et al., 1986). As they enter adolescence, youths gain an expanded capacity for self-reflection, which enables them to use metacognitive coping strategies (for a review, see Skinner & Zimmer-Gembeck, 2010). Developmental changes in emotion-focused coping plateau in late adolescence, at which point youth perform comparably to young adults (Compas et al. 1991; Fivush et al., 2007). At the same time, as children grow older and become more autonomous, they gradually gain more control over external conditions and their own psychological states (von Salisch & Vogelgesang, 2005).

Although higher levels of narrative agency are strongly associated with psychological well-being in adults, these findings cannot be generalized across all age groups. Regarding agency, children² differ substantially from adults. Owing to a combination of age-based biological and societal factors, children have considerably less

² In this article, "children" refers to humans that are 4 to 12 years old.

control over their own lives than adults do (Heckhausen & Schulz, 1995; Kliewer, 1991). What they eat, where they go, and what they do is usually decided for them, down to the most minute details such as the time they must go to sleep and wake up each day. Given these conditions, children are less able to meaningfully exert agency than are adults. Furthermore, children lack the cognitive-emotional development that adults have (emotion-focused coping) making them less able to recuperate agency when facing uncontrollable circumstances.

In young children (i.e., age 12 and under), their decreased capacity to adapt to events they cannot control is compounded by the sheer volume of situations in which they have no or limited capacity to exercise control by changing their circumstances directly. Children who overestimate their control of a situation may use problem-focused coping when in reality this strategy is unlikely to succeed (Kliewer, 1991). If they indeed cannot change the situation, they may experience lowered self-efficacy and thereby further distress. Similarly, children who over-emphasize or exaggerate their agency around an experience may suffer because they mistakenly blame themselves for events for which they bear no responsibility, such as parental divorce (Kliewer, 1991).

Whereas a mismatch between perceived and actual control/agency can increase distress, a match between perceived and actual control/agency can reduce distress. Distress is lower when problem-focused coping is used and external control is high (Compas 1991). This lines up with studies demonstrating an association between higher agency and higher well-being in adults. Following a similar logic, young children (12 and

under) may manage distress more effectively if they can recognize limits to their own agency (a probable match between perceived and actual control/agency). For instance, imagine a child who is threatened with physical violence by a group of older kids at their school. If this child has an exaggerated perception of agency/control, they may try to take on the bullies themselves. In the likely event that this fails, the child may experience lowered self-efficacy and expectations about the general controllability of events in the future- both of which contribute to a feeling of helplessness and increased distress. Alternatively, if this child has realistic expectations of their own agency with regard to the situation, they might be more likely to ask an adult to intervene. This approach would be more likely than the former to prevent the aforementioned conflict, as well as any future conflicts with the bullies.

Owing to a combination of age-based biological and societal factors, children may have fewer coping behaviors in their repertoire than do adults (Kliewer, 1991). While adults must also deal with circumstances which are out of their control, they have better coping skills to mitigate this kind of stress and recuperate a sense of control than do children (Kliewer, 1991). Correspondingly, as adolescents approach adulthood, they will be increasingly able to make choices for themselves and to find a sense of agency in situations which are out of their control via emotion-focused coping.

The objective of this study is to test whether narrative agency, as manifested in the autobiographical narratives of children between the ages of 8 and 17 (“youths”), is associated with their ability to cope with distressing memories, as reflected by reductions

in distress. To test this, I will analyze transcribed narratives collected from a group of 114 participants (aged 8-17) in Wainryb et. al. 's 2018 study: *Stories for All Ages: Narrating Anger Reduces Distress Across Childhood and Adolescence*. I will code narratives for EA and IA. These concepts correspond to problem-focused and emotion-focused coping, respectively. I will then examine relationships between EA and IA in youth's narratives, and the extent to which they report reduced distress after narrating. The hypotheses for this study are as follows:

1. As children grow older and become more autonomous, they will exhibit higher levels of narrative agency (both EA and IA) relative to their younger counterparts. I expect that this trend will be especially pronounced for IA, given that emotion-focused coping (which corresponds to IA) emerges in early adolescence.
2. Young children are less able than adults to employ EA and/or IA in effective, situation-matched ways. On these grounds, I predict that preadolescents (aged 8-12) will not show a positive association between higher levels of narrative agency (a probable mismatch between perceived and actual control) and better distress regulation as adults do. Following a similar logic, I expect that preadolescents with lower narrative agency (a probable match between perceived and actual control) will exhibit better distress regulation than preadolescents with higher narrative agency.
3. On the grounds that adolescents have both greater cognitive-emotional skills (IA) and increased autonomy (EA) over younger children, I anticipate that adolescents

(aged 13-17) will show a positive association between high levels of narrative agency and better distress regulation as adults do.

Methods

Design

The present study analyzed transcripts of oral narratives collected from 114 youths assigned to the narration condition in Wainryb et. al. 's 2018 study: *Stories for All Ages: Narrating Anger Reduces Distress Across Childhood and Adolescence*. Narratives were coded for both EA and IA on a three-point scale. Participants' emotion ratings (anger, sadness, fear, guilt, and shame) obtained from the original study were used to calculate distress scores.

Participants

Two hundred seventy-eight youths (aged 8-17) were recruited from local schools and community organizations in a Rocky Mountain metropolitan area to participate in a study on "how young people learn to regulate their emotions". Data for 37 participants were excluded from the original study because of missing or incomplete data. The remaining 241 participants were randomly assigned to one of four regulation conditions: narration, distract-game, distract-talk, and control. Data for 127 of these participants were excluded from the present study because they were not assigned to the narration condition of Wainryb et al.'s study, leaving a final sample of 114 participants, including 53 boys (M age 12.40, SD age 3.066) and 61 girls (M age 12.69, SD age 2.855).

Youth were compensated for their participation, with an additional incentive sum for timely arrival. Research received IRB approval (IRB_00049034) from the University of Utah.

Measures and Scoring

Narrative Agency

Narrative agency describes the extent to which a narrative conveys a sense of control over external circumstances and/or internal control of feelings and interpretations regarding the narrative. As such, narrative agency is a composite of EA and IA. Narrative agency, as captured by EA and IA, was obtained via coding the transcribed anger narratives. Thirty-five percent of the narratives were coded by a reliability coder; all coders coded without reference to explicit information about participant age or gender. Interrater reliability coefficients for each narrative feature are reported below.

External Agency (EA)

EA measures the degree to which a narrative conveys a personal sense of control over how events unfold in the physical world. Narrators who express a high degree of EA portray their own actions/choices as decisive factors in how events unfold in the physical world. These narratives often include attempts or intent to change the world to fit the needs and desires of the individual. Alternatively, EA can manifest as a sense of responsibility for the way in which events unfolded or will unfold. EA is coded on a

three-point scale from 0 to 2, where: 0 = absent, 1 = minimal, 2 = moderate/high (intraclass correlation [ICC] .872).

Internal Agency (IA)

IA assesses the degree to which a narrative conveys a sense of control over the narrator's feelings and interpretations surrounding the narrative. Narrators who express a high degree of IA portray their feelings and interpretations as at least somewhat under their own control, rather than attributing them to external forces (ex: "*I realized it wasn't worth getting mad over*" vs "*my dad said to get over it*"). IA is coded on a three-point scale from 0 to 2, where: 0 = absent, 1 = minimal, 2 = moderate/high (intraclass correlation [ICC] .867).

Emotion Ratings

Participants were asked to rate their anger, (+ sadness, fear, guilt, and shame) on a scale of 1 to 5 (1= not at all, 5= very, very) in response to the question, "how mad are you feeling right now?" Anger ratings were obtained once prior to elicitation of the anger experience and three times afterward: after first recalling the anger experience; after narrating the angry memory to a trained research assistant; and upon recalling the event immediately after.

Distress Scores

The term "distress" refers to a broad range of negative emotions. Hence, distress was calculated on SPSS as the average of anger, sadness, guilt, fear, and shame ratings

for each participant at each epoch³. The advantage of this approach is that aggregating across several distinct emotions which capture distress is a more reliable measure of distress than a single-item rating would be.

Data collected but not included in the present study. Data was collected on physiological measures, including heart rate, respiration rate, respiratory-sinus arrhythmia, and skin conductance levels. These measures were uncorrelated with emotion ratings and were not included in the analyses. Data for ethnicity was also excluded from analysis.

Procedures

Participants in the narration condition were asked to recall an angry memory (“initial exposure”). After a 1-min rest period, they were asked to narrate their angry memory to a research assistant (“regulation”), which lasted just over 2 min, and after another 1 min rest period they were re-exposed (“immediate re-exposure”) to the angry memory. Immediate re-exposure to memory was prompted as follows: “For the last time today, we’re going to have you remember again that same time when you felt really mad. Do this for a little bit and then I will be back”. Following each epoch, participants completed emotion ratings (anger, sadness, fear, guilt, shame).

³ e.g., prior to elicitation of the anger experience and then at three additional times: after first recalling the anger experience, after narrating their angry memory to a trained research assistant, and immediately upon recalling the

Initial exposure. Participants were asked to recall a recent, specific time in their life, “when someone did or said something and you ended up feeling really mad at that person.” Once they indicated they had identified such an event, they were instructed to “spend a few minutes thinking about that time. Imagine that you’re back in that moment again.”

Regulation. Participants in the narration condition were asked to narrate their memory of the angry event to a trained research assistant, as follows: “Now I would like you to tell me everything you remember about that time. You know that I wasn’t there, so tell me all the details so I can picture it as though I had been there. Tell me everything that happened, how you felt about it, and also what you learned from that time.”

Immediate re-exposure. Immediate re-exposure to memory was prompted as follows: “For the last time today, we’re going to have you remember again that same time when you felt really mad. Do this for a little bit and then I will be back”.

Conclusion of Session. Following the immediate re-exposure epoch, participants were compensated and dismissed.

Results

Analytic Strategy

I examined whether variations in narrative agency, as assessed by EA and IA, might correlate with variations in reductions in distress ratings. I also compared EA and IA features of youths' narratives to distress ratings (anger, sadness, fear, guilt, and shame) within participants across epochs and as a function of age, to find out if any associations differed across age categories. All analyses were conducted with SPSS.

Question 1: Is Narrative Agency related to Age?

I examined potential relationships between EA and IA narrative features and age and between EA and IA and distress scores at T1, T2, and T3⁴ using four separate bivariate correlations. In each case, EA or IA served as the dependent variable, and age or distress as the predictor variable. Table 1 shows associations between EA and IA in relation to age and distress across epochs.

Table 1

Relationships between Age, Distress Scores across Epochs and EA/ IA

Predictor Variables	External Agency R(p)	Internal Agency R(p)
Child Age (in years)	.093(.326)	.457(<.001)***
T1 Distress*	.052(.582)	.151(.108)
T2 Distress**	.098(.300)	.057(.546)
T3 Distress***	.056(.558)	.061(.524)

*T1= Exposure (pre-narration)

**T2= Regulation (immediately after narration)

***T3= Re-exposure (post-narration)

My results partially support the hypothesis that narrative agency (both EA and IA) increases with age. IA had a very strong, significant positive correlation with age, while EA did not. In other words, as a child's age increases, so does their Internal Agency. This

⁴ T1= Exposure (pre-narration); T2= Regulation (immediately after narration); T3= Re-exposure (post-narration)

finding supports my hypothesis that the development of Internal Agency occurs in the same time frame as emotion-focused coping, which first emerges in early adolescence. Neither IA nor EA were correlated with youth's self-reported distress before narrating, immediately after narrating, or after a re-exposure to the memory. However, my hypotheses about agency and distress cannot be tested without controlling for the initial distress associated with the event.

Question 2: Is Narrative Agency related to reductions in distress after controlling for initial distress?

The high correlation⁵ between distress scores across different epochs may obscure relationships between EA/IA and post-narration distress. To account for this, I conducted a partial correlation to determine the relationship between an individual's emotional distress at regulation (T2) and their distress at re-exposure (T3) while controlling for initial distress (T1). Table 2 shows the results of this analysis.

Table 2

Partial Correlation Analysis Controlling for Distress at T1 (Exposure)

R (p)	EA	IA
T2 distress	-.153 (.106)	-.172 (.069)
T3 distress	-.110 (.252)	-.194 (.041)

Overall, these results suggest that EA is slightly, but not significantly, negatively correlated with distress scores. That is, as EA increases, distress decreases and vice versa.

⁵ T1 and T2: $r(112) = .556^{**}$, $p < .001$

T1 and T3: $r(112) = .592^{**}$, $p < .001$

T2 and T3: $r(112) = .808^{**}$, $p < .001$.

** correlation is significant at the 0.01 level (2-tailed)

Compared to EA, IA is slightly more strongly, and negatively, correlated with distress scores. That is, as IA increases, distress decreases and vice versa. However, only one of these associations (between IA and T3 distress) was strong enough to attain statistical significance by conventional criteria. If, as my hypotheses suggest, the relation between agency and distress is different at different developmental periods, this lack of a strong relationship may be due to combining children where there should be no or a negative effect and adolescents where there should be a positive effect. This question is addressed in the next analysis.

Question 3: Does Age play a role in the Effects of EA/IA in Reducing Distress?

For my third analysis, associations of EA/IA with age were included to test whether EA/IA were differentially associated with reductions in distress for youth of different ages. I conducted another partial correlation controlling for distress scores at T1, but this time split age into two groups: 8 to 12 (N=56), and 13 to 17 (N=58), to test the hypothesis that adolescents (aged 13-17), but not preadolescents (aged 8-12), will show a positive association between high levels of narrative agency and better distress regulation. Results of this analysis are shown in Table 3.

Table 3

Partial Correlation Analysis of EA and IA Effects on T2 and T3 Distress, controlling for Age

Predictor Variable	EA R(p)	EA R(p)	IA R(p)	IA R(p)
	<i>Ages 8-12</i>	<i>Ages 13-17</i>	<i>Ages 8-12</i>	<i>Ages 13-17</i>
T2 Distress	-.103(.456)	-.224(.095)	-.125(.362)	-.315(.017)***
T3 Distress	-.07(.614)	-.155(.257)	-.106(.442)	-.423(.001)***

These results do not show any significant correlation between EA or IA with distress scores in younger children and therefore do not support my hypothesis that higher narrative agency may be a cause of distress for younger children due to mismatches. However, my hypothesis that adolescents (aged 13-17) will show a positive association between high levels of narrative agency and better distress regulation was partially supported. Although EA was not significantly correlated with distress scores in the older children, IA was very strongly, significantly negatively correlated with distress scores in this age group (higher IA = lower distress).

Discussion

The objective of this study was to test whether narrative agency, as manifested in the autobiographical narratives of children between 8 and 17 years old, is associated with children's ability to cope with distressing memories, as shown by reductions in distress. Along these lines, I formulated three hypotheses.

My results partially supported the first hypothesis, that narrative agency (both EA and IA) would increase with age. Although IA was significantly positively correlated with age, EA was not. In other words, older participants exhibited markedly higher IA than younger participants, but EA did not differ as a function of age across participants. These findings suggest that IA increases continuously between the ages of 8 and 17. My findings may also indicate that children's ability to articulate emotion-focused coping capabilities in narrative may lag behind the acquisition of this skill, similar to what has been seen in other narrative and theory of mind research (Pasupathi & Wainryb, 2010).

My finding that older participants did not have greater than EA than younger ones is not sufficient to determine whether EA and problem-focused coping are developmentally related. External Agency, as defined in this study, is a measure of the degree to which a narrative conveys a personal sense of control over how events unfold in the physical world. Problem-focused coping, which describes an individual's efforts to remove or modify a stressful situation, is theorized to begin development when children are three or four years old (Compas et al., 1991; Skinner & Zimmer-Gembeck, 2010), and may or may not relate to the individual's beliefs about how their actions impact the environment.

My second hypothesis predicted that in preadolescents (aged 8-12), in contrast to adults, higher narrative agency would not be directly associated with improved distress regulation. The lack of significant correlation between EA or IA and distress scores in this age group was consistent with this hypothesis. It should be noted, however, that the lack of a significant correlation between EA or IA and distress scores in this study could also just be a product of its relatively small sample size. I also suggested that preadolescents with lower narrative agency would exhibit better distress regulation than preadolescents with higher narrative agency, on the grounds that their perceived and actual control would match more closely than would preadolescents with higher narrative agency. This was not supported by the results, as there was no significant relationship between narrative agency and distress scores for preadolescents.

The third hypothesis, that adolescents (ages 13-17) would show a positive association between high levels of narrative agency and better distress regulation, was

partially supported. Although EA was not significantly correlated with distress scores, IA was very strongly negatively correlated with distress scores in adolescents. In other words, adolescents with higher IA exhibited better distress regulation than those with lower narrative agency.

Hypothesis 1: Relationship between Age and EA/IA

While narrative agency did increase with age, EA did not. One possible explanation for this is that the discrepancy in EA between adolescents and younger children may be less pronounced between the ages of 8 and 17 than it would be between children younger than 8 and those between 8 and 17. By age 10, participants were equally likely as participants in the older age group to receive the maximum score for EA, suggesting that for this type of experience, EA was already at a developmental maximum for most participants in the sample. Age-dependent differences in EA may have been more salient if the sample had included children younger than eight. Very young children (around pre-school age) are markedly more dependent upon adults than are preadolescents, and certainly more so than are adolescents. That aside, IA and age were strongly positively correlated, indicating that as age increases, so does IA. This finding is consistent with the hypothesis that Internal Agency is developmentally linked with emotion-focused coping, a skill that develops during early adolescence.

Hypothesis 2: Narrative Agency and Distress Regulation in Preadolescents

As shown by prior research, some of the same narrative features linked to favorable emotional outcomes in adults may be associated with worse emotional outcomes in children (e.g., Fivush et al., 2007; McLean et al., 2010; Wainryb et al., 2018). I hypothesized that in 8- 12-year-old participants (preadolescents), higher narrative agency would not be directly associated with improved distress regulation, in contrast to the positive association between these seen in adults. I based my hypothesis on the thought that children at this age would likely display a mismatch between perceived and actual control. As a follow up to this idea, I posited that preadolescents who recognize limits to their own agency would manage distress more effectively than would younger children, because preadolescents' perceived agency would better match their actual agency. For example, one eight-year-old child from this study shared the following story:

Participant: When my brother um, um kind of like had like my friends and was playing with my friends, and like, he was kind of like, playing with them telling them to hurt me and tease me so and I got really mad at him so um, yeah. He was playing with them and they only played with him instead of me so I told my um mom and she's like, "{Brother's name} we brought her friends here to play with her. You can play with your own friends." So yeah.

Research Assistant: Okay, can you tell me a little bit more about what you learned from that time?

Participant: That it helps not to try to resolve it yourself. You ha-you should go to your mom first.

In theory, the efficacy of either problem-focused coping (using EA) or emotion-focused coping (using IA) strategies depends upon closer matching between an individual's perceived and actual agency/control (Compas et al., 1991). Contrary to

existing literature (i.e., Compas et al., 1991; Folkman, 1984), I found that perceived control (as reflected by narrative agency) was unrelated to increased distress in preadolescents. In this age group, I did not find any correlation between EA or IA and distress scores. When comparing preadolescents to each other, preadolescents with lower narrative agency did not exhibit better distress regulation than preadolescents with higher narrative agency. Possible explanations are discussed below.

Under the assumption that this null result reflects reality, as opposed to a mere problem of statistical power, several potential explanations may be considered. For one, concurrent development of cognitive processes other than those examined in this study (EA/IA), may play important roles in distress regulation. In particular, the emergence of trait self-conceptions in late childhood to early adolescence may be a necessary precondition for youths to experience distress from lowered-self efficacy (Mazur et al., 1999; Pasupathi & Wainryb, 2010). According to Mazur et al. (1999), “As children develop both emotionally and cognitively, they become more likely to think of themselves in terms of stable traits... and less likely to positively estimate the efficacy of their own and others’ actions in producing desired events... These developmental changes may lead to increases in perceived responsibility for stressful events, allowing negative cognitive appraisals to become more closely linked with their emotional well-being”. Perhaps then, the reason that preadolescents do not exhibit heightened distress when confronted with situations outside of their control is because they do not attribute it to their own personal failings, which then precludes them from making negative cognitive

appraisals that heighten distress and feelings of helplessness (for ex: *I can never do anything right*).

Another possible explanation for why higher perceived control (as reflected by narrative agency) was unrelated to distress in preadolescents in this study is that the underlying assumption that preadolescents have little objective control over their circumstances may have been overly reductive. If this is the case, control-mismatch cases in this study may not actually represent a mismatch at all. My study lacked a concrete measure of participants' objective control to compare to participants' perceived control (derived from their narrative agency scores), a limitation of using previously collected data. In the absence of having access to this measure, I had to rely on the assumption that agency/control would increase with age. Further hampering the ability to conclusively answer this question is the possibility that the discrepancy in agency between adolescents and younger children may be less pronounced between the ages of 8 and 17, at least with respect to their angry memories. Age-dependent differences in agency may have been starker if the sample had included children younger than eight.

Hypothesis 3: Relationship between EA/IA and Distress Regulation in Adolescents

I also hypothesized that, as seen in adults, high levels of narrative agency in adolescents (aged 13-17) would be positively associated with better distress regulation. This was partially supported. Although EA was not significantly related to distress scores, IA was very strongly negatively correlated with distress scores in this age group. In other words, as IA increased, distress decreased. These findings build upon previous

work examining how agency/control beliefs expressed in narratives might affect distress and coping responses.

Limitations and future directions

Some limitations of the present study should be noted. Firstly, due to its correlational design, this study cannot determine if there is a causal relationship between narrative agency and distress regulation. Correlational research designs are also vulnerable to the “third variable problem”, which occurs when an observed correlation between two variables may be attributable to the effect of a third variable for which results cannot be controlled. I was able to partially compensate for this by running within-subjects analyses to track linear trajectories in the same participants across multiple ratings, a strategy that minimizes random noise. One strength of this design is that data gathered from correlational research is more applicable to everyday experiences because it is conducted without manipulating variables. Although it cannot answer the “why” part of the problem, correlational research provides a valuable starting point for future studies and reviews.

Another limitation of this study is that the relatively small sample size in some analyses raises concerns about statistical validity. This is especially pertinent to the correlational analyses between preadolescents and adolescents, wherein each of the samples was approximately half of the overall sample size. This is further complicated by the possibility that splitting the sample this way could have produced arbitrary

differences between groups. To account for this, I ran additional analyses⁶ with different age splits to ensure that differences between younger and older children were not just a product of splitting the groups. Results from the additional analyses were consistent with the original findings, in that IA was very strongly negatively correlated with distress scores in adolescents, but not preadolescents, and EA was not significantly related to distress for preadolescents nor adolescents.

Finally, it is difficult to measure EA purely based on anger narratives, largely due to the nature of anger experiences themselves. By their nature, “victim narratives” (i.e., narrative accounts of being angered) tend not to engage in self-blame in normal and healthy samples (Baumeister et al., 1990). Therefore, it is possible that having participants recall anger experiences may have limited EA measurement in this study. This is further complicated by the fact that anger and sadness are both highly endorsed in anger events – so the distinction is not as clear as one might prefer. A more thorough determination of EA will require different or multiple narratives per participant.

Further longitudinal or experimental research is needed to determine the precise nature of the causal relationship between narrative agency and the coping/distress regulation response. Future research could build on this work by investigating how control beliefs vary over developmental periods during childhood and the influence of

⁶ I ran two additional partial correlation analyses of EA/IA effects on T2/ T3 distress, controlling for age. The first analysis split age into 8- to 10-year-olds versus 11- to 17-year-olds. The second analysis split age into 8- to 13-year-olds versus 14- to 17-year-olds. For results, see Tables 4 and 5 in the Appendix.

specific events on coping/distress regulation as children mature. This would allow documentation of change over time, as well as future predictive studies. In addition, future studies should include participants aged 4 to 17 to capture age-based discrepancies in agency more clearly. Additionally, questionnaires should be supplemented with other methods that provide more objective evidence of agency (such as surveying participants' parents, teachers, siblings, friends, etc.) for the strategies children and adolescents use to cope with stress and regulate their emotions, as well as their perceived and objective control over situations which cause them distress.

Conclusion

The way that people narrate their own stories reflects not just how they view the world, but also how they view themselves. Narrative stories help individuals to construct their own identity and guide future behaviors. The strong positive association between well-being and narrative agency in adults can be partially explained by their mutual association with coping, whereby an individual attempts to reduce or eliminate distress via narrating events in ways that help achieve that effect. Individuals' coping responses are guided by their agency/control beliefs. Likewise, control beliefs are shaped by coping, in that adaptive coping improves confidence and perceived competence, whereas maladaptive coping contributes to feelings of helplessness (Skinner & Zimmer-Gembeck, 2010). This study found that adolescents (aged 13-17) demonstrate the same strong positive relationship between narrative agency and improved distress regulation (i.e., coping) as adults. In contrast, there was no relationship between narrative agency and distress regulation in preadolescents (aged 8-12). This finding provides support for the

idea that adult findings cannot be generalized to children with respect to narrative agency. Although this study cannot identify the narrative mechanisms (if any) which underlie improved distress regulation in preadolescents and younger children, it does provide a starting point for future studies.

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Appendix

Table 3

Comparing younger and older children

R (p)	EA	EA	IA	IA
	Ages 8-12 (n=56)	Ages 13-17 (n=58)	Ages 8-12	Ages 13-17
T2 Distress	-.103(.456)	-.224(.095)	-.125(.362)	-.315(.017)***
T3 Distress	-.07(.614)	-.155(.257)	-.106(.442)	-.423(.001)***

Table 4

Comparing younger and older children [2]

R (p)	EA	EA	IA	IA
	Ages 8-10 (n=35)	Ages 11-17 (n=79)	Ages 8-10	Ages 11-17
T2 Distress	-.027(.881)	-.249(.028)***	-.057(.748)	-.288(.010)***
T3 Distress	-.091(.608)	-.123(.288)	-.066(.710)	-.345(.002)***

Table 5

Comparing younger and older children [3]

R (p)	EA	EA	IA	IA
	Ages 8-13 (n=67)	Ages 14-17 (n=47)	Ages 8-13	Ages 14-17
T2 Distress	-.172(.167)	-.151(.316)	-.133(.288)	-.319(.031)***
T3 Distress	-.096(.445)	-.126(.410)	-.099(.431)	-.425(.004)***

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