Children’s narratives and well-being

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Research with adults indicates that writing causal-explanatory and emotionally disclosing narratives of stressful experiences is related to psychological well-being. Limited research with children has shown mixed results, but developmental theory suggests that simple extrapolation from adult findings might be problematic. In this study, 9- to 13-year-old children engaged in three days of writing under emotional and non-emotional instructions, and completed measures of depression, anxiety, strengths and difficulties, and somatic symptoms both at baseline and 2 months following intervention. Narratives were coded using a developmentally appropriate, exhaustive coding system. Children in the emotional writing group wrote more about negative evaluations, problems, emotions, explanations and coping than children in the non-emotional writing group. However, those children who wrote more about negative evaluations, problems and explanations subsequently showed higher levels of anxiety, depression and difficulties. Due to limited narrative and emotional regulation skills, expressive writing may not benefit, and may even be detrimental for, some children.

Narratives are socially and culturally conventionalised forms for organising and representing our past experiences (Bruner, 1987; McAdams, 1992). Because personal narratives move beyond simple memory of what happened to include explanations and emotional evaluations, narratives are the way in which we create meaning of our personal past, and are linked to

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understanding of self (Bruner, 1987; Fivush & Haden, 1997; Labov & Waletzky, 1967). Moreover, constructing coherent and emotionally expressive narratives is related to well-being. Using an expressive writing intervention initially developed by Pennebaker and his colleagues (see Pennebaker, 1997, for an overview), adults who write about the thoughts and feelings associated with stressful events in their lives subsequently show better physical and psychological health than adults who either engage in expository writing (e.g., time diaries) or no writing control groups (see Sloan & Marx, 2004, for an overview, and Frattaroli, 2006, and Smyth, 1998, for meta-analyses). To date, however, little is known about the developmental implications of these findings. Does expressive writing benefit young children as well as adults and, if so, are the same underlying processes at work?

In expressive writing studies, participants write about their deepest thoughts and feelings for three to five consecutive days for 5 to 20 minutes per day, although some studies use fewer days of writing, or space the three to five days of writing out across several weeks, or even use more guided instructions to help structure a more coherent narrative (see Frattaroli, 2006, for a review). This group is then compared to a control group of participants asked to write about daily activities, and subsequent psychological and/or physical health is assessed at a specific interval ranging from several days to several months. The narratives are analysed using the Linguistic Inquiry and Word Count (LIWC) computer program developed by Pennebaker & Francis (1996) that counts the proportion of words falling into specific linguistic categories.

Initial research using this technique showed that individuals who create narratives rich in causal-explanatory language ("because", "so", "therefore"), as well as words that express reflection and insight (e.g., "think", "understand", "realise"), and that disclose emotion, show the most benefit from the expressive writing intervention (Pennebaker, 1993; Pennebaker & Beall, 1986; Pennebaker & Francis, 1996). These findings suggest that both emotional disclosure and the creation of coherent explanatory narratives are critical in facilitating well-being. Studies examining diverse populations, including college students (Klein & Boals, 2001; Pennebaker, 1993), prisoners (Suedfeld & Pennebaker, 1997) and unemployed middle managers (Spera, Buhrfeind, & Pennebaker, 1994) converge in finding that creating more causal-explanatory and emotionally disclosing narratives about stressful and traumatic experiences results in multiple health benefits, including lower anxiety, lower depression, higher sense of well-being, fewer doctor visits and improved immune system functioning, as well as more effective behaviours in the world (Klein & Boals, 2001; Pennebaker, 1993; Spera et al., 1994). These results suggest that expressive writing is a powerful tool for creating positive outcomes.
Indeed, in a meta-analysis of 146 studies examining expressive writing with a variety of participants under a variety of conditions, Frattaroli (2006) found a small but significant overall effect size. More specifically, expressive writing was similarly beneficial for alleviating psychological symptoms including distress, anxiety and depression, physical symptoms including better immune system function and fewer doctor visits, and improved real-world behaviours including academic performance and social relationships. Interestingly, whereas only those studies requiring a minimum of three days of writing for at least 15 minutes a day led to improvement, the timing of the writing itself, whether on consecutive days or spaced out once a week, made little difference. Moreover, studies assessing benefits of expressive writing within the first few weeks of the intervention showed stronger effects than studies that assessed benefits more than a month after intervention. Overall, then, the meta-analysis demonstrated that engaging in expressive writing for at least three days for at least 15 minutes a day, whether consecutively or spaced out across time, shows short-term benefits in psychological and physical well-being. Although these effects held regardless of age of the participants, because there are so few studies of expressive writing with children, Frattaroli was unable to assess possible developmental differences.

Whereas it is now well established that expressive writing is beneficial for adults, the mechanisms by which expressive writing is beneficial are still unknown. Four basic mechanisms have been proposed (see Frattaroli, 2006, and Sloan & Marx, 2004, for overviews). One possible mechanism derived from psychodynamic theory is disinhibition. As inhibiting troubling thoughts and emotions is thought to be harmful, releasing these thoughts and emotions provides catharsis, and thus a lessening of stress. A second possible mechanism involves the role of cognitive processing; writing about stressful events allows individuals to gain understanding and insight into the event and their ensuing emotions, and this understanding leads to a reduction of stress. A third possibility is that expressive writing is a form of mastery experience in that individuals gain a sense of themselves as expressing and controlling their emotions, and this self-regulatory process leads to reduced stress. Finally, expressive writing might be similar to exposure therapy, in which individuals are simply exposed again and again to a stressor and this continued exposure leads to habituation and thus reduced stress.

As Pennebaker (2004) argued, the beneficial effects of expressive writing are a complex phenomenon that most likely relies on multiple underlying mechanisms. Indeed, there is some support (and also some lack of support) for each of these explanations. Again relying on Frattaroli's (2006) meta-analysis as the most comprehensive examination of expressive writing, disinhibition receives the least support, as neither individuals who have more
of a tendency to inhibit their thoughts and emotions, nor those who have failed to disclose stressful events for longer periods of time benefit more from expressive writing than other individuals. Neither does cognitive processing receive much support from the meta-analysis, in that studies in which specific instructions and guidelines for creating more coherent and explanatory narratives do not provide more benefit to participants than studies that do not. However, Frattaroli was not able to examine individual differences in the extent to which individuals took advantage of specific instructions to provide coherent, explanatory and emotionally expressive narratives. Pennebaker (1993) examined individual differences in narrative quality and found, across a series of studies, that individuals who provided more cognitive processing and emotion words in their narratives benefited more from expressive writing than individuals who did not include language indicative of cognitive processing.

In terms of mastery and self-regulation, individuals who engage in expressive writing about positive events benefit as much as those who engage in expressive writing about negative events, suggesting that simply expressing one’s emotion may be beneficial. Again, however, the quality of the narratives must be considered. Lymbursiky, Sousa, and Dickerhoof (2006) found that individuals who engaged in more cognitive processing and causal explanations when disclosing positive events actually showed increased stress and anxiety than individuals who simply expressed positive emotion. In contrast, individuals who created more explanatory narratives of negative events showed beneficial outcome. They conclude that creating causal explanations of negative events is beneficial, but trying to explain how and why positive events occurred may be detrimental. Finally, the exposure model also receives some support in that amount of exposure to expressive writing matters; only those individuals who write for a minimum of 15 minutes a day for a minimum of three days show benefit. However, again, Frattaroli’s (2006) meta-analysis was unable to examine the quality of narratives across days of writing. It may be that it takes several days of writing to develop a more coherent and explanatory narrative that allows for full cognitive processing.

Two important conclusions can be drawn from the previous research. First, expressive writing is beneficial for a large number of people under a variety of conditions and for a large number of outcome variables. Second, although we do not yet understand the exact mechanism by which expressive writing is beneficial, it is likely that multiple mechanisms are at work simultaneously. But what about children? Would expressive writing also be an effective intervention to help young children cope with the stressful events of their lives? This is a critically important question because expressive writing is an easy and cost-effective way to intervene on a relatively large scale; children also face daily stressful events, and the creation of meaning
through explanation and emotional expression may very well facilitate children's coping and well-being. However, developmental considerations suggest that a simple extrapolation from the adult literature is not warranted. Both narrative skills and emotional regulation develop gradually across childhood, and thus children may display different patterns than adults.

More specifically, in terms of narrative development, children are still learning story-telling skills well into middle childhood. Although by the end of the preschool years, children are able to create a reasonably coherent narrative of a personally experienced event (Fivush, 1997; Peterson & McCabe, 1982), these early narratives are still quite rudimentary. Through middle childhood, children continue to acquire cognitive and social emotional skills that allow them to tell more coherent and more emotionally expressive and explanatory stories. At least two specific cognitive skills related to narratives develop across middle childhood. First, children begin to understand temporal and causal sequences in more complex ways (Freidman, 2003; Hudson & Shapiro, 1991). Young children are able to relate an event in simple chronological sequence, but older children are better able to move back and forth within a sequence, and explain how events are both sequentially and simultaneously related. Second, older children are better able to provide causal explanations for how and why specific actions occur (Trabasso & Rodkin, 1994; Van der Broek, 1997), and are able to place one event in relation to other related events (Fivush & Haden, 1997; Friedman, 2003). Related to this is the developing ability to understand events in more complex psychological ways. Older children provide more psychologically imbued explanations, referring to human motivation and intentions to a greater extent than do younger children in their narratives (Fivush & Haden, 1997; Trabasso & Rodkin, 1994). Both the ability to construct more complex temporal causal sequences and to better understand the human intentions and motivations underlying events lead to more causally linked, more cohesive, and more psychologically complex and emotionally evaluative narratives across middle childhood (see Habermas & Bluck, 2000, for a review). Thus the beneficial effects of engaging in expressive writing may depend on the development of these more sophisticated narrative skills.

Similarly, children are still learning to cope with and regulate aversive emotions through middle childhood (Compas, 1987). During early childhood, children rely on automatic coping processes. Through middle to late childhood children start to use more effortful coping strategies, through problem-focused coping (Compas, Banez, Malcarne, & Worsham, 1991), which is an attempt to change the stressor or re-appraise the situation, or emotion-focused coping (Compas, Malcarne, & Fondacaro, 1988), which helps children to regulate their thoughts and feelings about the stressor
(Compas & Epping, 1993). Moreover, older children’s use of coping strategies resembles that of adults (Compas et al., 1988). In addition, during middle and late childhood children begin showing consistency in coping strategies across situations such as interpersonal and academic stressors (Compas et al., 1988). Given that the beneficial outcomes of expressive writing is related to explanatory and emotionally expressive narrative language, perhaps as children develop more sophisticated emotional regulation skills, they are simultaneously learning to create more coherent, explanatory and expressive narratives of stressful experiences.

Very few studies have examined relations between narratives, stress and well-being in children. Peterson and Biggs (1998) found that children who were more distressed about an injury necessitating an emergency room visit told less coherent and less evaluative narratives than children who were less distressed by these events. Similarly, Sales, Fivush, Parker, and Bahrick (2005) asked 3- to 4-year-old children to recall a devastating hurricane that destroyed their homes, a few months after the experience, and then again six years later when the children were 9 to 10 years old. Children who were most highly stressed initially recalled less information overall, and included less positive emotions and cognitive processing words in their recall than children experiencing less stress. Six years later, children who had initially recalled more positive emotion showed fewer post-traumatic stress symptoms than children recalling less positive emotion. These results suggest that the emotional and evaluative content of children’s narratives are related to their psychological well-being.

Only two published studies have used the Pennebaker expressive writing paradigm with children. Reynolds, Brewin, and Saxton (2000) asked 9- to 13-year-old children to keep a diary expressing their deepest thoughts and feelings for three consecutive days and compared this group to a non-emotional writing group in which children were asked to keep a record of their daily activities. Children’s narratives were coded for the number of words expressing cognitive processing (thoughts, insights, and causal connections) and emotion (both positive and negative emotions) using the LIWC system, described earlier, which has been used in the research with adults. Children in the emotional writing group used significantly more of this type of language than children in the non-emotional writing group. Children in both groups showed decreases in anxiety and depression, and increases in well-being from baseline to a two-month assessment, suggesting that diary writing, in general, was beneficial. Critically, however, there were no differences between the emotional and non-emotional writing groups, suggesting that focusing on emotional aspects of stressful events was no more beneficial for children than simply describing their daily activities. In contrast, Soliday, Garafolo, and Rogers (2004) found that 8th grade children who engaged in expressive writing showed decreases in distress 20
and 50 days after intervention. The conflicting results between these two studies may be due to differences in the ages studied, the timing of assessment, or both.

In addition, the LIWC coding system may be particularly unsuited to assessing children’s narratives. Children use very few of these kinds of words, especially cognitive processing words that reflect high levels of metacognitive awareness, even when explicitly asked to do so. Yet children may have other ways of expressing their problems, their thoughts and emotional regulation that a simple word count may not capture. Thus, the major objective of this study was to develop a narrative coding scheme that would better reflect children’s narrative writing, and to assess relations between this more developmentally appropriate coding of children’s narratives and their subsequent well-being. In order to accomplish this, we re-evaluated the children’s diaries originally collected and reported by Reynolds et al. (2000). Using this corpus, we developed a mutually exclusive and exhaustive coding scheme that categorises each proposition in each diary entry. By moving beyond a simple word count and developing an exhaustive propositional coding scheme, we can better capture the full extent of how and what children are writing about stressful experiences. That is, even if children are unlikely to use the specific words counted by LIWC (e.g., realise, comprehend), they may very well be expressing cognitive processing and emotional understanding of the event through larger semantic units linked together to form the narrative.

In developing our coding scheme, we used both a theoretical framework derived from the expressive writing literature and the children’s narratives themselves to inform us. Thus, stemming from expressive writing, we focused on children’s explanations and emotional expressions as a measure of their cognitive processing of the event. In addition to expressing specific emotions, many children provided affectively laden descriptions of people, objects and events, and so we included this as a category as well. We also examined the kinds of problems that children described in their narratives to get a better sense of what children find stressful. Finally, because many children spontaneously wrote about ways to cope with these stressors, we included this as a category. Using this scheme, we assessed differences between the emotional and the non-emotional writing groups, as well as individual differences in relations between children’s narratives coded in this way and multiple aspects of children’s well-being over time.

It is important to point out that the original Reynolds et al. (2000) study used a group differences approach, and established that children in the emotional writing group did use more emotion and cognitive processing words than children in the non-emotional writing group, but that this was not related to differential outcome between the two groups two months later. Thus, we already know there are no writing group effects at the follow-up
assessment, although both writing groups benefited compared to the non-writing control. Here we take an individual difference approach, examining how individual differences in how children narrate the events of their lives might be related to individual outcome. Thus we examine only the two writing groups. Because this was an exploratory study, we made no specific predictions.

**METHOD**

**Procedure**

Children were recruited from British primary (ages 9 to 11) and secondary schools (ages 12 to 13), and divided into two writing groups: an emotional writing group and a non-emotional writing group. Children in both groups were asked to write quietly and independently for 15–20 minutes for three consecutive days in small groups of four children in a quiet room in the school. Children in the emotional writing group were asked to write about their “deepest thoughts and feelings”, whereas children in the non-emotional writing group were asked to write about how they spend a typical day (see Reynolds et al., 2000, for full details on procedures).

Only children who completed all three diary entries were included in the current analyses. In the emotional writing group there were 56 children (17 younger boys, 13 younger girls, 15 older boys and 13 older girls); 58.9% described themselves as White, 21.4% as Black, 10.7% as Asian, and 8.9% as other. In the non-emotional writing group, there were 56 children (15 younger boys, 15 younger girls, 12 older boys and 15 older girls); 57.1% described themselves as White, 26.8% as Black, 8.9% as Asian, and 7.1% as other.

**Measures**

Children completed a battery of measures assessing well-being one day previous to the writing intervention and again at a two-month follow-up (see Reynolds et al., 2000, for full descriptions and psychometrics for these measures).

*The Birleson Depression Inventory (Birleson, 1981).* This inventory asks children to respond to 18 statements about the way they feel and rate on a Likert scale how much the statement has applied to them in the last week. These statements are connected to feelings associated with childhood depression, with normal school children displaying mean scores of 4.32 versus clinically depressed children with mean scores of 17.65.
The Spence Children's Anxiety Scale (Spence, 1994). This scale includes 44 questions and is answered on a Likert scale. Average scores for clinically anxious children were found to be 42.48 versus a normal control group with an average score of 25.04.

The Children's Somatisation Inventory (CSI; Walker, Garber, & Greene, 1991). This inventory includes a list of 35 psychophysiological symptoms such as headaches, dizziness, or back pain. Children rate how often they have been bothered by each symptom on a Likert scale, with a mean score for normal populations of 12.27 ($SD = 10.29$).

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). This questionnaire measures hyperactivity, emotional symptoms, conduct problems, peer problems, and prosocial behaviours with 25 questions rated on a Likert scale. The sum of these items measures the child's overall difficulties with normal scores ranging from 0 to 15.¹

Coding

As described in the introduction, the coding scheme was developed based on both theory stemming from the expressive writing literature and on themes that emerged from reading the diaries, as well as categories developed by Buckner and Fivush (1998) who examined children's autobiographical narratives of positive and negative events. Each narrative was separated into propositional phrases involving a subject and predicate (e.g., “I went to the store” and “She was mad”). Length of narrative was defined by number of propositions in the narrative. Each proposition was then coded into one of ten mutually exclusive and exhaustive categories, which are described in Table 1.

Two coders independently coded 25% of the emotional and non-emotional narratives and achieved 81% agreement across categories. The remaining transcripts were coded by one of these coders.

RESULTS

Analyses are reported in two major sections. The first section examines the content of children's narratives and the second section examines relations between children's narratives and well-being.

¹ Teachers in this study also filled out their own version of this questionnaire for each child, with normal scores ranging from 0 to 11; however, teachers report was not used for current analyses.
Narrative content

Description of events. The majority of children in both the emotional and non-emotional writing groups discussed their interpersonal relationships with family members (22% of narratives) and peers (22%), followed by
issues concerning school and teachers (17%), sports events (12%) and miscellaneous events (10%). No child in the emotional writing groups wrote about schedules or routines but 16% of the children in the non-emotional writing group did.

Length of narratives. A 2 (age) × 2 (gender) × 2 (writing task) × 3 (day of writing) ANOVA on total number of propositions revealed that children in the emotional writing group wrote longer narratives (M = 24.23, SD = 9.01) than children in the non-emotional narrative group (M = 17.86, SD = 7.66), F(1, 111) = 17.94, p < .001, girls wrote longer narratives (M = 24.69, SD = 8.03) than boys (M = 17.77, SD = 8.44), F(1, 111) = 22.26, p < .001, older children wrote longer narratives (M = 23.06, SD = 9.11) than younger children (M = 19.30, SD = 8.43), F(1, 111) = 7.66, p < .01, and children wrote longer narratives on the first (M = 22.50, SD = 9.52), t(111) = 3.74, p < .001, and the second day of writing (M = 21.33, SD = 10.30), t(111) = 2.47, p < .05, than on day 3 (M = 19.29, SD = 10.78).

Type of propositions. An initial MANOVA with type of proposition as the multiple dependent measure revealed a main effect of type of proposition, F(10, 111) = 99.77, p < .001. Therefore, analyses were conducted independently for each proposition type. Preliminary analyses included day of writing as an independent variable, but these results indicated that the only effects of day of writing were that children included more factual propositions on day 1 (M = 9.82, SD = 9.44) than day 3 (M = 8.06, SD = 8.40), t(111) = 2.64, p < .01, and more situational problems on day 1 (M = 3.04, SD = 2.91) than on day 3 (M = 2.05, SD = 2.18), t(111) = 3.16, p < .01. No other effects of day of writing were significant, therefore all further analyses were conducted using mean number of propositions across the three days of writing as the dependent variable. Because length of narratives did differ by age, gender and writing task, number of propositions was included as a covariate in all analyses. Means and standard deviations for all ten categories by type of narrative are shown in Table 2.

A 2 (age) × 2 (gender) × 2 (writing task) ANOVA on each type of proposition revealed that children included more facts, negative evaluations, emotions, explanations, problems involving punishment, aggression, situations, interpersonal concerns, and more coping in the emotional narratives than the non-emotional narratives (see Table 2 for statistical details). Girls also included more facts, emotions, explanations, and interpersonal problems than did boys, and there was a significant interaction between writing task and gender for facts and interpersonal problems, such that girls only displayed more of this type of information than boys in the emotional narratives but not in the non-emotional narratives (see Figure 1 for
statistical details). In addition, older children included more information about emotions, and problems with aggression than did younger children, although significant interactions indicated that age differences were only apparent for children in the emotional writing group and not for the non-emotional group (see Figure 2 for statistical details).

**TABLE 2**

<table>
<thead>
<tr>
<th>Narrative code</th>
<th>Emotion narratives: M (SD)</th>
<th>Non-emotional narratives: M (SD)</th>
<th>F(1, 111)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact</td>
<td>3.20 (2.71)</td>
<td>14.80 (7.51)</td>
<td>112.69</td>
<td>.001</td>
</tr>
<tr>
<td>Positive evaluation</td>
<td>3.20 (2.48)</td>
<td>4.41 (2.46)</td>
<td>0.003</td>
<td>.95</td>
</tr>
<tr>
<td>Negative evaluation</td>
<td>0.48 (0.74)</td>
<td>0.12 (0.31)</td>
<td>21.32</td>
<td>.001</td>
</tr>
<tr>
<td>Problem: relationship</td>
<td>2.99 (2.25)</td>
<td>0.52 (0.80)</td>
<td>88.87</td>
<td>.001</td>
</tr>
<tr>
<td>Problem: situation</td>
<td>3.00 (1.70)</td>
<td>2.07 (1.64)</td>
<td>19.89</td>
<td>.001</td>
</tr>
<tr>
<td>Problem: punishment</td>
<td>0.23 (.38)</td>
<td>0.07 (0.20)</td>
<td>6.06</td>
<td>.02</td>
</tr>
<tr>
<td>Problem: aggression</td>
<td>0.87 (1.10)</td>
<td>0.23 (0.53)</td>
<td>18.48</td>
<td>.001</td>
</tr>
<tr>
<td>Emotion</td>
<td>1.26 (1.15)</td>
<td>0.40 (0.66)</td>
<td>36.27</td>
<td>.001</td>
</tr>
<tr>
<td>Explanation</td>
<td>1.94 (1.40)</td>
<td>1.07 (1.03)</td>
<td>28.69</td>
<td>.001</td>
</tr>
<tr>
<td>Coping</td>
<td>0.70 (0.66)</td>
<td>0.54 (0.67)</td>
<td>6.81</td>
<td>.01</td>
</tr>
</tbody>
</table>

**Figure 1.** Gender differences in narrative variables by writing task. Notes: \( ^{a} F(1, 111) = 13.39, p < .01 \) for gender, \( F(2, 111) = 4.82, p < .05 \) for gender by task; \( ^{b} F(1, 111) = 4.46, p < .05 \) for gender, \( F(2, 111) = 7.45, p < .01 \) for gender by task; \( ^{c} F(1, 111) = 9.00, p < .01 \) for gender, \( F(2, 111) = 9.21, p < .01 \) for gender, \( F(2, 111) = 5.97, p < .05 \) for gender by task.
Finally, a significant three-way interaction between gender, age and writing task for emotions indicated that younger girls in the emotional writing group used more emotion talk ($M = 2.25$, $SD = 1.62$) than younger boys ($M = 1.07$, $SD = 0.86$), $F(1, 59) = 7.62$, $p < .01$, but there were no differences between older girls ($M = 1.15$, $SD = 0.78$) and older boys ($M = 0.67$, $SD = 0.55$) in the emotional writing task, and no gender differences in the non-emotional writing group for either age level.

**Narratives and well-being**

Children completed four measures of well-being assessing depression, anxiety, strengths and difficulties and somatic symptoms at baseline and at follow-up. As described in detail in Reynolds et al. (2000), children generally displayed lower anxiety, depression, difficulties and somatic symptoms from baseline to follow-up, suggesting that diary writing might help facilitate well-being regardless of the content of the narratives (see Reynolds et al., 2000, for specific details). Here, we focus on relations between the specific content that children included in their narratives and their subsequent well-being.

Partial correlations were computed between each narrative variable and follow-up well-being measure, controlling for the initial well-being score and
length of narrative. Correlations were computed separately for children in the emotional and non-emotional writing groups because the task instructions were different and the narratives were quite different. In particular, children in the non-emotional writing group focused on facts and used few propositions in the other categories, and combining these groups might lead to a distortion of the effects in each group separately. Correlations for the emotional writing group are shown in Table 3. As can be seen, children who wrote more about interpersonal problems and explanations subsequently showed higher depression and anxiety, controlling for their baseline scores on these measures, and children who wrote more about negative evaluations and situational problems subsequently showed higher anxiety, controlling for their baseline scores on this measure. In contrast, children writing more about coping subsequently showed fewer somatic symptoms, controlling for their baseline scores.

For children in the non-emotional writing groups, only 2 of the 40 correlations reached significance: children who wrote more about facts subsequently showed more problems in the strengths and difficulties measure and children who wrote more about emotions subsequently showed higher anxiety.

**DISCUSSION**

In this study, we evaluated children’s narratives about stressful events in their everyday lives, and assessed relations between these narratives and children’s
well-being. Surprisingly, the more children wrote about problems, explanations and negative evaluations of others, the lower their subsequent levels of well-being. However, the more children wrote about coping, the lower their subsequent levels of somatic symptoms.

In terms of the events children selected to write about, children in both the emotional and non-emotional writing groups focused on interpersonal themes, writing about family and friends. A substantially lower number of children’s narratives focused on academic- and achievement-oriented events. For children this age, who are just entering adolescence, a developmental period during which strivings for independence from family (Erikson, 1968) and the growing importance of peer groups (Harter, 1999) become paramount, perhaps it is not surprising that they focus on relationships. In contrast, in a college sample, Bohanek, Fivush, and Walker (2005) found that participants’ narratives of stressful events were equally focused on interpersonal relationships and academic achievements and failures. Thus the kinds of events that individuals find stressful seems to be related to the developmental tasks that they are currently facing. Indeed, we found few age differences in children’s narratives, indicating that the period of pre-adolescence studied here is reasonably homogenous in the kinds of situations children find stressful and the way in which they describe these stressful situations.

Girls also wrote differently than did boys. Girls included more information overall, more explanations, more interpersonal problems, and younger girls included more emotions in their narratives than did boys. These findings conform with the autobiographical memory literature that finds that females tell longer, more detailed, more emotional and more interpersonally situated narratives about their personal experiences than do males beginning in early childhood, and continuing through adulthood (see Fivush & Buckner, 2003, for a review).

Also, not surprising given the task instructions, children in the emotional writing group included more negative evaluations, more emotions, more explanations, more problems of all types, and more coping than children in the non-emotional writing group, even after controlling for narrative length. However, there were few changes in the content of the narratives over the three days of writing, suggesting that children did not shift to discussing events in a more explanatory framework, nor did they begin to discuss more ways to cope with their aversive experiences. Thus, whereas children in the emotional writing groups were easily, and quite poignantly, able to describe their stressful experiences, writing over a period of three days did not seem to help these children to change their appraisal and/or create more causal-explanatory frameworks to help them cope with their aversive experiences, a point we return to later.
The most surprising finding was that those children in the emotional writing group who included more explanations, more interpersonal and situational problems, and more negative evaluations of others subsequently showed higher levels of depression and anxiety compared to their baseline scores. This seems the opposite of what the research with adults has shown, albeit with a very different coding system. Adults who use specific words indicative of creating explanatory frameworks and emotional disclosure show benefits of expressive writing (Pennebaker, 1997). Previous analyses of the diaries studied here using the word count coding system used in the adult literature showed no group differences in emotional versus non-emotional writing conditions in subsequent outcome (Reynolds et al., 2000). Here, we did an exhaustive coding of narrative content, and found that the more children talked about their problems, negative evaluations of others, and provided explanations, the worse off they were. We must be cautious in interpreting these results as there were many correlations conducted and only a few reached statistically significant levels. However, that there were virtually no effects of narrative content on well-being for children in the non-emotional writing condition suggests that these effects are not simply artefactual. Moreover, it is not simply engaging in writing per se that is detrimental, but specifically focusing on negative evaluations, problems and explanations when writing about stressful experiences. Why might this be so?

As reviewed in the introduction, the ability to create causally coherent, cohesive and thematically organised narratives develops gradually across childhood. Especially when faced with the additional emotional distress associated with stressful experiences, children may not be able to create meaningful explanations on their own. The fact that we saw virtually no change in narrative content across the three days of writing supports the idea that children may not yet be able to create coherent, cohesive narratives that help them to understand and manage their stress. Rather, narrating these experiences may simply serve to bring the experience to mind, leaving the child with a heightened sense of anxiety and no coherent explanatory framework to alleviate this distress. Even adults experience heightened distress immediately after engaging in expressive writing interventions (Pennebaker, 1997), but adults seem able to use expressive writing as a way to help create meaning and manage their aversive emotions over the long term.

Recall that in the meta-analysis done by Frattaroli (2006) described in the introduction, adults needed a minimum of three days of writing for at least 15 minutes per day to show benefits of expressive writing, and these benefits accrued regardless of task instructions, and regardless of whether writing was on consecutive days or spaced out across several weeks. However, these findings might not extend to children. Perhaps children need more days of writing, or longer writing periods to benefit, given their less developed
narrative and emotional regulation skills. Or perhaps because children have difficulty creating explanatory coherent narratives on their own, they would benefit from more explicit instructions about how to write, more so than adults, a point we return to later.

It is also possible that the follow-up measures were administered after too much time had passed since the intervention. Indeed, Soliday et al. (2004), who did find a decrease in distress as a result of expressive writing with 8th graders, included a shorter follow-up assessment. Again, Frattaroli’s (2006) meta-analysis indicates that benefits are stronger for adults assessed sooner rather then later following expressive writing. Thus future research might examine possible short-term benefits of expressive writing for children.

However, researchers should approach expressive writing interventions with children with caution. Considering the results as a whole, expressive writing as used with adults may be, at best, ineffective and, at worst, detrimental for children at this age for several reasons. First, as reviewed in the introduction, children of this age are just beginning to be able to use effortful emotion regulation strategies. Pre-adolescent children are most likely not yet able to engage in more sophisticated coping interventions (Compas, 1987). Indeed, impressionistically, the majority of coping strategies suggested in children’s narratives involved avoiding the stressful situation in the future (e.g., avoiding the child who teases them, or not talking to their father on the phone because they miss him too much), or soliciting the support of an adult to help them manage the situation (e.g., telling a teacher about a bully). These kinds of coping strategies may aid in avoiding future stress, but they may not alleviate stress associated with events that have already occurred.

The finding that children who talked more about coping subsequently displayed fewer somatic symptoms is in line with this interpretation. Somatic symptoms may reflect concerns about future occurrences of stressful events (Compas & Epping, 1993), whereas alleviating stress associated with events that have already occurred might require cognitive restructuring to change the appraisal of the situation (Lazarus & Folkman, 1984), a coping strategy that may be developmentally difficult for pre-adolescents. Future research should examine the types of explanations and coping strategies that children use in their narratives of stressful events in a more qualitative way to assess these interpretations.

Second, and interrelated with this first explanation, recent research finds that mothers who co-construct narratives about stressful experiences with their pre-adolescent children that are rich in emotions and explanation, have children who show more flexible coping and fewer internalising and externalising behaviour problems (Fivush & Sales, 2006; Sales & Fivush, 2005). These findings suggest that children may need the help of someone
with more effective coping and narrative skills in order to help them to structure a more causally coherent and emotionally expressive narrative that can help them to manage their stress. That is, for children who are just learning more sophisticated narrative skills and more effective coping strategies, they may need the scaffold provided by a more competent adult to create narratives that facilitate their cognitive understanding and restructuring of stressful events in ways that facilitate coping and well-being (Fivush & Sales, 2006). It would be interesting to determine if children of this age might benefit from more guided expressive writing that might help them to create a more explanatory framework for understanding stressful events.

Thus, we agree with Soliday et al.’s (2004) explanation that one critical reason for the discrepant findings between their study and the findings with this set of diaries is the age differences. Children in this study were mostly pre-adolescent whereas participants in Soliday et al. were all 8th graders (approximately 14–15 years old) and thus developmentally better able to engage in narrative construction and emotional regulation independently. The transition into adolescence is a time of rapid developmental change, and future studies should examine age difference in the benefits of expressive writing across this age period in more detailed ways.

Obviously, research on expressive writing has just begun with children and there are many limitations to this study that suggest directions for future research. Most important, given the arguments here, children may need more structured writing intervention over a longer period of time to help them to create more explanatory and coherent narratives of stressful events. Thus future research should include an assessment of varying task instructions. Perhaps initial training on how to write more coherent narratives would have long-term benefits for children to begin to do this better on their own. In addition, the children in this study, while experiencing the typical stressors associated with childhood, were reasonably healthy and well adjusted. Perhaps expressive writing would be more beneficial for children who have experienced more stressful or traumatic events. Future research should also more directly test the multiple mechanisms thought to underlie the benefits of expressive writing. These mechanisms may themselves show a developmental trajectory such that certain mechanisms may be on line earlier than others. For example, habituation following exposure is a relatively low-level emotion-regulation device as compared with cognitive processing and reframing. Determining how and why expressive writing does and does not work for children of different ages will help researchers create more developmentally appropriate expressive writing interventions.

However, given the results presented here, we also recommend caution in future research examining expressive writing in children. Whereas children are easily able to engage in expressive writing interventions, these results
suggest that it may be detrimental, at least for some preadolescent children, to write about the stressful events of their lives, especially if they focus on problems and explanations, without guidance to help them to restructure their understanding of the event, and help them create meaning.

REFERENCES


