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Associations Between Narrative Features and Resilience in Newly Emancipated Foster Youth

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ABSTRACT OF THE DISSERTATION

Associations Between Narrative Features and Resilience in Newly Emancipated Foster Youth

by

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This dissertation evaluated prospective relations between emancipated youth's narrative content (i.e., depicted themes of positive and negative affect) and coherence (i.e., organization) in a modified Five Minute Speech Sample (FMSS), which prompted youth to reflect on their experiences in foster care. Specific aims evaluated 1) unique and interactive associations of youth's narrative content and narrative coherence with psychosocial adjustment, 2) childhood correlates of youth's narrative content and coherence, and 3) mediating models wherein narrative features were expected to explain associations between childhood experiences and youth adjustment. Participants were 172 recently emancipated foster youth (66% female; M_{age}= 19.62 years, *SD* = 1.11; 34.1% Hispanic, 31.1% African American, 15.9% White European American, and 18.9% multiracial/other) who completed extensive face-to-face interviews as part of an ongoing study of youth's adaptation to aging out.

Both narrative content, particularly negative affect, and narrative coherence were related to age-salient adjustment. However, narrative content was more strongly related to emotional well-being (i.e., positive narrative content was associated with self-esteem and life satisfaction, and negative narrative content was related to internalizing and externalizing problems), whereas narrative coherence was more strongly related to relational outcomes (i.e., romantic and peer relationship quality, and peer attachment). Moderation analyses revealed unique associations of narrative content and coherence with varied outcomes, but the degree of narrative coherence did not significantly alter relations between narrative content and adjustment. Although narrative features were related to youth's childhood experiences (e.g., child maltreatment, child welfare experiences, and mentoring relationships), mediation analyses suggested only modest explanatory relations between these childhood experiences and later adjustment via narrative content and coherence with the strongest indirect paths evident through negative narrative content.

These findings support the utility of the FMSS as a brief narrative assessment tool. The results are discussed with particular attention to processes of narrative representation and meaning making as salient developmental influences in the wake of foster care, and in development broadly. Implications for future practice and policy aimed at supporting positive development among transition-aged foster youth are also discussed.

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Associations between Narrative Features and Resilience in Newly Emancipated Foster Youth

Life stories allow us to weave together memories and abstract knowledge of the reassembled past, the perceived present, and the anticipated future. Narratives include personal accounts of past events and/or stories that include characters, settings, and a plot. They may be characterized with respect to their content (i.e., positive and negative narrative themes) and their coherence (i.e., narrative organization and structure). Both individually and interactively, these narrative elements provide opportunities to establish a sense of self-continuity and understanding with respect to personal experience that fosters a feeling of purpose and unity. Indeed, "the most comprehensive way to express identity is through the life story" (Habermas & Bluck, 2000, p. 762).

Adolescents who know their family's stories and are able to relate those stories in detailed and elaborative ways have higher levels of emotional well-being and identity achievement (Fivush, 1991). In contrast, children raised in foster care experience numerous disruptions in their life stories with multiple instances of caregiver loss and transition. Foster care is associated with increased exposure to trauma and chaotic environments, both of which have been found to undermine the formation of organized memories (Nelson, 1986; Terr, 1991). In the absence of familial ties and stable family narrators, foster youth may evidence heightened difficulty with constructing a coherent and continuous life narrative. At the same time, an organized life story is apt to be especially important for youth with disrupted care histories as it can confer a sense of internal continuity and stability amidst external chaos.

The current study examined recently emancipated foster youth's narratives about their experiences in foster care to understand how both the content and coherence of their narratives may be related to resilience in salient domains of adjustment during emerging adulthood. First, I developed a novel approach to collect and code emerging adults' narratives about their experiences in foster care and demonstrated the adaptive significance of these narrative features by documenting unique and interactive relations of narrative content and coherence with indices of adjustment in the domains of psychological well-being, self-esteem, educational attainment, civic engagement, and relational health, during the transition to adulthood. Second, I examined historical correlates of narrative features among emancipated foster youth, including both risk and protective factors (e.g., child maltreatment, child welfare experiences, and mentoring relationships). Third, I evaluated the mediating role of narrative features on observed relations between childhood experiences and youth's adjustment in emerging adulthood. Although studies have examined associations among socioemotional well-being, manifest adjustment, and narrative features in varied populations (Buehlman, Gottman, & Katz, 1992; Hauser, 1999; Pennebaker, 1993; Toth, Cicchetti, Macfie, Rogosch, & Maughan, 2000), to my knowledge, this investigation is the first to examine relations of narrative content and narrative coherence with socioemotional adjustment in a large sample of newly emancipated foster youth.

The Phenomenology of Narratives

Narratives can be characterized by both content (i.e., positive and negative affective themes and attributions) and coherence (i.e., organization). Although related,

these narrative features are distinct with potentially unique implications for development. Thus, the first aim of this investigation was to evaluate individual and interactive associations between youth's narrative features and their psychosocial adjustment in age-salient domains, such as health, school, and relationships.

Narrative content refers to the affective themes that are expressed in the process of telling a story (Barrowclough & Hooley, 2003). Narrative content may consist of negative and/or positive affects and experiences. For example, negative narrative content could be articulated as anger, fear, hostility, distress, sadness, or guilt, and often follows from negative experiences, such as a death, a time in which one endured abuse or maltreatment, or a time of failure or betrayal. Positive narrative content may be expressed as happiness, pride, enthusiasm, and nostalgia, which are often attendant with positive experiences, such as high value accomplishments (e.g., graduating high school), acquisitions (e.g., buying a new car), or gratifying relationships (e.g., enjoying a positive moment with a friend or loved one).

Narrative coherence refers to the organization of verbal or written narratives. Coherent narratives are succinct, orderly, and relevant to the purpose of the narrative (Androutsopoulou, Thanopoulou, Economou, & Bafiti, 2004; Grice, 1975). Baerger and McAdams (1999) define narrative coherence across four components: 1) *orientation* (i.e., context in which the story takes place), 2) *structure* (i.e., how the narrator constructs the beginning, middle and end), 3) *significance* (i.e., why the story was told), and 4) *integration* (i.e., integration of the story into the overall life story). Other criteria for narrative coherence include established end points, ordering of events, stability of

characters' identities, and selection of relevant events that will contribute to the plot or trajectory of the story (Gergen, 1994).

Coherent narratives follow general principles of discourse as conceptualized by the British philosopher, Paul Grice (1975), who argued that coherent narratives need to evidence characteristics of 1) *quality* (i.e., truthful with no contradictory statements), 2) *quantity* (i.e., succinct and to the point), 3) *relation* (i.e., content is relevant to the narrative), and 4) *manner* (i.e., clear and orderly). In sum, individuals who evidence a logical flow of thought throughout the narrative while adhering to Grice's maxims (i.e., truthful, succinct, relevant, and clear) are considered coherent. In contrast, narratives that are full of contradictions, confused and disjointed sentences, and unclear statements are considered incoherent.

Narrative coherence is closely related to cognitively oriented concepts, such as 'coherence of mind,' which is evidenced by the ability to metacognitively monitor discourse (Main, 1991). For example, a youth who relates back to an earlier statement within the narrative may say, "as I said before" to communicate to the listener the flow of her/his thoughts. Further, youth who evidence a high degree of cognitive affective integration (i.e., integration between cognitive and affective elements of the experience being recounted) are better able to remain coherent in their thinking throughout their narrative as they will neither be overwhelmed by, nor avoidant of, negative affect (Main, 1991). Given the breadth of this construct, narrative coherence is typically evaluated as a global feature across multiple sub-elements of the narrative, such as focus, complexity, balance, and integration.

Although narrative content and coherence are related in the sense that overwhelmingly positive or negative narrative content undermine coherence by diminishing the complexity and balance of the narrative as a function of unidimensional portrayals that are idealizing or disparaging, they are presumed to be distinct in the elements they capture and how they relate to adjustment (Bowlby, 1969/1982; Hesse, 2008; Sher-Censor & Yates, 2014). Narrative content reflects the attributions or meaning one has made (positive and/or negative) about experiences, whereas narrative coherence refers to the information processing principles that guide the formation, storage, and retrieval of those attributions (Bowlby, 1969/1982; Crittenden, 1990). As such, narrative coherence influences the manner in which positive and/or negative narrative content is accessed and applied to everyday situations. Thus, narrative coherence may moderate the developmental significance of narrative content. Theorists have argued that narrative coherence is salient for understanding the developmental implications of experience, and may be particularly relevant for relational adjustment because it influences the accessibility and flexibility/organization of narrative content in day-to-day exchanges (Bowlby, 1969/1982; Crittenden, 1990; Hesse, 2008).

The Assessment and Developmental Significance of Narratives

Narrative assessment is commonly used in attachment research and is typified by measures such as the MacArthur Story Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, & Emde, 1990) and the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985). The MSSB was developed and validated to assess children's narrative beliefs and expectations of self and others. In this assessment, toy props are used to

introduce story stems about relationally charged family events (e.g., separation, injury, disobedience) and children are asked to complete the stories using gender and racially matched dolls (see Bretherton & Oppenheim, 2003 for review). In older adolescents and adults, narrative measures become more verbal in the context of semi-structured interviews about past experiences and relationships, such as the AAI (George et al., 1985) and Waters' secure base script assessment, which focuses on narratives produced in response to a standard set of word prompts (Waters & Waters, 2006). The AAI examines individual's narrative reflections regarding early relationships with parents, including separations, experiences, and resulting attitudes toward each parent. Responses on the AAI can be coded to classify participants as having a secure or insecure state of mind with regard to their primary attachment relationships (George et al., 1985). Similarly, secure base script assessments using word prompts to obtain narratives are thought to capture the individual's internalized sense of relational security and predictability. Finally, adult narratives have also been assessed using expressive writing techniques, in which adults are asked to write about their feelings and thoughts regarding varied life events, particularly stressful ones (Pennebaker, 1993). Across these different techniques, narrative content and coherence are assessed in light of their anticipated significance for age-salient adaptation.

As noted earlier, both narrative content and narrative coherence are expected to relate to adjustment. However, they are distinct in that narrative content reflects the attributions that are assigned to experience, whereas narrative coherence reflects the organization of those attributions thereby influencing how subsequent experiences,

particularly relational exchanges, are processed and organized. For this reason, narrative content may be more strongly related to emotional adjustment and well-being than to relational adjustment. Conversely, narrative coherence, though associated with emotional well-being and adjustment, may be more strongly related to relational adjustment.

Across variably-aged samples, studies have documented associations between narrative content and behavioral outcomes. In a study of preschoolers, Stacks (2007) found that children who expressed elevated levels of negative narrative content (e.g., hostility and fear) were reported to have high levels of externalizing behavior by their parents on the Child Behavioral Checklist. Likewise, elementary school children who expressed aggressive and harsh narrative content in the Attachment Doll Story Task evidenced elevated levels of externalizing behavior as reported by teachers (Laible, Carlo, Torquati, & Ontai, 2004). In longitudinal work examining adversity-exposed adolescents, youth who had positive narrative content (e.g., self-efficacy, ambition, and persistence) demonstrated narrative thematic continuity from adolescent into adulthood (Hauser, 1999). Moreover, when these youth became adults, those whose narratives were characterized by positive narrative content evidenced greater resilience with regard to psychological health (Hauser, 1999). Other work examining adult narratives in young couples found that positive narrative story themes were associated with elevated problem solving abilities and marital satisfaction, while negative narrative affect was associated with more physiological arousal and somatic reactivity (Buehlman et al., 1992).

As with narrative content, narrative coherence has been associated with improved behavioral and psychological well-being in studies of preschoolers (Oppenheim, Emde,

& Warrren, 1997) and of adolescents and adults (Alvarez-Conrad, Zoellner, & Foa, 2001; Pennebaker, 1993). However, many theorists postulate that narrative coherence may be an especially salient influence on relational adjustment because it underlies individuals' access to and application of attributional content in everyday relationships (Bowlby, 1969/1982; Crittenden, 1990; Hesse, 2008; Main, Hesse, & Kaplan, 2005). Research has shown that both positive narrative content (e.g., prosocial, moral, and positive relational themes) and narrative coherence in preschoolers' narratives are associated with children's social competence, whereas negative narrative content (e.g., aggression) and poor coherence were related to conduct problems and hyperactivity as reported by teachers and parents (von Klitzing, Stadelmann, & Perren, 2007). In adult research, the capacity to discuss childhood events, particularly negative experiences, coherently (i.e., in a well structured and organized fashion) has been associated with less reenactment of negative parenting practices with one's own children, whereas adults who were not able to discuss their upbringing in a coherent manner were less able to maintain positive parenting practices (Phelps, Belsky, & Crnic, 1998).

Finally, as discussed previously, narrative coherence may qualify the developmental significance of narrative content (Bowlby, 1969/1982; Crittenden, 1990; Hesse, 2008). While both narrative features provide unique contributions to the narrative frame, there may be interactive effects wherein narrative coherence may moderate the meaning of narrative content, particularly negative narrative content. For example, content expressed in the context of a coherent narrative is thought to be well-regulated,

whereas affective content in the absence of narrative coherence, may be less regulated and thus more strongly related to adjustment problems.

The first aim of the present study was to examine the content and coherence of newly emancipated foster youth's narratives about their experiences in foster care to evaluate their individual and interactive associations with youth's age-salient adjustment. As reviewed earlier, varied techniques are well-validated for evaluating narrative processes in development (e.g., MSSB, AAI). However, these approaches are quite costly in terms of training, time, and expenses related to administration and scoring. These concerns have prompted recent efforts to adapt brief narrative assessment tools, such as the Five Minute Speech Sample (FMSS), to evaluate narrative features.

The FMSS was originally developed by Brown and colleagues (1972) to measure expressed emotion (e.g., attitudes and feelings) within families of patients with schizophrenia based on caregivers' narrative statements across five uninterrupted minutes in response to being asked about their relationship with their adult child. These narratives can be coded to assess expressed emotion or narrative content (e.g., criticism, self-sacrifice and overprotection; Magaña et al., 1986), and have been examined in populations with chronic asthma (Wamboldt, O'Connor, Wamboldt, Gavin, & Klinnert, 2000), anorexia (Duclos et al., 2014), and postpartum depression (Iles, Spiby, & Slade, 2014). In addition to content, recent efforts to evaluate the coherence of FMSS narratives (Sher-Censor, Grey, & Yates, 2013; Sher-Censor & Yates, 2014) have prompted growing interest in the use of the FMSS as a brief measure of narrative coherence. Thus, this investigation drew on a modified FMSS procedure to evaluate associations between

youth's narrative processes and young adult competence.

The Development of Narratives

Although narrative content and coherence are distinct with likely differences in their developmental implications, both narrative features are thought to originate in early development. According to theories of attachment (Bowlby, 1969/1982) and secure base scripts (Neisser, 1967; Waters & Waters, 2006), the quality of early caregiving lays the foundation for children's representations or schemas/scripts about themselves, others, and future relationships. Individuals who have had a history of sensitive and reliable caregiving develop a schema of relational and experiential security that supports future information processing and adjustment. Children who encounter harsh, rejecting, or unpredictable care are likely to evidence greater difficulty when trying to create a balanced, complex, coherent narrative in which their past life events smoothly connect to their present experience (Fivush & Sales, 2006; Main & George, 1985; Oppenheim & Waters, 1995). To that end, evidence suggests that both narrative content and coherence are related to the quality and organization of children's caregiving relationships (Bretherton, Ridgeway, & Cassidy, 1990).

Representation and Narratives in Typical Development. Although Bowlby (1969, 1973) conceived of the presence of internal models of representation, he did not articulate a mechanism for how these models were internally organized. In 1967, Neisser offered an innovative cognitive theory, which stated that mental representations were organized by schemas (i.e., conceptual representations of experience). Since then, Neisser's (1967) schema theory has been further developed and is now widely accepted.

Schema theory postulates that individuals construct representations of events that enable them to anticipate, predict, and interpret future experience (Nelson, 1986; Schank & Abelson, 1977; Waters & Waters, 2006).

In the context of early caregiving, narrative schemas or scripts are thought to develop through memory-talk between adults and children that informs the child about what aspects of experience are important to recall and how to organize and retain the experience in their memory (Gauvain, 2001). Through these social interactions characterized by shared reminiscing, children develop the ability to verbalize and contextualize their life narratives (Gauvain, 2001). The development of these narrative abilities allows the child to create more complex yet coherent narratives in which past life events fluidly connect to the present experience.

In early development, children rely on adults to help piece together past experiences. Adults may help the child expand one word references, such as "park," to provide a structured narrative frame that extends the word's meaning, such as, "Yes, we were at the park. Remember, I pushed you on the swing?" Through this scaffolding, adults facilitate the development of autobiographical memory (Fivush, 2011; Gauvain, 2001). However, the quality of memory talk can vary across parent-child dyads. For example some mothers show a highly elaborative style (e.g., long, descriptive, and detailed conversations) when discussing past events with their children, while other mothers talk less and discuss memories in less detail (Fivush, 2011; Gauvain, 2001). The quality of the mother's ability to reminisce has been found to impact her child's narrative abilities (Fivush & Sales, 2006; Main & George, 1985; Oppenheim & Waters, 1995).

Mothers who are able to provide emotionally regulated, open, and organized dialogues help their children to develop coherent and consistent models of the self in the environment and in relation to others (Koren-Karie, Oppenheim, & Getzler-Yosef, 2008; Oppenheim & Waters, 1995; Thompson, 2000). Thus, both the quality of caregiving and the nature of parent-child dialogues about experience are thought to contribute to children's narrative and representational capacities.

As children age, both working models and script representations become more complex as events become hierarchically organized with specific behaviors leading to different outcomes (e.g., mother comforts me when I get hurt, but father does not). Children's increasing cognitive capacities foster the emergence of complex and flexible representations (Lee, 2000). Over time, these representations and narrative capacities are carried forward into new relationships with enduring consequences for youth's socioemotional adaptation and relational adjustment.

Representation and Narratives in Atypical Development. Understanding processes whereby parents typically help young children develop their memory and reminiscing abilities may clarify how and why narrative processes can be compromised by the aversive and/or disrupted caregiving that often attends placement into foster care. Bowlby (1988) observed that "the striking differences in which [parent-child] communication is either free or restricted [are] of great relevance for understanding why one child develops healthily and another becomes disturbed" (Bowlby, 1988, p. 131). In his essay "On Knowing What You Are Not Supposed to Know and Feeling What You Are Not Supposed to Feel," Bowlby (1988) described the experiences of children who

had witnessed a parent commit suicide. In instances where the surviving parent pressured the child to deny the experience, children were unable to recall the event with consistency and clarity in later development. In contrast, those who were supported to process this exceptionally difficult life experience were better able to integrate it into a coherent life story. Absent or distorted parent-child caregiving and communication patterns may be detrimental to the creation of an integrated life story (Oppenheim & Waters, 1995).

In maladaptive environments, dyadic processes by which parents typically help children develop memory and meaning making abilities may be distorted or altogether absent. Hostile, neglectful, and rejecting relationships do not allow for emotionally intimate and responsive conversations. In fact, insecure and hostile caregiver-child relationships affect representations of attachment leading to incoherent narratives of experience (Main, Kaplan, & Cassidy, 1985), thus making an abusive relationship between caregiver and child particularly damaging.

Fivush and colleagues (2006) propose that the quality of a narrative reflects the state of mind of the narrator as s/he recounts events. In an examination of childhood trauma, Terr (1991) found that traumatic stress leads to fragmented, disorganized memories of experience. Furthermore, situations that engender chronic stress, as in chaotic environments, have also been related to disorganized memories (Nelson, 1986). Schwartz and Kline (1995) found that adults in highly stressful situations struggled to regulate their emotional responses and had difficulty confronting their experiences. This finding is echoed in research showing that adults evidence low levels of narrative coherence and increased disorganization when recounting highly stressful events

(Bohanek, Fivush, & Walker, 2005; Foa, Molnar, & Cashman, 1995). Children who lack the emotional and cognitive resources needed to handle stressful events at the same time their caregiving environment fails to support these emergent abilities may be particularly vulnerable to disorganized memories (Compas, 1987; Davies, Dumenci, & Windle, 1999; Fivush & Sales, 2006).

A sizable body of research has documented associations between prior experience and narrative characteristics in work examining the relations between parenting quality and children's MSSB narratives in both sensitive (Oppenheim et al., 1997; Sher-Censor & Oppenheim, 2004) and toxic (Macfie et al., 1999; Shields, Ryan, & Cicchetti, 2001; Toth et al., 2000) milieus. Maltreated children include more themes of hostility, destruction, pain, and escalation of conflict and less affection, affiliation, compliance, and empathy in their narratives about every day family events than their non-maltreated counterparts (Macfie et al., 1999; Toth et al., 2000). Insecurely attached and/or maltreated children evidence more negative self and maternal representations characterized by more disorganization and incoherence in story telling tasks designed to assess attachment representations (Main et al., 1985; Solomon & George, 1999). In contrast, children with secure working models and responsive parenting experiences are able to tell more positive and more coherent stories about family relationships and experiences (Bretherton & Munholland, 1999).

Clinical work with adolescents and adults who were maltreated in childhood demonstrates that trauma narratives of an autobiographical nature may challenge the narrator's capacity to verbalize her/his experiences in a coherent manner.

Autobiographical narratives pertaining to childhood trauma activate associated nonverbal feelings and sensory memories instead of relational scripts and schemas, which further threatens the coherence of the narrative (Briere, 2002; Greig et al., 2008). Indeed, evidence suggests that the narratives of maltreated children, adolescents, and adults are characterized by more negativity and poorer coherence relative to non-maltreated comparisons, and these findings replicate across studies of children's narrative play (Macfie et al., 1999; Toth et al., 2000) and adolescent and adult verbal narratives (Briere, 2002; Greig et al., 2008).

The Current Study

Children in foster care have encountered extreme caregiving environments that may lead to profound disruptions in their narrative meaning making and future adjustment (Cerezo, 1997; Mueller & Silverman, 1989; Rogosch, Cicchetti, Shields, & Toth, 1995). Importantly, at the same time narrative processes are negatively affected by adversity, they may also take on unique importance for maltreated youth. Evidence suggests that intrapersonal processes, such as narrative construction, may be especially important for understanding adjustment patterns among maltreated youth because they cannot rely on the relational environment for structure and stability (Cicchetti & Rogosch, 1997). Given these findings, the study of narrative content and coherence among newly emancipated foster youth has significant potential for scientific and applied impact because these capacities are both vulnerable to distortion in the context of maltreatment and foster care, yet disproportionately important for supporting socioemotional and relational adjustment in the wake of these same experiences.

This dissertation examined youths' narratives about their experiences in foster care and how those experiences affected or influenced them using a modified FMSS procedure. Narrative features (i.e., positive narrative content, negative narrative content, and coherence) were assessed among newly emancipated foster youth because these processes are integrally connected to adjustment, may be compromised by disrupted histories of foster care, and may account for expected relations between child welfare experiences and young adult adjustment.

In the context of an ongoing longitudinal study of 172 newly emancipated foster youth, I evaluated specific hypotheses addressing the relation between youth's narrative features and multi-domain competence at a time of major developmental reorganization and opportunity across youth's transition from adolescence and foster care to adulthood and self-care. Indeed, this period serves as "a developmental bridge between childhood and adulthood in the integration and interpretation of memories of one's personal past" (Habermas & Bluck, 2000, p. 748). This dissertation addressed three questions to further our understanding of whether and how narrative construction constitutes an essential adaptive process and to inform efforts to protect this process in contexts of disadvantage and adversity.

Q1: What are the unique and interactive relations between youth's narrative qualities and adjustment? The first aim of this investigation examined concurrent relations among narrative content features (i.e., positive and negative themes and affects), narrative coherence, and age-salient adjustment domains (i.e., internalizing and externalizing problems, life satisfaction, self-esteem, educational attainment, civic

engagement, relational health, and peer attachment). I hypothesized that narrative content and coherence would be uniquely and interactively related to youth adjustment. Specifically, I predicted that narrative content would be more strongly related to indices of emotional adjustment and psychopathology, whereas narrative coherence would be especially salient for understanding indices of relational adjustment. I also hypothesized that narrative coherence would moderate the magnitude of the relation between narrative content and adjustment, such that narrative content would be less strongly associated with youth adjustment when expressed in the context of a coherent narrative frame. Furthermore, I expected this moderating effect to be significant for negative narrative content, because, as described previously, negative narrative content carries the potential to disrupt development and narrative meaning making due to its association with greater arousal and dysregulation.

Q2: What are the childhood correlates of youth's narrative content and coherence? The second aim of this investigation was to identify risk and protective factors that may influence foster youth's narrative content and coherence. I hypothesized that youth with relatively more disruption and trauma would express more negative narrative content, less positive narrative content, and evidence greater difficulty discussing their experiences in an organized, balanced, and complex way (i.e., lower coherence). In contrast, I hypothesized that fewer placement and educational disruptions would be related to more positive and less negative narrative content, while supportive relationships (i.e., mentoring) would be associated with more coherent narratives.

Q3: Do narrative features mediate expected relations between childhood experience and youth adjustment? Guided by the correlative findings obtained in aims one and two, the third aim of this study was to evaluate the extent to which narrative features (i.e., narrative content and coherence) accounted for observed relations between childhood experiences (i.e., age at foster care entry, placement disruption, child maltreatment, educational disruption, and adolescent mentoring) and youth adjustment in salient life domains (i.e., internalizing and externalizing problems, life satisfaction, self-esteem, educational attainment, civic engagement, relational health, and peer attachment). I hypothesized that narrative content features would mediate expected relations between childhood experience and emotional outcomes, whereas narrative coherence would be more salient for understanding pathways to relational adjustment.

Method

Participants

Participants were 172 youth (66% female; M_{age}= 19.62 years, *SD* = 1.109) who were part of an ongoing longitudinal study of newly emancipated foster youth. The sample was ethnoracially diverse (27.3% Hispanic, 23.8% African American, 15.7% White European American, and 33.1% multiracial/other) with extensive child welfare involvement (mean age of entry to care = 8.70 years, *SD* = 5.52; mean number of foster placements = 7.18, *SD* = 4.89).

Procedures

Emancipated foster youth were invited to participate in a study of youth transitioning from foster care to adulthood via fliers distributed in various locations

serving transition-aged foster youth, including social service offices, homeless shelters, and transitional living facilities in Southern California. Prospective participants were screened by phone before a face-to-face interview was scheduled. Youth who entered care after the age of 16 (n = 6), youth who entered care because of juvenile delinquency (n = 4), youth who were older than 21 years (n = 9), and youth who were not able to speak English (n = 0) were excluded from the study. Youth who were hospitalized or incarcerated at the time of initial data collection were not eligible for participation.

Interviews were conducted on-site at the University or at locations outside the University (e.g., local libraries) when participants were unable to secure transportation. Participants were informed that the purpose of the study was to examine patterns of adjustment among youth aging out of foster care in age-salient domains, such as education, relationships, and health. All interviews were audio recorded and participants were informed that the examiner was required to report ongoing abuse or neglect of a minor child or vulnerable adult to the department of public and social services. Participants were compensated with 75 dollars for their participation. The Human Research Review Board of the participating University approved all procedures.

Face-to-face interviews were conducted in forty-five minute segments with breaks between each section. The first segment of the interview included questions pertaining to the youth's living arrangements since emancipation, civic engagement, education, employment, and a semi-structured relationship interview about a close friend (48.4 %) or (when available) a romantic partner of 2 months or longer (51.6 %). The second section included a computerized survey that asked about the youth's views on important

relationships (e.g., with parents, partners, and peers), and their relational experiences vis a vis sexual risk behaviors, dating relationships, and pregnancy/parenting. During the third section of the visit, youth completed a semi-structured life history interview, including an event history of their out-of-home placements, maltreatment experiences, and other exposures to traumatic events. In the final section, participants completed a second set of computerized surveys that assessed their mental health and socioemotional adjustment. The interviews concluded with a brief set of questions about future goals.

Measures

Narrative Representation Following the informed consent, each interview began with a modified five minute speech sample (FMSS; Magaña-Amato, 1993), in which the examiner said to the youth:

> *I'd like to hear your thoughts about your foster care experiences. When I ask you to begin I'd like you to speak for 5 minutes, telling me about what it was like for you in foster care and how these experiences have affected or influenced you. After you begin to speak, I prefer not to answer any questions until after the 5 minutes are over. Do you have any questions before we begin?*

The FMSS procedure was developed to evaluate parental narratives about their adult child in terms of narrative content or expressed emotion (Magaña-Amato, 1993) and, more recently, narrative coherence (Sher-Censor & Yates, 2014). The FMSS technique was adapted for use in this study to elicit spontaneous narratives regarding youth's experiences of, and reflections about, foster care. FMSS narratives (and the ensuing interviews) were audio recorded and transcribed verbatim to permit narrative coding and analysis.

FMSS transcripts were coded for narrative content and coherence using a manual (Sher-Censor & Yates, 2010) that was adapted from the Insightful Assessment (IA; Koren-Karie & Oppenheim, 2004) and the Adult Attachment Interview (AAI; Main et al., 1985). Transcripts were coded across several 7-point scales by independent coders who were blind to all other information about the youth. Coherence-relevant scales included:

(1) *Positive Content* (ICC = .855) – the extent to which positive affective content was expressed, characterized by happiness, pride, and enthusiasm:

> *My foster mom was the best…she was there for me, she pushed me [in high school]. She was awesome… and she was there and she's still there. My foster dad too, he was pretty funny. When I was growing up I didn't think that, people could love people so much but they love me so much and I love them and like I graduated school, so that was a good thing.*

(2) *Negative Content* (ICC = .828) – the extent to which negative affective content was expressed, characterized by anger, distress, fear, guilt, and sadness:

> *Umm in foster care…it was really bad, it was like real bad. I…was from foster care to foster care and then, like the people in the foster care was…I don't know it was bad, like they treated me bad too and just…just hard, really bad, really hard.*

(3) *Focus* (ICC = .611)– keeping the focus of the FMSS on their experiences in foster care and how those experiences influenced or affected them, which relates to the internal consistency dimension of coherence:

> *I can easily say it molded me in to the person I am today because uhh being in foster care actually somehow gave me this motivation to just want to continue school, want to do better for myself and for my family, so like when I can grow, grow older, my children won't have to you know, go through the same thing that I went through. (high focus)*

> *I didn't speak to my Mom for a long, long time because I was really bitter with her and angry that what she had did. I thought she was being very, very selfish only thinking about herself. (low focus)*

(4) *Elaboration* (ICC = .803) – the inclusion of rich details that provide a believable narrative:

> *I was placed into a foster home when I was 17 years old. And umm, at the time I never really had a good feel of education, umm I hardly went to school. Umm, I didn't really make it uh, one of my main priorities. Umm…once I was placed into a foster home umm, I was required to go to school more often and me being able to go to school umm, it actually made me realize that school's really important and umm I think it changed how I am because I think education is really important to me now then it was before I was place into foster home. And umm, I actually, I learned how to communicate better and express my feelings because umm, in the foster home umm, you kinda are, it depends on the kind of home you're placed in but I was like really blessed to be placed into a really good home with people that actually cared about me and wanted to know how I felt and had a really good social worker so, umm, and before being in a foster home I never really had anyone I could voice any of my opinions to or umm, like, just how I viewed things and stuff. And um having the people in my life when I was in the foster, foster home that actually helped, brought out a lot of my views on what I wanted to do in my future, and umm, actually helped me walk, walked me through umm…what I wanted to achieve, and the goals I wanted to achieve, and.. umm I just…I find it really helpful that I was put in a foster home. (high elaboration)*

> *Oh, uhm it wasn't a good (laugh) experience to tell you, for that part (giggles). I don't know how to put it into words. Like do I have to go into detail about it? I have no idea how to explain it. Well every time I was put into placement they were taking me from either my mother, my grandmother or my grandmother has called for me to be placed into them. Or my mother again, my aunt. I was in group homes, foster homes; I've been in mental wards. I've been in rehabs; they're all pretty much the same. Same kind of people. Staff didn't really care what we did, at all. Let's see, I've been to so many, I can't just pick and choose. All I can pretty much say is I really wouldn't be me if it wasn't for them. It wasn't good experiences, but you learn from it. I'm sorry, I really don't know how to explain it (giggles). (low elaboration)*

(5) *Cognitive-Affective Integration* (ICC = .707) – the extent to which the participant discussed both intellectual and emotional elements of her/his foster care experience in an integrated (rather than oscillating) fashion:

Honestly, I think maybe in a good way and some in bad ways cause I mean I was away from my family for a really long time. And it was hard but…umm, I don't know I don't really know how to explain the whole experience I mean for, probably like the first 2, 3 years it was very hard for me to adjust and I think after that I started to realize, well, I'm not getting out of this I can't continue ta disagree with it anymore I just had to live my life and do what I gotta do to get over this. And umm, looking back, now that I've turned 18, it's probably helped me because the fact that before when I was with my mom I was just…kind of in a bad spot and I think if I'd continued down that road I wouldn't be where I am now. Uh, it's given me more or less uh structure in my life. I realized school and work and things like that are more important than just kind of screwing around (laugh). So um…it's kinda gotta weigh out the good and the bad I guess (laugh). I mean at that part is, kinda affected me psychologically, I feel like maybe I had experienced a little more anxiety. (Giving away) uh you know making friends was really hard due to the fact that I completely changed cities, everything was new, and different schools and stuff like that, that was really hard. But all in all I think it was, it was good. I graduated high school, I mean, did what I had to do, I enrolled in college after that and…it worked pretty well (chuckles). (high cognitive-affective integration)

Okay, um, well they, well being in foster care for me, it was kind of fun. I liked it. And then some foster parents I didn't like, but I had to get used to it. Um, um, one foster mom she was supposed to adopt me but she ended up getting sick … It was cool. I think so. It kind of helped me though, and now I am doing a little bit better. (low cognitive-affective integration)

(6) *Complexity* (ICC = .755) – the degree of both negative and positive descriptions of foster care such that the youth's narrative could be evaluated with regard to if and how s/he depicted a balanced recollection of experience across multiple contexts:

Um, I don't know, I guess I don't, it's uh, might have hardened me a little bit because I don't trust people too easily but I definitely, I think I definitely like developed, like, like a feel for people, like I definitely have compassion for like certain things, just because of the things that I've gone through, the things that I've seen. And um, I don't know, like all in all it's definitely like, made me a better person, like development wise. Um, I learned a lot in experience like, I've, I've been able to experience

things that a lot of people like don't, get the opportunity to do, I don't know if that's like a good thing or a bad thing. (high complexity)

I don't know. It was horrible to me, especially in the beginning. I don't know. I really, I don't know. It was horrible. It was really bad. I think. And, uh, I don't know (laugh) … They've affected me, because I didn't get to finish school, for moving from place to place, losing my credits like the schools were losing my credits. I moved so much and um. I don't know. I lost my nephew too. I don't know. It was just horrible. It was really horrible. (laugh) I don't know. I don't know what else to say. (laugh) I don't know. It's not a good experience I don't think. I don't know. I don't know what else to say. (low complexity)

Together, these ratings informed a global *Narrative Coherence* score on a 7-point scale with higher values connoting more coherence (ICC = .732). An incoherent narrative was characterized by a youth who refused to provide a narrative or provided a narrative that was so meager or disorganized that the reader could not understand what the youth's experiences were as exemplified below:

Um … being in foster care (4 second pause) I would say, I liked being in foster care. But there was some times where I didn't want to be in there because it was too hard. Um, I think it made me a stronger person now, to see how far I've gotten and, how much foster care ended up helping me out in the end. Um, (sniff) (24 second pause) Are you allowed to repeat the question?

A coherent narrative is succinct, organized, rich in detail, and temporally contained. In these narratives, the youth provided the reader with a fresh, spontaneous, and complex narrative about her/his experience as exemplified below:

Umm…I honestly really don't know where to start but umm…I can say that foster care has its, its flaws as well as its benefits. Just because like umm anybody who's in foster care, pretty much doesn't wanna be there…but when you do find good foster parents or a good foster home, or a placement, umm and you find people who really care about the children and wanna help, I feel like, that, that's a blessing in itself just because a, a lot, a lot of kids who go in to foster care don't even have that going into foster care, so I kinda feel like that, that, that's what one of the, that's one

of the good parts of being in foster care. And, and how they help you with uh after high school, after care. They umm…(sniff) they pretty much get you through college, if you're dedicated and you're willing then, do the, do the work and discipline yourself to actually go to school, they'll assist you the whole way, so I think that that's pretty cool too. Uh…some of the things I disliked about foster care when I was in the system um have to be…the frequent, the frequent court visits and, and the visitations, like with, with my family and everything. At first they're kind of shaky uhh…lot of them were, were supervised. I mean I didn't mind being supervised or anything, but it was just kinda, kinda awkward havin a total stranger just all in our business and everything. So umm I disliked that. And I don't know, well when I first went into foster care I was x years old, I believe and I kinda took care of myself at the time when I first went in, so, umm, it was, it was just kinda, it was just kinda awkward for me to be away from what I used to, what I used to be doing. Like helping out my brothers and sisters and, not being able to see them was like one of the hardest parts too cause we were all split up umm, I'm just one of the four siblings who were foster care at the same time. Umm (5 second pause) man uhh I could really say that umm…that it did mold me, I, I can, I can easily say it molded me in to the person I am today because uhh being in foster care actually somehow gave me this motivation to just want to continue school, want to do better for myself and for my family, so like when I can grow, grow older, my children won't have to you know, go through the same thing that I went through and everything so I, I would say that it molded me. And umm with their program, their independent living program, uhh it gave me good interview skills, it actually gave me good living skills and stuff that I would take with me for the rest of my life, I really, I really appreciate that. Umm (12 second pause) Ummm another thing is uh, another thing I disliked about it was…the, the moving, always had to move around a lot, I mean, I was only in foster care for…x months, not even that, I don't think, and, I must have moved about x times and it was just ridiculous. Like having to settle in and change schools and stuff like that uhh I really disliked that, but uh, luckily we had a good judge, I still remember her, her name was Judge D, SD, she was, she was pretty nice, she end up uh ordering us back to uh…our high school of origin, so it was cool.

Verbal ability. The vocabulary test from the Shipley Hartford Institute of Living Scale (SILS; Shipley, 1940) was used to assess participant's verbal ability. The verbal subtest of the SILS consists of 40 vocabulary items to be completed in 10 minutes. For each item, participants were asked to circle the word that has the same meaning as the

target word from four possible options. Correct answers were summed, such that higher scores reflected greater receptive vocabulary. The SILS is highly correlated with other standardized IQ tests (Bowers & Pantle, 1998).The correlation between the Kaufman Brief Intelligence Test (K-BIT; Kaufman, 1990) and the SILS was .77, while the correlation between the Wechsler Adult Intelligence Scale-Revised (WAIS-R; Wechsler, 1981) and the SILS was .85 (Zachary & Shipley, 1986).

Behavior problems. Achenbach's (1990, 1997) Young Adult Self-Report (YASR) is a self-report measure designed to assess emotional and behavioral problems for individuals between the ages of 18 and 30 years old. The internalizing subscale of the YASR includes items pertaining to somatic complaints, anxiety, depression, and withdrawn behaviors, while the externalizing subscale of the YASR includes items pertaining to aggressive, delinquent, and intrusive behaviors. Participants responded to 134 behavioral descriptors (e.g., "I worry a lot;" "I get in many fights") on a three-point scale: *not at all true* (0), *somewhat true* (1), or *very tru*e (2). YASR *T* scores of 63 or above identify clinical symptom elevations and were used in these analyses.

Life satisfaction. The Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) is a five-item self-report instrument that measures an individual's overall life satisfaction. Items include statements such as; "In most ways my life is close to ideal" and "I am satisfied with my life," which are rated on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). The Satisfaction With Life Scale evidenced strong test–retest reliability (r = .82) and internal consistency (α = 0.87; Diener et al., 1985) in prior research and good internal consistency in the current sample (α = 0.89).

Self-esteem. The Rosenberg Self-Esteem Scale (Rosenberg, 1965, 1989) is a 10-item, self-report measure of global self-esteem. Respondents indicated their level of agreement with 10 items assessing overall feelings of self-acceptance and self-worth (e.g., "At times I think I am no good at all," "I am able to do things as well as most other people") on a 4-point Likert scale from *strongly agree* (1) to *strongly disagree* (4). Rosenberg Self-Esteem Scale items were summed to yield a global measure of self-esteem ranging from 10 to 40 with higher scores connoting higher self-esteem. The Rosenberg Self-Esteem Scale evidenced acceptable reliability in varied samples (test–retest *rs* = .82–.88; αs = 0.77–0.88; Blascovitch & Tomaka, 1993), as well as in the current study (α = 0.86).

Educational attainment. Education level was scored on a 9-point scale ranging from *grade school* (1) to *graduate school* (9).

Civic engagement. Independent raters evaluated the degree to which each participant engaged with her/his community based on interview responses to questions regarding voting, volunteering, and organization membership (ICC = .90; Duke, Skay, Pettingell, & Borowsky, 2009; Obradović & Masten, 2007). In addition to structured questions regarding voter registration, voting activity, volunteering, and organization membership, participants were also asked about their motivations for engagement. At the low end of the continuum, the participant endorsed active resistance to community engagement or minimal engagement such that s/he may have been registered to vote, but did not actively vote, volunteer, or belong to any kind of group or organization. Moderate levels of civic engagement captured youth who actively engaged in their community

through voting, intermittent volunteering, or organizational activity; however, these individuals rarely evidenced more than one form of engagement and/or were extrinsically motivated (e.g., "I volunteer once a month because my counselor told me it would look good for school"). The highest ratings of civic engagement were reserved for youth who evidenced consistent and multifaceted community engagement, and expressed an intrinsic sense of commitment obligation, or fulfillment in so doing.

Relational competence. Each youth completed a semi-structured relationship interview that began with questions about the important people in her/his life followed by in-depth questions about her/his primary dating relationship of 2 months or longer if present (52.6%) or a close platonic relationship (47.4%). In both interviews youth were asked a series of questions with follow-up probes to assess the core features of their primary relationship in terms of contact, consistency, intimacy, conflict, and relational expectations. Independent ratings of relational competence were based on the relationship's (a) intimacy and reciprocity in terms of mutual disclosure and experiential sharing, (b) predictability and reliability, and (c) safety and security (ICC = .87). Interview-based assessments of relationships are uniquely valuable (Collins & Sroufe, 1999), particularly in the current study where several participants endorsed extremely high levels of relational violence, but also expressed a strong desire to remain in the relationship and great satisfaction with the level of respect provided by their friend or partner. Relationship quality was evaluated in consideration of all available information using a 7-point scale. Low relationship scores characterized relationships with infrequent contact, high levels of conflict, and/or low intimacy. High-quality relationships were

indicated by complex and well-supported descriptions of relational security and reciprocity using several specific examples. Interview items and coding parameters were based on existing measures and coding schemes for friendships and dating relationships (Egeland, Lehn, Ostoja, Williams, & Kalkoske, 1994).

Peer attachment. The Peer Scale of the Inventory of Peer and Parent Attachment (Armsden & Greenberg, 1987) assessed three dimensions of participant's reported relationship quality with peers to indicate the extent to which s/he viewed peer relationships as characterized by mutual trust, high-quality communication, and/or alienation and anger. Participants indicated their agreement with 25 statements pertaining to peer relationship quality (e.g., "My friends understand me," "I trust my friends") using a 5-point Likert scale from *almost never or never true* (1) to *almost always or always true* (5). The Inventory of Peer and Parent Attachment has evidenced strong test–retest reliability in prior research (Armsden & Greenberg, 1988), and was internally reliable in this sample ($\alpha = 0.92$).

Child welfare history. Participants completed a semi-structured interview beginning with their age at first placement into care, the reason for initial placement, and the sequence of placements thereafter. Every participant was probed for the age, type, and reason (if known) for each placement and the level of contact with kin, including if they were placed with one or more siblings at each placement until the point of emancipation. Placement variables pertaining to the participant's age at first placement and total placement disruption (i.e., total number of placements) were used in these analyses. For cases in which the youth was not certain of 20% or more of her/his placement

experiences, all placement data were coded as missing (n = 11). Participants who were not able to recall their complete placement histories differed from the rest of the sample in that they reported less life satisfaction and lower quality adolescent mentoring experiences, but did not differ in other respects, including narrative features.

Child maltreatment history. The Early Trauma Inventory (ETI; Bremner, Vermetten, & Mazure, 2000) was used to collect data about specific types of maltreatment. Interviews assessed participant's maltreatment experiences prior to age 17, including questions about ages of onset and offset, frequency, perpetrator identity, and resulting injuries and interventions (i.e., medical or legal). Independent raters assessed the severity of each form of reported maltreatment across four levels from *no abuse* (0), *mild abuse* (1), *moderate abuse* (2), and *severe abuse* (3) using criteria presented by McGee and colleagues (McGee, Wolfe, Yuen, Wilson, & Carnochan, 1995). Maltreatment severity was based on both the intensity and frequency of the abuse. Mild abuse ratings reflected low intensity and low frequency, moderate ratings were assigned to reports of high intensity and low frequency or low intensity and high frequency, and severe ratings were used for cases of maltreatment that was both high in intensity and frequency. Intraclass correlations were calculated across all cases to assess reliability and a composite of maltreatment severity was used in the current analyses based on the following subtypes (ICC = .86).

Child sexual abuse (CSA). CSA was assessed with questions asking about experiences of unwanted sexual exposure or contact by a person 5 years or older than the participant. Mild intensity was characterized by touching over clothes. Moderate intensity

was specified by contact experiences that did not involve force or penetration, including fondling under clothes or kissing. High intensity was indicated by any type of penetration (e.g., digital, oral, anal, vaginal). Severity ratings accounted for both CSA intensity and frequency (ICC = .91).

Child physical abuse (CPA). CPA was assessed with questions asking about experiences of physical injuries caused by adult caregivers. Mild intensity was reserved for corporal punishment (i.e., minimal physical harm inflicted for disciplinary purposes), which was *not* included in the calculations for CPA severity. Moderate intensity was captured by experiences that caused physical marks or injuries, and went beyond normative disciplinary methods (e.g., punching, kicking, hitting with hangers). High intensity was characterized by experiences that had the potential to cause severe injury (e.g., beatings, choking, and/or use of a weapon). Severity ratings accounted for both CPA intensity and frequency (ICC = .84).

Child emotional abuse (CEA). CEA was assessed with questions asking about experiences in which caregivers attacked the participant's sense of self-worth or safety. Mild intensity was indicated by direct or indirect communications representing inadequate caregiving without direct physical insult (e.g., comparing the participant unfavorably to others, hostile communication toward the participant, swearing or cursing at the participant). Moderate intensity was indicated by experiences that threatened the participant's sense of self-worth (e.g., blaming or ridiculing the participant, exposing the participant to criminal acts, threatening suicide). High intensity was reserved for experiences that jeopardized the youth's sense of self or safety (e.g., telling the

participant that they are unwanted, threatening to kill, abandon, or send the child away, using extreme forms of humiliation, and/or non-physical punishment). Severity ratings accounted for both CEA intensity and frequency (ICC = .89).

Child neglect (CN). CN was evaluated as experiences of caregiving omissions in physical (e.g., food, shelter), emotional, and/or supervisory domains. Mild intensity was characterized by parenting that failed to meet minimum care standards (e.g., not providing regular meals, disregard for the participant's feelings, and allowing the participant to miss school without reason). Moderate intensity was indicated in cases where the participant was at risk for improper development (e.g., leaving the participant alone for long periods of time, failure to provide food at times, or perinatal drug exposure). High intensity was captured by experiences that put the child at risk for physical harm (e.g., failure to provide enough food to sustain development, inattention to medical needs, lack of cleanliness in the home to the point of fostering disease, or failure to protect from ongoing abuse). Severity ratings accounted for both CN intensity and frequency (ICC = .77).

Domestic violence exposure (DV). DV was assessed with items asking about experiences of seeing or hearing caregivers physically fighting. Mild intensity was indicated by witnessing violence between caregivers that lacked potential for injury (i.e., low contact experiences, such as throwing things). Moderate intensity was specified by nonlethal experiences (e.g., punching, hitting). High intensity involved experiences that were potentially lethal or involved injury or weapons. Severity ratings accounted for both intensity and frequency of DV exposure (ICC = .83).

Education history. Semi-structured interviews assessed the participant's education history from the beginning of 9th grade until they completed or left school. Educational disruption was assessed by summing total school transitions from 9th grade until the participant obtained a high school diploma, GED, or dropped out.

Mentoring history. Participant's experiences with mentors and mentoring relationships were assessed via a semi-structured interview comprised of questions probing for adolescent mentoring experiences prior to emancipation and rated on a 7-point scale (ICC = .88). If the participant endorsed a mentoring relationship, further questions probed for the mentor's identity, how s/he met the mentor, how long s/he considered the individual to be her/his mentor, and her/his beliefs about the impact of the mentoring relationship. Participants at the low end of the scale made no report of having a mentor or may have stated that they did have a mentor but then could not provide specific/detailed information about the mentor's influence on them. Participants on the high end of the mentoring scale reported having had a mentor who made a clear impression on them.

Data Preparation & Analysis

All variables were sufficiently normal to render parametric statistics valid (Affifi, Kotlerman, Ettner, & Cowan, 2007). Multivariate analyses of variance (MANOVA) evaluated mean differences in study variables by gender, race/ethnicity, and their interaction. Bivariate relations clarified correlative relations among narrative features, contemporaneous adjustment, and childhood experiences to inform regression analyses. Hierarchical linear regressions evaluated the unique and interactive contributions of

narrative content and coherence to adjustment, as well as mediating relations from childhood experience to youth adjustment via narrative features. Relevant covariates were entered in block 1, followed by the experiential predictor in block 2, and finally the proposed narrative mediator was entered in block 3. Predictors were centered to reduce multicollinearity (Kraemer & Blasey, 2006). Mediating effects were evaluated with a normal theory based measure of significance using Sobel's (1982) *z*.

Missing data were present across study variables due to participant refusal, administration errors, and technical difficulties (e.g., computerized survey data did not save). Missing data were present for verbal ability (3.5%), narrative features (1.2%), internalizing and externalizing problems (6.4%), life satisfaction (3.5%), self-esteem (3.5%), civic engagement (1.7%), relationship quality (1.2%), peer attachment (1.2%), age of first placement (1.2%), placement disruption (6.4%), maltreatment (0.6%), and educational disruption (2.3%). Listwise deletion was used as Little's (1988) MCAR test did not support estimation; χ^2 (326) = 397.260, p = .004.

Results

Descriptive Analyses

Three multivariate analysis of variance models (MANOVA) evaluated mean differences in 1) narrative features, verbal ability, and age, 2) adjustment indicators, and 3) childhood experiences to evaluate the main effects of gender and race/ethnicity, as well as their interactions. Bonferroni-corrected post hoc comparisons probed for significant differences in study variables that evidenced a main effect of race/ethnicity.

Means and standard deviations by gender and by race/ethnicity for narrative and

covariate variables are depicted in Table 1. There were no significant main effects for gender (Wilks' λ [5,152] = .958, p = .253) or race/ethnicity (Wilks' λ [15, 420.006] = .867, p = .105), nor for their interaction (Wilks' λ [15, 420.006] = .898, p = .343).

Means and standard deviations by gender and by race/ethnicity across youth's age-salient adjustment indicators are depicted in Table 2. There were no significant main effects for gender (Wilks' λ [8, 136] = .938, p = .353) or race/ethnicity (Wilks' λ [24, 395.043] = .855, p = .588), nor for their interaction (Wilks' λ [24, 395.043] = .857, p = .602).

Means and standard deviations by gender and by race/ethnicity across youth's childhood experience variables are depicted in Table 3. There was no significant main effect for gender (Wilks' λ [5,143] = .983, p = .788), but there was a significant main effect for race/ethnicity (Wilks' λ [15, 395.161] = .829, p = .026). There was not a significant interaction effect of gender by race/ethnicity (Wilks' λ [15, 395.161] = .908, p = .522). Post-hoc comparisons indicated a significant effect of race/ethnicity on maltreatment severity (F[3, 154] = 3.479, p = .018) with post-hoc comparisons indicating that Black participants reported more maltreatment than multiracial participants. Although there was a significant univariate effect of race/ethnicity for educational disruption (F[3, 154] = 3.023, p = .032), post hoc analyses did not reveal any significant pairwise differences.

Bivariate Analyses

Table 4 depicts bivariate relations among youth's narrative features (i.e., positive narrative content, negative narrative content, and narrative coherence) and covariate

variables (i.e., age and verbal ability). Positive narrative content was negatively associated with negative narrative content. Positive narrative content, but not negative narrative content, was associated with higher narrative coherence. Participant age and verbal ability were not significantly related to any of the narrative variables.

Table 5 depicts bivariate relations among narrative features (i.e., positive narrative content, negative narrative content, and narrative coherence) and adjustment indicators (i.e., internalizing and externalizing problems, life satisfaction, self-esteem, civic engagement, educational attainment, relationship quality, and peer attachment). Positive narrative content was negatively related to internalizing and externalizing problems and positively related to life satisfaction, self-esteem, and civic engagement. Negative narrative content was positively related to internalizing and externalizing problems, but negatively related to life satisfaction and self-esteem. Narrative coherence was positively related to youth's civic engagement, educational attainment, relationship quality, and peer attachment.

Table 6 depicts bivariate relations among narrative features (i.e., positive narrative content, negative narrative content, and narrative coherence) and childhood experience variables (i.e., age at entry into foster care, placement disruption, maltreatment, educational disruption, and adolescent mentoring). Positive narrative content was negatively related to placement disruption (i.e., fewer placement transitions). Negative narrative content was related to more placement disruption, maltreatment, and educational disruption (i.e., more school transitions). Narrative coherence was positively related to the quality of adolescent mentoring relationships. Age of entry into foster care

was not related to any of the variables examined here.

Moderation Analyses

Hierarchical regression analyses evaluate the unique and interactive associations of youth's narrative features (i.e., positive narrative content, negative narrative content, narrative coherence) with each adjustment indicator (i.e., internalizing and externalizing problems, life satisfaction, self-esteem, civic engagement, educational attainment, relationship quality, and peer attachment). All analyses included gender (female =1), race/ethnicity (minority =1), and verbal ability as covariates. Verbal ability was included as a covariate because it evidenced significant relations with several adjustment variables. Participant age was not included due to nonsignificant relations with all study variables.

Negative narrative content was uniquely related to youth's internalizing symptoms beyond relevant covariates and other narrative features. Neither positive narrative content, nor narrative coherence was associated with internalizing problems, and coherence did not moderate these relations (see Table 7).

Although negative narrative content accounted for significant variance in youth's externalizing problems, this relation dropped to nonsignificance when interactive relations between narrative coherence and content were included in the model. Neither interaction term was significant (see Table 8).

As shown in Table 9, positive narrative content and narrative coherence were marginally related to higher life satisfaction, but neither interaction term was significant.

Despite significant relations of positive and negative narrative content with self-esteem at the bivariate level, the full regression model indicated that neither narrative

content features in isolation, nor their interactive relations with narrative coherence was associated with significant variance in self-esteem (see Table 10).

As shown in Table 11, narrative coherence was uniquely related to youth's educational attainment beyond relevant covariates and other narrative features. Neither positive narrative content, nor negative narrative content was associated with educational attainment. This relation remained significant even when interactive terms for narrative coherence and content were included in the model. Neither interaction term was significant.

Narrative coherence was uniquely related to youth's civic engagement beyond relevant covariates and other narrative features. Neither positive narrative content, nor negative narrative content was associated with civic engagement. The relation between narrative coherence and civic engagement remained significant even when interactive relations between narrative coherence and content were included in the model. Neither interaction term was significant (see Table 12).

Although there were significant relations between narrative coherence and relationship quality at the bivariate level, the full regression model indicated that neither narrative coherence in isolation, nor its interactions with narrative content explained significant variance in relationship quality (see Table 13).

Despite significant relations between narrative coherence and peer attachment at the bivariate level, narrative coherence was not related to peer attachment in the full model. However, the interaction of narrative coherence with negative narrative content was marginally significant, suggesting a marginally weaker negative relation between

negative narrative content and peer attachment among emancipated youth with relatively more narrative coherence (see Table 14).

Mediation Analyses

Hierarchical regression analyses evaluated the extent to which narrative features accounted for observed relations between childhood experience variables and youth adjustment as supported by the bivariate relations. All analyses included gender (female =1), race/ethnicity (minority =1), and verbal ability as covariates.

As shown in Table 15, both maltreatment and negative narrative content accounted for significant variance in youth's internalizing problems. In addition, child maltreatment was associated with increased negative narrative content over and above the covariates (β = .237, p = .002). Mediation analyses supported a significant indirect effect from child maltreatment to later internalizing through youth's negative narrative content in their FMSS narratives (sobel z = 2.991, p = .002).

As shown in Table 16, both placement disruption and negative narrative content accounted for significant variance in youth's externalizing problems. In addition, placement disruption was associated with increased negative narrative content over and above the covariates (β = .214, p = .008). Mediation analyses indicated that the indirect effect from placement disruption to later externalizing through youth's negative narrative content in their FMSS narratives was marginally significant (sobel z = 1.913, p = .055).

As shown in Table 17, both adolescent mentoring and narrative coherence accounted for significant variance in youth's relationship quality. In addition, adolescent mentoring was associated with increased narrative coherence over and above the

covariates (β = .201, p = .010). However, mediation analyses indicated that the indirect effect from adolescent mentoring to later relationship quality through youth's narrative coherence in their FMSS narratives was not significant (sobel z = 1.619, p = .105).

Discussion

This investigation constitutes the first known effort to examine associations among recently emancipated foster youths' childhood experiences, narrative features (i.e., content and coherence), and adjustment across multiple age-salient developmental domains. The current findings support prior assertions that (even brief) narratives can reveal meaningful information about thematic and organizational aspects of meaning making (Bowlby, 1969/1982; Crittenden, 1990; Hesse, 2008; Main et al., 2005). Moreover, obtained associations indicate that narrative content and narrative coherence may be differentially associated with psychological well-being (Fiese & Spagnola, 2005; Laible et al., 2004; Stacks, 2007) and relational adjustment (Crittenden, 1990; Hesse, 2008; Main et al., 1985; Phelps et al., 1998), respectively.

Overall, newly emancipated foster youth evidenced variable degrees of positive and negative content in their narratives, as well as varying capacities to do so in an organized or coherent manner. In general, emancipated youth reported more negative narrative content (73.5% earned a score of 5 or higher on negative affect) than positive narrative content (36.5% earned a score of 5 or higher on positive affect). In addition, obtained levels of narrative coherence were generally lower (24% of these youth earned coherence scores of 5 or higher) than those observed in community samples (e.g., 34.9% of mothers in a community sample; Sher-Censor et al., 2013). Nevertheless, a sizable

subset of youth articulated elaborate, integrated, complex, and reflective narratives characterized by coherence, despite their difficult and disrupted life histories.

Overall, levels of positive narrative content, negative narrative content, and narrative coherence did not differ significantly as a function of gender, race/ethnicity, or their interaction. These findings may support the universality of narratives and their attributional and organizational characteristics. However, some prior evidence suggests the *meaning* of narrative features may differ across racial/ethnic groups as demonstrated by differences in associations between narrative content and adjustment across groups (Futh, O'Connor, Matias, Green, & Scott, 2008; Grey & Yates, in review; Rosenfarb, Bellack, & Aziz, 2006; Sher-Censor & Yates, 2014). This remains an open question as moderating relations between narrative features and gender and/or race/ethnicity were not examined here.

Contemporaneous associations between youth's narrative features and indicators of age-salient adjustment revealed that measures of positive and negative narrative content were associated with youth's emotional well-being and psychopathology, whereas narrative coherence was most strongly related to relational adjustment indices. Moreover, as expected, a pattern emerged wherein positive narrative content was related to well-being and negative narrative content was more consistently related to psychological maladjustment.

These patterns support the first hypothesis that narrative content would be related to emotional and psychological adjustment, whereas narrative coherence would be especially important for relational adjustment. These findings are also consistent with

prior theories of narrative representation wherein narrative content is presumed to capture attributions about experience, whereas narrative coherence reflects the information processing rules that guide the application of the those attributions in day-to-day relationships (Bowlby, 1969/1982; Crittenden, 1990; Hesse, 2008; Sher-Censor & Yates, 2014).

Associations between narrative content and psychological adjustment have been documented across development (Buehlman et al., 1992; Fiese et al., 1999; Laible et al., 2004; Main et al., 1985). Narrative content reflects individuals' attributions about their experiences. As such, narrative content may support or follow from depressive and/or hostile attributional styles. Alternately, unbalanced levels of positive and negative narrative content (e.g., too much negative or too much positive narrative content) may be a marker of problematic self-regulation. Both attributional biases and emotion dysregulation have been associated with adjustment difficulties, including internalizing, externalizing, and social problems (Crick & Dodge, 1994; Eisenberg et al., 2001). In addition to emotion regulation, narrative content has also been associated with physiological arousal. Negative narrative content has been associated with greater autonomic arousal, whereas positive narrative content has been associated with less autonomic arousal (Bar-Haim, Fox, VanMeenen, & Marshall, 2004; Buehlman et al., 1992). Although these findings may suggest that negative narrative content influence socioemotional adjustment, as discussed in detail below, it is important to recognize that the cross-sectional nature of this study limits the ability to ascertain whether observed relations between narrative content and psychological adjustment reflect the influence of

narrative content on adjustment, the impact of adjustment on narrative meaning making, or merely correlated outgrowths of an as yet unidentified third factor.

Relative to narrative content, narrative coherence has been more strongly related to relational schemas and attachment representations (Bowlby, 1980; Bretherton & Munholland, 1999; Crittenden, 1990). Previous work has shown that the capacity to sustain an intelligible, continuous, and purposeful sense of one's self bolsters one's ability to navigate a variety of social settings by supporting predictable, flexible, and appropriate responsiveness to others (Gergen, 1997; Neimeyer, 1994). The current findings support these assertions, but again, it is difficult to ascertain the directionality of relations underlying apparent associations between narrative coherence and relational adjustment. Bidirectional relations wherein narrative coherence engenders more adaptive relational exchanges and positive relationships, in turn, support coherent meaning making are probably operating, but await further empirical verification.

Hierarchical regression analyses revealed unique effects of negative narrative content on internalizing and externalizing behaviors, and of narrative coherence on educational attainment and civic engagement. However, in contrast to my hypothesis that narrative coherence may qualify the meaning of content, obtained interactive results did not support this pattern. It is notable that interactions, when suggested, were present only with negative narrative content which is consistent with literature that emphasizes the salience of negative narrative content for adjustment (Buehlman et al., 1992; Hauser, 1999; Laible et al., 2004; Stacks, 2007), and the unique challenge of processing negative narrative content such that coherence becomes especially important in the context of

difficult life experiences and the negative attributions that typically accompany them.

Although there were significant bivariate associations of narrative coherence with relationship quality and peer attachment, narrative coherence did not uniquely contribute to these constructs. The absence of more robust predictive associations between narrative coherence and relational adjustment outcomes was surprising, as was the absence of moderating relations between narrative coherence and content. As discussed in greater detail below, the absence of stronger relations between coherence and relational outcomes is curious, but may follow from the adapted version of the FMSS used in this study. Specifically, because the prompted narratives were not specifically targeting youth's relational experiences, the obtained indices of coherence may have been less relevant for relational outcomes.

The second aim of this study was to examine associations between select childhood variables and narrative meaning making in emerging adulthood. With regard to childhood experiences, youth who reported elevated levels of placement disruption, maltreatment, and educational disruption expressed more negative narrative content and less positive narrative content. Here again, it was surprising that narrative coherence was not related to child maltreatment or placement disruption as previous studies examining childhood trauma have demonstrated that the inability to control distressing memories associated with abusive or disrupted caregiving makes it more difficult for individuals to maintain a coherent sense of self and self in relation to others, as well as for these individuals to construct coherent life stories in later development (Blatt, 1995; Fish-Murray, Koby, & van der Kolk, 1978; Solomon & George, 1999).

Interestingly, youth who indicated having a supportive mentoring relationship during adolescence produced more coherent narratives. This finding highlights the salience of relational supports for coherence, specifically, relational supports in adolescence. These findings add to extant literature suggesting that the opportunity to share one's life experiences with another person enables one to appropriately order life events and begin to organize a life narrative (Main et al., 1985). The organization of the life narrative is of particular importance in adolescence because it is both a time of transition, and a time of identity consolidation (Habermas & Bluck, 2000). The guidance of a caring and empathetic adult during this uncertain transition may be of particular importance to the coherence of youth's developing life narrative.

Overall, these findings provided only modest support for expected mediating relations wherein narrative features were hypothesized to underlie apparent associations between childhood experiences and young adult adjustment. As expected, negative narrative content mediated observed relations between maltreatment and internalizing problems and between placement disruption and externalizing problems, though the latter indirect effect attained only marginal significance. These findings suggest that childhood maltreatment and placement disruption may contribute to negative attributional styles that render individuals vulnerable to later pathology. However, an alternate interpretation that cannot be evaluated in this cross-sectional design is that these negative childhood experiences contribute to psychopathological features that engender a negative reflective style (e.g., depressive reminiscing/rumination).

Although bivariate analyses revealed significant relations among the quality of

adolescent mentoring experiences, narrative coherence, and relationship quality in young adulthood, the observed relation between adolescent mentoring and relationship quality was not significantly mediated by narrative coherence. As noted previously, the limited findings in regards to narrative coherence were surprising. These results may have occurred because the FMSS prompt was not specific enough to relational experiences Instead of a question about personal relationships, the prompt queried general experiences in care. Perhaps because of this more general prompt, our FMSS measure could not aptly capture the relationally relevant aspects of narrative coherence.

Strengths and Limitations

This investigation evaluated the narratives of recently emancipated foster youth as they reflected about their experiences in foster care and how those experiences influenced their development. Strengths of this investigation include the use of a large and diverse sample, with explicit consideration of salient covariates including gender, race/ethnicity, age, and verbal ability, in tracing associations across childhood experiences, narrative content and coherence features, and multi-domain adjustment. Yet these findings are qualified by a number of limitations.

Features unique to the current sample may limit the strength and generalizability of the obtained findings. First, the present sample was self-selected, rather than randomly selected, from the population of recently emancipated foster youth in Southern California. Moreover, youth who were hospitalized or incarcerated at the time of data collection were excluded from recruitment. Thus, the obtained sample may be comprised of higher functioning emancipated youth, who were disproportionately female. At the

same time, however, not recruiting from social service providers exclusively may have bolstered our sample's adjustment variability because we were not limited to service-engaged youth. In addition, the current restrictions of sample size and the geographic distribution of the present study to Southern California constrained our ability to examine differences in narrative capacity due to possible differentials in social service supports and resources that are known to vary across counties and regions.

As discussed earlier, the cross-sectional nature of the current study limited the ability to evaluate the directionality of relations among youth's childhood experiences, narrative features, and current adjustment. For example, we were not able to evaluate if youth's childhood experiences caused negative narrative content, which then affected youth's adjustment. The analytic strategy of this study could be enhanced in the future by alternative designs that draw on multiple data waves to evaluate cross-lagged associations between childhood and child welfare experiences, narrative features, and adjustment.

Methodological limitations in the current study also may have influenced the obtained findings. For example, these analyses relied on participants' self-report data, which are subject to biased reporting and/or inflated associations due to shared method variance. These reports may be influenced by the participants' unique perceptions of experience and/or individual differences in their willingness to reveal their psychological states and personal information. In the absence of social service records, it is difficult to ascertain the validity of self-reported child welfare and child maltreatment histories. However, there is growing evidence that recorded maltreatment data may not be accurate because of problems with inconsistencies in the operationalization of maltreatment,

biased reporters of maltreatment (e.g., parents, police, teachers), and variability in data collection methods (e.g., discrepancies in social worker files) (Manly, 2005; Putnam, 2003; Shaffer, Huston, & Egeland, 2008).

The present study used an adapted FMSS, which may limit the validity of these findings as this modified FMSS has not yet been used in other studies. The FMSS was originally designed to assess relational representations with a prompt asking about the participant's specific relationship with another person (e.g., tell me about what kind of a person your child is and how the two of you get along). Not surprisingly the coherence of these narratives may be more strongly connected to relational outcomes than the more general FMSS prompt used in the present study.

Relatedly, the FMSS prompt used in this investigation was negatively biased because it probed youth to narrate about a difficult life experience, rather than a specific relationship for which the FMSS was designed. The negatively biased FMSS focus may account for the disproportionately strong association between positive narrative content and narrative coherence, relative to the nonsignificant relation between negative narrative content and narrative coherence. If and how relations between narrative content and narrative coherence would change in the context of a positive narrative prompt (e.g., tell me about some of the best experiences in your life and how they have influenced you) warrants further consideration in future research. In the context of a prompt that pulls for negative content, it makes sense that the presence of positive content despite the bias toward negativity would be more strongly associated with coherence.

Conclusions and Implications

Positioned at the crucial transition to adulthood and focused on an extremely high-risk group of newly emancipated foster youth, the current findings have important implications for future research and practice. These findings extend prior assertions that narrative features are distinct from each other and in their relations to adjustment. Moreover, these data suggest that narrative processes may be important for understanding resilience, since competence in the wake of foster care exemplifies resilience (i.e., the expression of relatively normative adjustment despite extraordinary circumstance; Masten, 2001).

In future research, narrative processes should be examined among larger, more representative samples, using multiple methods and prompts to evaluate dynamic relations among narrative capacities, adjustment, and childhood experiences over time. Future studies could employ larger samples to support more refined moderation analyses as a function of gender and/or race/ethnicity in light of prior research suggesting that these demographic characteristics may be associated with differential meaning/significance of narrative content, though coherence appears to be relatively more robust to such differences (López et al., 2004; Sher-Censor & Yates, 2014; Tompson et al., 1995). It may also be interesting to explore the relations between narrative features and physiological arousal. For example, if narrative content elicits physiological dysregulation, it may be beneficial to attend to youth's narrative attributions in self-regulatory intervention efforts.

Multiple methods to validate the FMSS as a brief assessment of narrative features

are needed. The FMSS is valuable measure because of its brevity, flexibility, and ease of administration. However, it is important to evaluate this measure against other commonly used narrative assessments, such as expressive writing techniques (Pennebaker, 1993), word prompt script assessments (Waters & Waters, 2006), and the AAI (George et al., 1985).

Longitudinal work examining the development of narratives is needed to elucidate factors that predict and influence narrative capacity and adjustment. Prospective research designs will provide opportunities to examine the directionality of associations among experience, narrative features, and adjustment. In addition, longitudinal research could clarify patterns of stability and change in narrative content and coherence to understand how and why some individuals become more or less positive or more or less coherent over time.

In addition to empirical implications, the current study has important applications for child welfare practice and policy. Emancipated foster youth are highly vulnerable to trauma and pathology, as well as to relational disruption and isolation from traditional supports. Thus, this unique population is in great need of empirically informed support services. First, intervention may seek to bolster youth's narrative development. For example, youth could be provided programs in which they could learn about expressive writing, or programs in which they could create a narrative about their life in the presence of an empathetic ally, therapist, or mentor. Second, it may be helpful to encourage youth to form lasting relational connections while providing ample resources to help youth stay connected to those social supports. Finally, interventions may help youth accurately

reflect on their life experiences so that they are able to arrive at a balanced view of both the negative and positive aspects of their experiences in the hopes that this will engender greater acceptance, complexity, and coherence in their meaning making.

Narrative research has increased over the past decade and is fast becoming an important topic of study in developmental psychology (Fiese & Spagnola, 2005). Narratives are more than a simple event description because they include cognitive and emotional states of the individual during the experience (Fivush, Haden, & Reese, 2006). Narration has been found to promote the ability to make meaning of experience, which helps to cultivate self-understanding (Bruner, 1987) and adjustment.

The proposed study represents the first systematic effort to clarify the association between narrative features and adjustment among newly emancipated foster youth. This study enhances narrative research by introducing a modified FMSS technique as a potential tool for obtaining meaningful indices of narrative content and coherence. By examining relations among childhood experiences, narrative processes, and youth adjustment, this study provided information that will inform interventions to foster a sense of self-continuity and self-understanding among these and other at risk youth.

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Table 1

Descriptive Statistics for Narrative Features and Covariates by Gender and Race/Ethnicity

Variable	Gender		Race/Ethnicity				Total Sample
	Male *M* (*SD*)	Female *M* (*SD*)	White *M* (*SD*)	Black *M* (*SD*)	Hispanic *M* (*SD*)	Multi *M* (*SD*)	*M* (*SD*)
Participant Age	19.61 (1.14)	19.64 (1.12)	19.66 (1.15)	19.84 (1.17)	19.33 (1.08)	19.74 (1.08)	19.63 (1.12)
Verbal Ability	46.00 (11.01)	45.03 (9.39)	49.44 (10.13)	42.79 (10.27)	44.74 (10.22)	45.75 (8.89)	45.34 (9.92)
Negative Narrative Content	5.17 (1.09)	4.87 (1.27)	4.92 (1.22)	4.55 (1.43)	5.04 (1.15)	5.22 (1.22)	4.97 (1.22)
Positive Narrative Content	3.89 (1.34)	3.82 (1.29)	4.00 (1.29)	3.93 (1.18)	3.89 (1.16)	3.65 (1.51)	3.84 (1.31)
Narrative Coherence	3.87 (.96)	3.91 (1.02)	4.16 (1.02)	3.63 (1.05)	3.93 (.90)	3.93 (1.02)	3.90 (1.00)

Note: Univariate F-values not shown due to nonsignificant omnibus tests for both main and interactive effects.

Table 2

Descriptive Statistics for Adjustment Indicators by Gender and Race/Ethnicity

Variable	Gender		Race/Ethnicity				Total Sample *M* (*SD*)
	Male *M* (*SD*)	Female *M* (*SD*)	White *M* (*SD*)	Black *M* (*SD*)	Hispanic *M* (*SD*)	Multi *M* (*SD*)	
Internalizing Problems	54.18 (10.84)	57.33 (12.58)	55.32 (11.02)	54.14 (12.17)	55.62 (12.83)	58.73 (11.80)	56.28 (12.09)
Externalizing Problems	55.28 (10.24)	54.60 (11.97)	56.09 (9.18)	51.38 (12.34)	54.00 (10.45)	57.38 (11.83)	54.83 (11.40)
Life Satisfaction	19.88 (7.93)	20.10 (8.67)	23.18 (8.20)	18.59 (7.14)	20.58 (9.56)	19.29 (8.22)	20.03 (8.40)
Self-Esteem	32.26 (4.92)	32.08 (5.87)	32.59 (5.93)	31.71 (6.07)	31.72 (5.19)	32.58 (5.39)	32.14 (5.55)
Civic Engagement	3.21 (1.66)	3.38 (1.68)	3.09 (1.38)	3.46 (1.41)	3.11 (1.79)	3.48 (1.87)	3.32 (1.67)
Educational Attainment	3.60 (1.29)	3.95 (1.24)	4.13 (1.32)	3.81 (1.27)	4.05 (1.11)	3.56 (1.33)	3.83 (1.27)
Relationship Quality	4.90 (1.16)	4.79 (1.36)	5.27 (.88)	4.78 (1.18)	4.90 (1.37)	4.61 (1.43)	4.83 (1.30)
Peer Attachment	97.89 (15.12)	97.55 (15.98)	102.66 (12.34)	96.54 (16.24)	96.62 (15.65)	97.16 (16.48)	97.67 (15.65)

Note: Univariate F-values due to nonsignificant omnibus tests for both main and interactive effects.

Table 3
Descriptive Statistics for Childhood Variables by Gender and Race/Ethnicity

Variable	Gender		Race/Ethnicity				$F_{race/eth.}$	Total Sample *M* (*SD*)
	Male *M* (*SD*)	Female *M* (*SD*)	White *M* (*SD*)	Black *M* (*SD*)	Hispanic *M* (*SD*)	Multi *M* (*SD*)		
Age of First Placement	8.37 (5.73)	9.14 (5.46)	9.00 (5.19)	7.07 (5.84)	10.47 (4.93)	8.83 (5.70)	.977	8.90 (5.54)
Placement Disruption	7.22 (4.67)	7.03 (5.01)	6.59 (3.49)	5.63 (3.46)	6.67 (5.37)	8.80 (5.50)	2.499	7.09 (4.89)
Maltreatment	1.64 (.59)	1.72 (.80)	1.51 (.72)	1.45 (.71)	1.71 (.76)	1.96[a] (.68)	3.479*	1.70 (.74)
Education Disruption	3.92 (3.23)	3.66 (2.54)	2.77 (2.18)	3.10 (2.01)	4.00 (2.97)	4.42 (3.14)	3.023*	3.74 (2.77)
Adolescent Mentoring	4.52 (1.79)	4.27 (1.66)	4.27 (1.67)	4.03 (1.93)	4.33 (1.76)	4.64 (1.47)	.692	4.35 (1.70)

Note: Univariate F-values not shown due to nonsignificant omnibus tests for gender and interactive effects.

Table 4

Bivariate Correlations among Narrative Features and Covariate Variables

	1	2	3	4	5
1. Participant Age	—				
2. Verbal Ability	.039	—			
3. Positive Narrative Content	.024	.104	—		
4. Negative Narrative Content	-.038	-.141	-.157***	—	
5. Narrative Coherence	.125	.111	.507***	-.057	—

Note: ***$p < .001$.

Table 5

Bivariate Correlations among Narrative Features and Adjustment Indicators

	1	2	3	4	5	6	7	8	9	10	11
1. Positive Narrative Content	—										
2. Negative Narrative Content	-.587***	—									
3. Narrative Coherence	.507***	-.057	—								
4. Internalizing Problems	-.209**	.230**	-.070	—							
5. Externalizing Problems	-.184**	.229**	-.025	.653***	—						
6. Life Satisfaction	.196**	-.201**	-.016	-.354***	-.226**	—					
7. Self-Esteem	.175**	-.154**	.070	-.494***	-.297***	.401***	—				
8. Civic Engagement	.178**	-.077	.295***	-.095	-.242**	.102	-.021	—			
9. Educational Attainment	.121	-.071	.239**	-.108	-.210**	.109	.017	.319***	—		
10. Relationship Quality	.115	.017	.199**	-.289***	-.213**	.227**	.193**	.116	.139	—	
11. Peer Attachment	.131	-.020	.169**	-.338***	-.305***	.381***	.381***	-.027	.147	.287***	—

Note: $^{**}p < .05$, $^{***}p < .001$.

Table 6

Bivariate Correlations Among Narrative Features and Child Variables

	1	2	3	4	5	6	7	8
1. Positive Narrative Content	—							
2. Negative Narrative Content	-.587***	—						
3. Narrative Coherence	.507***	-.057	—					
4. Age of First Placement	.108	.024	.101	—				
5. Placement Disruption	-.180**	.233**	-.105	-.383***	—			
6. Maltreatment	-.012	.199**	.060	-.098	.307***	—		
7. Educational Disruption	-.104	.159*	-.131	.085	.471***	.137	—	
8. Adolescent Mentoring	-.010	-.050	.189**	.012	-.018	.065	-.012	—

Note: $*p < .10$, $**p < .05$, $***p < .001$.

Table 7

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Internalizing Problems

Predictor	Internalizing Problems			
	b	*SE*	*β*	*p*
Gender (Female = 1)	4.256	2.062	.166	.041
Race (Minority = 1)	1.124	2.829	.033	.692
Verbal Ability	.210	.100	.169	.038
Block 1 ΔR^2		.053*		
Gender (Female = 1)	5.193	2.037	.202	.012
Race (Minority = 1)	1.040	2.751	.030	.706
Verbal Ability	.265	.098	.213	.008
Positive Narrative Content	-.355	1.067	-.038	.740
Negative Narrative Content	2.557	1.011	.257	.012
Narrative Coherence	-.569	1.145	-.048	.620
Block 2 ΔR^2		.080**		
Gender (Female = 1)	4.747	2.057	.185	.022
Race (Minority = 1)	.712	2.758	.021	.797
Verbal Ability	.243	.099	.195	.016
Positive Narrative Content	-.590	1.102	-.064	.593
Negative Narrative Content	2.795	1.066	.281	.010
Narrative Coherence	.170	1.278	.014	.895
Positive Narrative Content x Narrative Coherence	-.546	.858	-.060	.525
Negative Narrative Content x Narrative Coherence	.883	.841	.099	.296
Block 3 ΔR^2		.014		
Total R^2		.147		
F (8, 155)		3.163**		

Note: *$p < .10$, **$p < .05$.

Table 8

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Externalizing Problems

Predictor	Externalizing Problems			
	b	*SE*	*β*	*p*
Gender (Female = 1)	.154	1.953	.006	.937
Race (Minority = 1)	-.547	2.680	-.017	.838
Verbal Ability	.156	.095	.134	.103
Block 1 ΔR^2		.019		
Gender (Female = 1)	.819	1.954	.034	.676
Race (Minority = 1)	-.475	2.638	-.015	.857
Verbal Ability	.197	.094	.170	.038
Positive Narrative Content	-.524	1.023	-.061	.609
Negative Narrative Content	1.956	.970	.211	.046
Narrative Coherence	.058	1.098	.005	.958
Block 2 ΔR^2		.060**		
Gender (Female = 1)	1.295	1.968	.054	.512
Race (Minority = 1)	-.124	2.639	-.004	.963
Verbal Ability	.220	.095	.190	.022
Positive Narrative Content	-.271	1.054	-.032	.798
Negative Narrative Content	1.703	1.020	.184	.097
Narrative Coherence	-.735	1.223	-.067	.549
Positive Narrative Content x Narrative Coherence	.589	.821	.069	.474
Negative Narrative Content x Narrative Coherence	-.942	.805	-.113	.243
Block 3 ΔR^2		.018		
Total R^2		.049		
F (8, 155)		1.991*		

Note: *$p < .10$, **$p < .05$.

Table 9

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Life Satisfaction

Predictor	Life Satisfaction			
	b	*SE*	*β*	*p*
Gender (Female = 1)	-.210	1.495	-.011	.889
Race (Minority = 1)	-1.046	1.950	-.044	.592
Verbal Ability	-.051	.071	-.059	.472
Block 1 ΔR^2		.005		
Gender (Female = 1)	-.302	1.487	-.016	.839
Race (Minority = 1)	-1.184	1.922	-.050	.539
Verbal Ability	-.069	.070	-.080	.328
Positive Narrative Content	1.366	.770	.210	.078
Negative Narrative Content	-.630	.729	-.091	.389
Narrative Coherence	1.255	.847	-.147	.141
Block 2 ΔR^2		.064**		
Gender (Female = 1)	-.083	1.501	-.005	.956
Race (Minority = 1)	-1.033	1.930	-.044	.593
Verbal Ability	-.058	.071	-.067	.418
Positive Narrative Content	1.463	.796	.225	.068
Negative Narrative Content	-.827	.772	-.119	.286
Narrative Coherence	-1.616	.939	-.189	.087
Positive Narrative Content x Narrative Coherence	.210	.627	.032	.739
Negative Narrative Content x Narrative Coherence	-.577	.621	-.090	.354
Block 3 ΔR^2		.009		
Total R^2		.077		
F (8, 155)		1.558		

Note: $^{**}p < .05$.

Table 10

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Self-Esteem

Predictor	Self-Esteem			
	b	*SE*	*β*	*p*
Gender (Female = 1)	-.414	.960	-.035	.666
Race (Minority = 1)	-.401	1.282	-.026	.755
Verbal Ability	-.015	.045	-.028	.736
Block 1 ΔR^2		.003		
Gender (Female = 1)	-.475	.978	-.040	.628
Race (Minority = 1)	-.351	1.295	-.023	.787
Verbal Ability	-.024	.046	-.044	.601
Positive Narrative Content	.387	.508	.092	.447
Negative Narrative Content	-.292	.494	-.063	.555
Narrative Coherence	-.169	.559	-.031	.763
Block 2 ΔR^2		.017		
Gender (Female = 1)	-.366	.983	-.031	.710
Race (Minority = 1)	-.216	1.296	-.014	.868
Verbal Ability	-.014	.047	-.026	.760
Positive Narrative Content	.586	.522	.139	.264
Negative Narrative Content	-.253	.517	-.055	.625
Narrative Coherence	-.589	.615	-.107	.340
Positive Narrative Content x Narrative Coherence	.610	.412	.143	.140
Negative Narrative Content x Narrative Coherence	-.038	.410	-.009	.927
Block 3 ΔR^2		.017		
Total R^2		.037		
F (8, 155)		.707		

Table 11

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Educational Attainment

Predictor	Educational Attainment			
	b	*SE*	*β*	*p*
Gender (Female = 1)	.308	.206	.113	.138
Race (Minority = 1)	-.082	.272	-.023	.765
Verbal Ability	.039	.010	.300	.000
Block 1 ΔR^2		.102***		
Gender (Female = 1)	.270	.207	.099	.195
Race (Minority = 1)	-.006	.270	-.002	.983
Verbal Ability	.036	.010	.277	.000
Positive Narrative Content	-.033	.110	-.034	.763
Negative Narrative Content	-.043	.103	-.041	.679
Narrative Coherence	.280	.119	.219	.020
Block 2 ΔR^2		.041		
Gender (Female = 1)	.239	.210	.088	.257
Race (Minority = 1)	-.026	.271	-.007	.932
Verbal Ability	.034	.010	.264	.001
Positive Narrative Content	-.051	.113	-.052	.653
Negative Narrative Content	-.027	.109	-.025	.808
Narrative Coherence	.335	.132	.262	.012
Positive Narrative Content x Narrative Coherence	-.047	.089	-.047	.600
Negative Narrative Content x Narrative Coherence	.059	.088	.061	.506
Block 3 ΔR^2		.006		
Total R^2		.150		
F (8, 155)		3.411***		

Note: ***$p < .001$.

Table 12

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Civic Engagement

Predictor	Civic Engagement			
	b	*SE*	*β*	*p*
Gender (Female = 1)	-.022	.288	-.006	.940
Race (Minority = 1)	.554	.377	.119	.143
Verbal Ability	.017	.014	.099	.220
Block 1 ΔR^2		.020		
Gender (Female = 1)	-.091	.282	-.025	.748
Race (Minority = 1)	.699	.364	.150	.057
Verbal Ability	.011	.014	.063	.419
Positive Narrative Content	-.014	.148	-.010	.927
Negative Narrative Content	-.110	.139	-.079	.431
Narrative Coherence	.512	.160	.303	.002
Block 2 ΔR^2		.092**		
Gender (Female = 1)	-.201	.281	-.056	.474
Race (Minority = 1)	.620	.359	.133	.086
Verbal Ability	.005	.013	.029	.706
Positive Narrative Content	-.083	.150	-.064	.580
Negative Narrative Content	-.062	.144	-.044	.670
Narrative Coherence	.705	.175	.418	.000
Positive Narrative Content x Narrative Coherence	-.189	.118	-.145	.112
Negative Narrative Content x Narrative Coherence	.174	.117	.136	.140
Block 3 ΔR^2		.042**		
Total R^2		.154		
F (8, 155)		3.449***		

Note: $^{**}p < .05$, $^{***}p < .001$.

Table 13

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Relationship Quality

Predictor	Relationship Quality			
	b	*SE*	*β*	*p*
Gender (Female = 1)	-.175	.217	-.064	.421
Race (Minority = 1)	-.246	.287	-.070	.393
Verbal Ability	.001	.010	.005	.949
Block 1 ΔR^2		.010		
Gender (Female = 1)	-.170	.220	-.063	.440
Race (Minority = 1)	-.183	.285	-.052	.522
Verbal Ability	-.002	.011	-.013	.869
Positive Narrative Content	.064	.116	.066	.581
Negative Narrative Content	.056	.109	.053	.610
Narrative Coherence	.208	.127	.161	.104
Block 2 ΔR^2		.038		
Gender (Female = 1)	-.142	.222	-.052	.525
Race (Minority = 1)	-.161	.287	-.045	.577
Verbal Ability	.000	.011	.002	.982
Positive Narrative Content	.094	.120	.096	.435
Negative Narrative Content	.054	.115	.052	.636
Narrative Coherence	.137	.141	.106	.334
Positive Narrative Content x Narrative Coherence	.089	.094	.089	.350
Negative Narrative Content x Narrative Coherence	-.026	.093	-.027	.783
Block 3 ΔR^2		.008		
Total R^2		.008		
F (8, 161)		1.154		

Table 14

Hierarchical Regression Analysis Examining Unique and Interactive Associations of Narrative Features with Peer Attachment

Predictor	Peer Attachment			
	b	*SE*	*β*	*p*
Gender (Female = 1)	.540	2.602	.016	.836
Race (Minority = 1)	-6.062	3.479	-.140	.083
Verbal Ability	.174	.123	.113	.159
Block 1 ΔR^2		.038		
Gender (Female = 1)	.978	2.647	.030	.712
Race (Minority = 1)	-5.702	3.498	-.132	.105
Verbal Ability	.178	.125	.115	.156
Positive Narrative Content	1.431	1.395	.122	.307
Negative Narrative Content	1.501	1.309	-.119	.253
Narrative Coherence	.572	1.505	.037	.704
Block 2 ΔR^2		.018		
Gender (Female = 1)	1.962	2.636	.060	.458
Race (Minority = 1)	-5.008	3.455	-.116	.149
Verbal Ability	.228	.125	.147	.069
Positive Narrative Content	1.888	1.418	.161	.185
Negative Narrative Content	.890	1.358	.071	.513
Narrative Coherence	-.973	1.650	-.064	.556
Positive Narrative Content x Narrative Coherence	1.111	1.114	.094	.320
Negative Narrative Content x Narrative Coherence	-2.027	1.094	-.176	.066
Block 3 ΔR^2		.040**		
Total R^2		.096**		
F (8, 161)		2.030**		

Note: $^{**}p < .05$.

Table 15

Hierarchical Regression Analysis Testing the Mediating Effect of Narrative Negative Content in the Relation of Maltreatment to Internalizing Behavior

Predictor	Internalizing Problems			
	b	*SE*	*β*	*p*
Gender (Female = 1)	4.211	2.076	.163	.044
Race (Minority = 1)	.986	2.886	.028	.733
Verbal Ability	.209	.101	.168	.039
Block 1 ΔR^2		.052**		
Gender (Female = 1)	3.807	2.054	.148	.066
Race (Minority = 1)	.341	2.859	.010	.905
Verbal Ability	.172	.100	.138	.089
Maltreatment	3.035	1.310	.185	.022
Block 2 ΔR^2		.033**		
Gender (Female = 1)	4.777	2.018	.185	.019
Race (Minority = 1)	.552	2.778	.016	.843
Verbal Ability	.228	.099	.183	.023
Maltreatment	2.081	1.308	.127	.114
Negative Narrative Content	2.502	.791	.251	.002
Block 3 ΔR^2		.058**		
Total R^2		.142**		
F (5, 154)		4.940***		

Note: $^{**}p < .05$, $^{***}p < .001$.

Table 16

Hierarchical Regression Analysis Testing the Mediating Effect of Narrative Negative Content in the Relation of Placement Disruption to Externalizing Behavior

Predictor	Externalizing Problems			
	b	*SE*	*β*	*p*
Gender (Female = 1)	.219	2.024	.009	.914
Race (Minority = 1)	-.042	2.732	-.001	.988
Verbal Ability	.154	.099	.130	.123
Block 1 ΔR^2		.017		
Gender (Female = 1)	.359	1.971	.015	.856
Race (Minority = 1)	-.548	2.665	-.017	.837
Verbal Ability	.185	.097	.156	.059
Placement Disruption	.555	.185	.243	.003
Block 2 ΔR^2		.057**		
Gender (Female = 1)	1.057	1.944	.044	.587
Race (Minority = 1)	-.400	2.606	-.012	.878
Verbal Ability	.218	.096	.184	.024
Total Placements	.451	.185	.197	.016
Negative Narrative Content	2.072	.749	.225	.006
Block 3 ΔR^2		.047**		
Total R^2		.122**		
F (5, 148)		3.964**		

Note: $^{**}p < .05$.

Table 17

Hierarchical Regression Analysis Testing the Mediating Effect of Narrative Coherence in the Relation of Adolescent Mentoring to Relationship Quality

Predictor	Relationship Quality			
	b	*SE*	*β*	*p*
Gender (Female = 1)	-.175	.217	-.064	.421
Race (Minority = 1)	-.246	.287	-.070	.393
Verbal Ability	.001	.010	.005	.949
Block 1 ΔR^2		.010		
Gender (Female = 1)	-.152	.216	-.056	.483
Race (Minority = 1)	-.302	.285	-.085	.292
Verbal Ability	-.001	.010	-.008	.922
Adolescent Mentoring	.114	.057	.158	.047
Block 2 ΔR^2		.025**		
Gender (Female = 1)	-.172	.214	-.063	.421
Race (Minority = 1)	-.231	.284	-.065	.419
Verbal Ability	-.003	.010	-.025	.751
Adolescent Mentoring	.091	.057	.127	.114
Narrative Coherence	.217	.104	.168	.037
Block 3 ΔR^2		.027**		
Total R^2		.062**		
F (5, 161)		2.049		

Note: $^{**}p < .05$.